

**REPORT OF THE
VIRGINIA COMMISSION ON YOUTH**

**Collection of
Evidence-based Practices
for Children and Adolescents
with Mental Health Treatment Needs
5th Edition**

**TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA**



HOUSE DOCUMENT NO. 7

**COMMONWEALTH OF VIRGINIA
RICHMOND
2013**



COMMONWEALTH of VIRGINIA
Commission on Youth

Delegate Christopher K. Peace, *Chairman*
Senator Harry B. Blevins, *Vice Chair*

Suite 269
General Assembly Building
Richmond, Virginia 23219-0406

April 15, 2013

Dear Fellow Citizen of the Commonwealth:

It is my pleasure as Chair of the General Assembly's Commission on Youth to present the 5th Edition of the *Collection of Evidence-based Practices for Children and Adolescents with Mental Health Treatment Needs*. The *Collection* summarizes current research on those mental health treatments that have been proven to be effective in treating children and adolescents. The *Collection* is intended to serve a broad readership: educators, service providers, parents, caregivers, and others seeking information on evidence-based mental health practices for youth.

Section 30-174 of the *Code of Virginia* establishes the Virginia Commission on Youth and directs the Commission to "... study and provide recommendations addressing the needs of and services to the Commonwealth's youth and their families." This section also directs the Commission to "...encourage the development of uniform policies and services to youth across the Commonwealth and provide a forum for continuing review and study of such services."

The 2002 General Assembly, through Senate Joint Resolution 99, directed the Virginia Commission on Youth to coordinate the collection of empirically based information to identify the treatments recognized as effective for the treatment of children, including juvenile offenders, with mental health treatment needs, symptoms and disorders. The resulting publication entitled *Collection of Evidence-based Treatments for Children and Adolescents with Mental Health Treatment Needs* was compiled by the Commission on Youth with the assistance of an advisory group of experts pursuant to Senate Joint Resolution 99. The *Collection* was published in *House Document 9* and presented to the Governor and the 2003 General Assembly.

To ensure that this information remained current and reached the intended audience, the 2003 General Assembly passed Senate Joint Resolution 358, which required the Commission to update the *Collection* biennially. The resolution also required the Commission to disseminate the *Collection* via web technologies. The Secretaries of Health and Human Resources, Public Safety and Education, along with the Advisory Group, were requested to assist the Commission in updating the *Collection*, as were various state and local agencies. Since 2003, the Commission has updated this resource and made it available through the Commission on Youth website and in print editions.

The Commission on Youth gratefully acknowledges the contributions of its Advisory Group members and the General Assembly's Division of Legislative Automated Systems for its assistance.

For more information about the Virginia Commission on Youth or the *Collection*, I encourage you to visit our website at <http://vcoy.virginia.gov>.

Sincerely,

A handwritten signature in cursive script that reads "Christopher K. Peace".

Christopher K. Peace

COMMISSION ON YOUTH MEMBERSHIP

From the Virginia House of Delegates

Christopher K. Peace, Chair
Mamye E. BaCote
Robert H. Brink
Peter F. Farrell
Beverly J. Sherwood
Anne Crockett-Stark

From the Senate of Virginia

Harry B. Blevins, Vice Chair
Barbara A. Favola
Stephen H. Martin

Gubernatorial Appointments from the Commonwealth at Large

Gary L. Close
Frank S. Royal, Jr., M.D.
Charles H. Slemp, III

Commission on Youth Staff

Amy M. Atkinson
Meg Burruss, Esq.
Joyce Garner
Leah Hamaker

C ONTENTS

Introduction	1
Role of the Family in Treatment Programs	10
Key Components of Successful Treatment Programs	18
Reference Chart of Disorders and Evidence-based Practices	23
Adjustment Disorders.....	33
Behavior Disorders	
<i>Attention Deficit Hyperactivity Disorder</i>	40
<i>Oppositional Defiant & Conduct Disorders</i>	52
Maladaptive Behaviors	
<i>Sexual Offending</i>	64
<i>Eating Disorders</i>	75
<i>Juvenile Firesetting</i>	94
<i>Non-Suicidal Self-Injurious Behavior</i>	102
Habit Disorders	109
Anxiety Disorders	116
Trauma.....	125
Obsessive-Compulsive Disorder	138
Mood Disorders	
<i>Depression and Dysthymia</i>	150
<i>Pediatric Bipolar Disorder</i>	158
Early-onset Schizophrenia	173
Substance Use Disorders	185
Youth Suicide	202
Antidepressants and the Risk of Suicidal Behavior	213
School-based Mental Health Services.....	219
Juvenile Offending	227
Developmental Disabilities and Co-occurring Mental Health Disorders	
<i>Overview of Developmental Disabilities</i>	240
<i>Autism Spectrum Disorder</i>	244
<i>Intellectual Disability</i>	265
General Description of Providers.....	278
Providers Licensed in Virginia	280
Terms Used in Virginia’s Mental Health Delivery System	283
Commonly-used Acronyms and Abbreviations.....	307

Appendices

Appendix A. Advisory Group Members

Appendix B. Senate Joint Resolution 99

Appendix C. Senate Joint Resolution 358

DISCLOSURE STATEMENT

The information contained herein is strictly for informational and educational purposes only and is not designed to replace the advice and counsel of a physician, mental health provider, or other professional. If you require such advice or counsel, you should seek the services of a licensed mental health provider, physician, or other medical professional. The Commission on Youth is not rendering professional advice and makes no representations regarding the suitability of the information contained herein for any purpose.

INTRODUCTION

Background of Child and Adolescent Mental Health

Epidemiology and Burden of Child and Adolescent Mental Health Problems

Serious Emotional Disturbance

Providing Optimal Treatment

Identifying and Encouraging the Use of Effective Treatments

Benefits of Evidence-Based Treatments

Limitations of Evidence-based Treatments

Background of the Collection

Using the Collection 5th Edition

Revisions Made in Collection 5th Edition

Conclusion

Background of Child and Adolescent Mental Health

The recognition that children and adolescents suffer from mental health disorders is a relatively recent development. Throughout history, childhood was considered a happy period. Children were not thought to suffer from mental disorders or emotional distresses, due to the notion that they were spared the stresses that afflict adults (American Psychiatric Association [APA], 2002). It is now well-recognized that these disorders are not just a stage of childhood or adolescence, but are a result of genetic, developmental, and physiological factors.

Research conducted in the 1960s revealed that children suffer from mental disorders (APA, 2002), but it was not until 1980, when the third edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-III)* was published by the APA, that child and adolescent mental disorders were assigned a separate and distinct section within the classification system (National Institute of Mental Health [NIMH], 2001). The development of treatments, services, and methods for preventing mental health disorders in children and adolescents has also evolved over the past several decades.

The National Alliance for the Mentally Ill (NAMI) defines mental illness as a disorder of the brain that may disrupt a person's thinking, feeling, moods, and ability to relate to others (2005). Mental health disorders appear in families of all social classes and backgrounds. However, there are children at greater risk due to other factors. These include physical problems, intellectual disability, low birth weight, family history of mental and addictive disorders, multigenerational poverty, and caregiver separation or abuse and neglect (U.S. Department of Health and Human Services, 1999). Risk factors and causal influences for mental health disorders in youth vary, depending on the specific disorder.

Child and adolescent mental health has emerged as a distinct arena for service delivery, drawing on the philosophies and practices that characterize other childhood fields, such as early intervention (Woodruff et al., 1999). With the increased attention given to children's mental health and the development of systems of care for children with serious emotional disorders and their families in the last two decades, mental health has emerged as a new focus in the field of early childhood (Woodruff et al.). Family members, practitioners, and researchers have become increasingly aware that mental health services are an important and necessary support for youth who experience mental, emotional, or behavioral challenges and their families.

Epidemiology and Burden of Child and Adolescent Mental Health Problems

According to the President's New Freedom Commission on Mental Health, childhood is a critical time for the onset of behavioral and emotional disorders (2003). The Center for Mental Health Services estimates that 11 percent of children in the United States have at least one significant mental health disorder accompanied by impairment in home, school or peer contexts (U.S. Department of Health and Human Services, 2001).

According to the NIMH, half of all lifelong cases of mental health disorders begin by age 14 (Archives of General Psychiatry, as cited by the NIMH, 2005). Moreover, NIMH noted that there are frequently long delays between the first onset of symptoms and the point when people seek and receive treatment. In addition, this study noted that a mental health disorder left untreated could lead to a more severe, more difficult-to-treat illness and to the development of co-occurring mental health disorders. Nearly half of all individuals with one mental disorder met the criteria for two or more disorders (NIMH).

According to InCrisis (2005), the 2000 U.S. Census Report and the Methodology for Epidemiology of Mental Disorders in Children and Adolescents (MECA) Study found that 8.4 million children ages 9 to 17 have had a diagnosable mental or addictive disorder associated with at least minimal impairment. This translates to a prevalence of almost 21 percent, or one in five children. These estimates would suggest that as many as 4.3 million youth suffer from a mental health disorder that results in significant impairments at home, at school, or with peers and that there are two million who experience severe functional impairments.

There has been little research to measure the financial burden of mental health disorders in children and adolescents. However, a team of researchers analyzed various data sources to locate information on the utilization and costs associated with mental health disorders in youth. This review was conducted using data from 1998, with focus on youth up to 17 years of age. It was estimated that the direct costs for the treatment of child mental health problems, both emotional and behavioral, were approximately \$11.75 billion, or \$173 per child (Sturm et al. 2001; Ringel & Sturm, 2001). This study pointed to two of many reasons why national health expenditures for child and adolescent mental disorders are difficult to estimate, including:

1. mental health services are delivered and paid for in the health, mental health, education, child welfare, and juvenile justice systems; and
2. no comprehensive national datasets exist in this area.

Child and adolescent preventive interventions have the potential to significantly reduce the economic burden of mental health disorders by reducing the need for mental health and related services. Further, such interventions can result in improvements in school readiness, health status, and academic achievement and reductions in the need for special education services (National Institute for Health Care Management, 2005). These interventions also translate into societal savings by lessening parents' dependence on welfare and by increasing educational attainment and economic productivity (National Institute for Health Care Management).

Serious Emotional Disturbance

A particular population of children with more severe functional limitations is identified by federal regulations as suffering from a serious emotional disturbance (SED). The term "serious emotional disturbance" is used in a variety of federal statutes in reference to a diagnosable mental health problem which severely disrupts a youth's ability to function socially, academically, and emotionally. Studies have documented that 4 to 16 percent of youth ages 9 to 17 meet SED criteria, depending upon how the criteria are defined (Costello, Messer, Bird, Cohen & Reinherz, 1998). Definitions of SED are bounded by federal legislation and regulation, though states may provide additional guidance to professionals.

Virginia's Department of Behavioral Health and Developmental Services (DBHDS, 2009) outlines the following criteria for SED:

- problems in personality development and social functioning that have been exhibited over at least one year's time;
- problems that are significantly disabling, based on the social functioning of most children of the child's age;
- problems that have become more disabling over time; and
- service needs require significant intervention by more than one agency.

DBHDS estimates that between 84,978 and 103,861 Virginia children and adolescents have SED, with between 47,210 and 66,098 exhibiting extreme impairment (2011). In addition, 73,890 Virginians (age six and older) have intellectual disability and 18,427 infants, toddlers, and young children (birth to age 5) have developmental delays requiring early intervention services. Recent estimates by the Centers for Disease Control and Prevention's National Center for Health Statistics are that one in 91 children has an autism spectrum disorder (DBHDS).

Providing Optimal Treatment

The acknowledgment of mental health needs in youth has prompted further study on a variety of disorders and their causes, prevention, and treatments. Child and adolescent mental health represents a major federal public health priority, as reflected in the U.S. Surgeon General's *Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda* (2000). The report outlines the following three steps which must be taken to improve services for children with mental health needs:

1. improving early recognition and appropriate identification of disorders within all systems serving children;
2. improving access to services by removing barriers faced by families; and
3. closing the gap between research and practice to ensure evidence-based treatments for children.

Without appropriate treatment, childhood mental health disorders can escalate. Untreated childhood mental health disorders may also be precursors of school failure, involvement in the juvenile justice system, and/or placement outside of the home. Other serious outcomes include destructive, ambiguous, or dangerous behaviors, in addition to mounting parental frustration. The resulting cost to society is high in both human and financial terms. Identifying a child's serious emotional disturbance early and ensuring that the child receives appropriate care can break the cycle (New Freedom Commission on Mental Health, 2003).

Identifying and Encouraging the Use of Evidence-based Treatments

There have been more than two decades of research in treating children and adolescents' mental health disorders. However, there are challenges to helping families and clinicians select the best treatments. The field of child and adolescent mental health is multi-disciplinary, with a diverse service system. Today there are a multitude of theories about which treatments work best, making it very difficult for service providers to make informed choices. Scientific evidence can serve as a guide for families, clinicians, and other mental health decision-makers. Interventions with strong empirical support are variously referred to as empirically validated treatments, empirically supported treatments, evidence-based treatments, and evidence-based practices. All terms attempt to capture the notion that the treatment or practice has been tested and that its effects have been demonstrated scientifically.

Benefits of Evidence-Based Treatments

Evidence-based medicine evolved out of the understanding that decisions about the care of individual patients should involve the conscientious and judicious use of current best evidence

(Fonagy, 2000). Evidence-based treatments allow patients, clinicians, and families to see the differences between alternative treatment decisions and to ascertain what treatment approach best facilitates successful outcomes (Donald, 2002). Treatments that are evidence-based and research-driven complement a clinician's experience in practice. Evidence-based medicine has significantly aided clinicians in the decision-making process by providing a fair, scientifically rigorous method of evaluating treatment options.

Evidence-based medicine has also assisted professional bodies in developing clearer and more concise working practices, as well as in establishing treatment guidelines. The accumulated data for these treatments support their consideration as first-line treatment options (Nock, Goldman, Wang & Albano, 2004). With literally hundreds of treatment approaches available for some disorders, it is difficult for clinicians to select the most appropriate and effective intervention (Nock et al.). The strongest argument in support of evidence-based practices is that it enables clinicians to identify the best-evaluated methods of health care.

Another driving force in the utilization of evidence-based medicine is the potential for cost savings (Fonagy, 2000). With rising awareness of mental health issues and a demand by consumers to obtain the best treatment for the best price, the emphasis on evidence-based practices is both practical and justified. Few people have time to conduct research in order to evaluate best practices. Evidence-based medicine provides a structured process for clinicians and patients to access information on what is effective.

Limitations of Evidence-Based Treatments

There are stakeholders in the field of children's mental health who have regarded the evidence-based treatment movement with skepticism. According to Michael Southam-Gerow, Assistant Professor of Clinical Psychology and Director, Graduate Studies at the Department of Psychology at Virginia Commonwealth University, there are several criticisms surrounding the utilization of evidence-based treatments (Personal Communication, December 15, 2009). These include the following:

1. There is too much information, making it difficult for a service provider to choose a treatment among many that may be supported for a particular problem.
2. There is too little information and there are distinct problem areas for which there is still very little known.
3. The evidence is inadequate and it has been argued that there is insufficient supportive data to favor one treatment versus another. Further, the long-term effects of many treatments are unknown. This criticism suggests that more studies are needed before treatments are categorized as being evidence-based.
4. Because a treatment has not been tested does not mean it is not effective. Some commonly-used treatments are not deemed to be evidence-based treatment because they have not been tested.

Background of the *Collection*

The 2002 General Assembly, through Senate Joint Resolution 99, directed the Virginia Commission on Youth to coordinate the collection of treatments recognized as effective for children and adolescents, including juvenile offenders, with mental health disorders. The resulting publication, the *Collection of Evidence-based Practices for Children and Adolescents with Mental Health Treatment Needs (Collection)* was compiled by the Commission on Youth with the assistance of an advisory group of experts.

In 2003, the General Assembly passed Senate Joint Resolution 358, requiring the Commission to update the *Collection* biennially. The resolution also required the Commission to disseminate the *Collection* via web technologies. As specified in this resolution, the Commission received assistance disseminating the *Collection* from the Advisory Group and other impacted agencies. This publication,

the *Collection 5th Edition*, provides an updated listing of evidence-based practices for youth with mental health disorders. *The Collection 5th Edition* is for parents, caregivers, educators, service providers and others seeking current research on evidence-based practices.

Using the *Collection 5th Edition*

With the limitations of evidence-based treatments in mind, the *Collection 5th Edition* has been updated to reflect the current state of the science. It has been developed and updated to provide information to families, clinicians, administrators, policymakers and others seeking information about evidence-based practices for child and adolescent mental health disorders. The *Collection 5th Edition* has four categories that represent different levels of scientific support for a particular treatment. These levels are summarized in Table 1. Because research is ongoing, treatments are expected to move around among the categories with time.

Table 1

Treatment Categories Used in *Collection 5th Edition*

Levels of Scientific Support	Description
What Works	Meet all of the following criteria: 1. Tested across two or more randomized controlled trials (RCTs); 2. At least two different investigators (i.e., researcher); 3. Use of a treatment manual in the case of psychological treatments; and 4. At least one study demonstrates that the treatment is superior to an active treatment or placebo (i.e., not just studies comparing the treatment to a waitlist).
What Seems to Work	Meet all but one of the criteria for “What Works.”
What Does Not Work	Meet none of the criteria above but meet either of the following criteria: 1. Found to be inferior to another treatment in an RCT; and/or 2. Demonstrated to cause harm in a clinical study.
Not Adequately Tested	Meet none of the criteria for any of the above categories, but have been tested. It is possible that such treatments have demonstrated some effectiveness in non RCT studies, but their potency compared to other treatments is unknown. It is also possible that these treatments were tested and tried with another treatment. These treatments may be helpful, but would not be currently recommended as a first-line treatment.
Untested	Occasionally a treatment may be included that, though sometimes used in clinical practice, has not been tested. Treatment meets the criteria for none of the above categories because it is untested. The benefits and risks are unknown and caution (for providers or administrators) is suggested in applying them and or (for families) in receiving such treatment.

Source: Virginia Commission on Youth Graphic, 2010.

The *Collection 5th Edition* also includes information on assessment in order to emphasize that all clinical decisions should be made in consultation with the data. Accordingly, data should be collected to justify treatment plans, changes in treatment plans, and terminations. Clinicians and mental health treatment organizations are becoming both data-driven and data collectors, allowing for greater opportunities for outcome measures to be collected and reviewed over time.

Revisions Made in Collection 5th Edition

The *Collection* provides information that represents the medical model, the traditional approach to the diagnosis and treatment of medical conditions. This model focuses on the physical and biological aspects of specific diseases and conditions. However, the medical model does not incorporate changes in the language or methods used for communicating and interacting with individuals with developmental disabilities. In interacting with youth with developmental disabilities, a service provider can use “person-centered” planning and approaches to focus on emotional and support needs. Person-centered practices promote individualized treatment and service plans, in addition to emphasizing individualized outcomes and the participation of the individual in their treatment planning. Further, these plans focus on the services needed for the youth to address his or her mental health disorder and to lead successful integrated lives in their community (National Association of State Mental Health Program Directors, 2004).

In response to the above-referenced finding, the Commission on Youth adopted the following recommendations at its November 2011 meeting:

1. The Commission on Youth will revise the Autism Spectrum Disorders and Intellectual Disability sections of the *Collection 4th Edition* and limit these sections to discussion of co-occurring mental health disorders.
2. The Commission on Youth will add a disclaimer to the *Collection 5th Edition* to acknowledge that Intellectual Disability and Autism Spectrum Disorders are developmental disorders.
3. The Commission on Youth will convene the Advisory Group prior to the 2013 biennial update and discuss further modifying the Intellectual Disability and Autism Spectrum Disorders sections to include best practices in service delivery for developmental disabilities.

Accordingly, information included in the “Developmental Disabilities” section of the *Collection 5th Edition* is provided in response to these recommendations. The *Collection 5th Edition* has been modified to classify Autism Spectrum Disorders (ASD) and Intellectual Disability as developmental disorders and to provide information about mental health disorders which may co-occur with these developmental disorders. The disorders included in this and in previous editions are presented as classified in the *Diagnostic and Statistical Manual, Fourth Edition, Text Revision (DSM-IV-TR)* of the American Psychiatric Association (APA): *Disorders usually categorized as disorders first diagnosed in infancy, childhood, or adolescence.*

Conclusion

Effective mental health treatments which have undergone testing in both controlled research trials and real-world settings are available for a wide range of diagnosed mental health disorders. The *Collection 5th Edition* is designed to encourage use of these treatments by professionals providing mental health treatments. The *Collection 5th Edition* is also designed to inform parents, caregivers, and other stakeholders by providing general information about the various disorders and problems affecting children and adolescents.

Evidence-based treatments have been developed with the express purpose of improving the treatment of child and adolescent mental health disorders (Nock et al., 2004). Clinicians can incorporate these well-documented treatments, while still adequately addressing the individual differences of the patient (Nock et al.).

Sources

- American Psychiatric Association (APA). (2002). *Childhood Disorders*. [Online]. Available: www.psych.org/public_info/childr~1.cfm. Not available August 2005.
- Centers for Disease Control (CDC). (2012). Prevalence of Autism Spectrum Disorders — Autism and Developmental Disabilities Monitoring Network, 14 Sites, United States, 2008. *Surveillance Summaries*. March 30, 2012/61(SS03); 1-19. [Online]. Available: http://www.cdc.gov/mmwr/preview/mmwrhtml/ss6103a1.htm?s_cid=ss6103a1_w. [March 2012].
- Costello, J., Messer, S., Bird, H., Cohen, P., & Reinherz, H. (1998). The prevalence of serious emotional disturbance: a re-analysis of community studies. *Journal of Child and Family Studies*, 7 (4), 411-432.
- Donald, A. (2002). A practical guide to evidence-based medicine. *Medscape Psychiatry & Mental Health eJournal*, 9 (2).
- Fonagy, P. (2000). *Evidence Based Child Mental Health: The Findings of a Comprehensive Review*. Paper presented to “Child mental health interventions: What works for whom?” Center for Child and Adolescent Psychiatry.
- National Alliance for the Mentally Ill (NAMI). (2005). *About Mental Illness*. [Online]. Available: http://www.nami.org/Content/NavigationMenu/Inform_Yourself/About_Mental_Illness/About_Mental_Illness.htm. Not available June 2007.
- National Institute for Health Care Management. (2005). *Children’s Mental Health: An Overview and Key Considerations for Health System Stakeholders. Issue Paper*. [Online]. Available: <http://www.nihcm.org/pdf/CMHReport-FINAL.pdf>. [October 2010].
- National Institute of Mental Health (NIMH). (2001). *Blueprint for Change: Research on Child and Adolescent Mental Health*. Report of the National Advisory Mental Health Council’s Workgroup on Child and Adolescent Mental Health Intervention.
- National Institute of Mental Health (NIMH). (2005). *Mental Illness Exact Heavy Toll, Beginning in Youth*. [Online]. Available: <http://www.nih.gov/news/pr/jun2005/nimh-06.htm>. [October 2010].
- New Freedom Commission on Mental Health. (2003). *Achieving the Promise: Transforming Mental Health Care in America. Final Report*. DHHS Pub. No. SMA-03-3832. Rockville, MD.
- Nock, M., Goldman, J., Wang, Y., & Albano, A. (2004). From science to practice: the flexible use of evidence-based treatments in clinical settings. *Journal of the American Academy of Child and Adolescent Psychiatry*, 43 (6), 777-780.
- Sturm, R., Ringel, J., Bao, C., Stein, B., Kapur, K, Zhang, W., & Zeng, F. (2001). National estimates of mental health utilization and expenditures for children in 1998, in *Blueprint for Change: Research on Child and Adolescent Mental Health*, Vol. VI, Appendices. Washington, DC: National Advisory Mental Health Council Workgroup on Child and Adolescent Mental Health Intervention, Development, and Deployment.
- Ringel, J., & Sturm, R. (2001). National estimates of mental health utilization and expenditures for children in 1998. *Journal of Behavioral Health Services and Research*, 28, 319-333.
- U.S. Department of Health and Human Services. (1999). *Mental Health: A Report of the Surgeon General*. Rockville, MD.

U.S. Department of Health and Human Services. (2001). *Mental Health: Culture, Race, Ethnicity—Supplement to Mental Health: Report of the Surgeon General*. Rockville, MD.

U.S. Public Health Service. (2000). *Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda*. Washington, DC: Department of Health and Human Services.

Virginia Department of Behavioral Health and Developmental Services (DBHDS). (2011). *Comprehensive State Plan 2012 to 2018*. [Online]. Available: <http://www.dbhds.virginia.gov/documents/reports/opd-StatePlan2012thru2018.pdf>. [March 2013].

Virginia Department of Behavioral Health and Developmental Services (DBHDS). (2009). *Comprehensive State Plan 2010 to 2016*. [Online]. Available: <http://www.dbhds.virginia.gov/documents/reports/opd-StatePlan2010thru2016.pdf>. [October 2010].

Woodruff, D., Osher, D., Hoffman, C., Gruner, A., King, M., Snow, S., et al. (1999). The role of education in a system of care: effectively serving children with emotional or behavioral disorders. *Systems of Care: Promising Practices in Children's Mental Health, 1998 Series, Volume III*. Washington, DC: Center for Effective Collaboration and Practice, American Institutes for Research.

Organizations

American Association of Child and Adolescent Psychiatry (AACAP)

www.aacap.org

American Psychiatric Association (APA)

www.psych.org

ParentsMedGuide.org

American Psychological Association (APA)

www.apa.org

Center for Effective Collaboration and Practice

National Resource Network on Child and Family Mental Health Services

<http://cecp.air.org>

FamilyDoctor.org

American Academy of Family Physicians

www.aafp.org

Medscape Today Resource Centers (from WebMD)

www.medscape.com

Mental Health America (MHA) (formerly National Mental Health Association)

<http://www.nmha.org>

National Alliance for the Mentally Ill (NAMI)

<http://www.nami.org>

National Technical Assistance Center for Children's Mental Health

<http://www.dml.georgetown.edu>

Research & Training Center on Family Support and Children's Mental Health
<http://www.rtc.pdx.edu>

U.S. Department of Education
Office of Special Education Programs
<http://www.ed.gov/about/offices/list/osers/index.html?src=mr>

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention (CDC)
www.cdc.gov

National Institutes of Health

Medline Plus

U.S. National Library of Medicine and the National Institutes of Health (NIH)
www.nlm.nih.gov/medlineplus

National Institute of Mental Health (NIMH)
<http://www.nimh.nih.gov/index.shtml>

Substance Abuse and Mental Health Services Administration (SAMHSA)
National Mental Health Information Center
Child, Adolescent and Family Branch, Center for Mental Health Services
<http://www.mentalhealth.samhsa.gov/child>

National Registry of Evidence-based Programs and Practices
<http://www.nrepp.samhsa.gov>

Virginia Resources

Children's Services System Transformation
801 East Main Street — Richmond, VA 23219
<http://vafamilyconnections.com>

Mental Health America of Virginia
<http://www.mhav.org>

National Alliance for the Mentally Ill Virginia (NAMI Virginia)
www.namivirginia.org

Virginia Department of Behavioral Health and Developmental Services (DBHDS)
P.O. Box 1797 – Richmond, VA 23218-1797
<http://www.dbhds.virginia.gov>

Virginia Office of Comprehensive Services
<http://www.csa.virginia.gov>

Voices for Virginia's Children
<http://www.vakids.org>
Richmond
701 East Franklin Street, Suite 807 — Richmond, VA 23219

Northern Virginia
4031 University Drive, Suite 200 — Fairfax, VA 22030

R OLE OF THE FAMILY IN TREATMENT PROGRAMS

Over the past several years, the focus of mental health treatment and support for youth and families has increasingly been on evidence-based practices (National Alliance on Mental Illness [NAMI], 2007). Families are coming to understand that evidence-based practices are those which have been shown through research to be effective. While there is growing emphasis on evidence-based practices, families must be educated to become partners in the treatment process (NAMI).

The involvement of family members in child and adolescent services is crucial to ensure successful treatment outcomes (Kutash & Rivera, 1995; Pfeifer & Strzelecki, 1990). Research has shown that the effectiveness of services hinges less on the particular type of treatment than on the family's participation in planning, implementing, and evaluating the services (Koren et al., 1997) and their control over the child's treatment (Curtis & Singh, 1996; Thompson et al., 1997). Family participation promotes an increased focus on families, provision of services in natural settings, a greater awareness of cultural sensitivity, and a community-based system of care. Research also confirms that family participation improves not only service delivery, but also treatment outcomes (Knitzer, Steinberg & Fleisch, 1993).

There is a growing body of evidence indicating that children from vulnerable populations, children of single mothers, children who live in poverty, and minority children are more likely to exhibit the most serious problems. They are also the most likely to prematurely terminate treatment (Kadzin & Mazurick, 1994). Additional research is necessary to determine the factors which contribute to this early termination. In recognition of this problem, however, it is important for mental health providers to ensure that these families are actively recruited and engaged in the services that the child receives in order to maximize the potential for successful outcomes. This goal is complicated, however, by the fact that both families and providers may be confused and hesitant about the role that family members should play in treatment efforts. In addition, systemic barriers may preclude families from fully participating in the procurement of high-quality mental health services for their children.

In an attempt to combat this problem, researchers have identified six broad roles that families should play in the treatment process (Friesen & Stephens, 1998). These roles are listed below.

Contributors to the Environment – Family members are the constant component of the environment in which a child resides. Consequently, treatment providers often try to identify ways in which the behavior and interactions between family members influence the child's emotional and behavioral problems. With the assistance of the treatment provider, family members should consider ways to improve the home environment and the relationships in the family in order to provide the child with the most stable, supportive environment possible. In addition, family members should seek external support from their extended family and community members in order to reduce the stress of raising a child with emotional or behavioral difficulties.

Recipients of Service – Family members are also an important part of the therapeutic process. Service providers often focus on the family unit as a whole, creating interventions and strategies that target the health of the entire family. These interventions are intended to assess the strengths and weaknesses that exist within the family structure, to enhance the well-being of parents and other family members, and to help families locate support mechanisms in the community. The provider also assists

family members in developing the skills necessary to support the special needs of the child. Services may include supportive counseling, parental training and education, development of coping skills and stress management techniques, respite care, parental support groups, transportation, and financial assistance.

Partners in the Treatment Process – Family members also serve as equal contributors in the problem-solving process. They should work with treatment providers to identify the goals of treatment and to plan realistic strategies to achieve these goals. Additionally, family members should play a key role in implementing these strategies to help ensure that treatment goals are met. When performing these functions, family members should not be afraid to ask questions and to voice their opinions and preferences. It is crucial that they are fully informed and that their preferences are considered in all treatment decisions.

Service Providers – The treatment process is incomplete without the direct services provided to the child by family members. They are responsible for providing emotional support and information to the child and other family members, and for filling in the gaps in the services being received by the child. Furthermore, they often coordinate the services being received by the child by requesting and convening meetings, and transporting the child to appointments. It is a crucial role, the importance of which cannot be understated. Parents and caregivers need to remain vigilant and involved in all aspects of the child's treatment. This includes keeping all follow-up appointments, becoming knowledgeable about any prescribed medications, and keeping track of all treatments that have been unsuccessful.

Advocates – Family members often serve as the child's only voice in the mental health system. They should therefore actively advocate for the child in order to ensure that s/he receives the appropriate services, and voice any concerns regarding undesirable practices and policies. There are several local, state, and national organizations that can assist parents and caregivers in these efforts, allowing them to serve as part of a larger voice in their community.

Evaluators and Researchers – It is important that families participate in research and evaluation activities so that their opinions can be heard regarding which treatments and services are most beneficial and convenient. The input of family members is crucial to ensure that all children receive services that are efficient and effective. While much of this research requires the involvement of the family for a significant length of time, the input of caregivers and other family members is extremely important.

Because families play important supporting roles in combating mental health disorders, it is important that family members assume each of these roles in order to provide the effective support network that is necessary for the child's continued improvement. Although the child is the most important focus of treatment, family members can help by offering support and encouragement, and by creating a favorable environment. Family members can help their child while they are receiving treatment by recognizing and praising small achievements, modifying expectations during stressful periods, measuring progress on the basis of the improvements made, and being flexible, while trying to maintain a normal routine (Psychiatry 24x7.com, 2005).

The following information is attributed to the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA, 2000). Families must recognize that, while they are obtaining services for their child, they are the experts in understanding the following:

- how their child responds to different situations;
- their child's strengths and needs;
- what their child likes and dislikes; and
- what has worked and not worked in helping their child.

Families are ultimately responsible for determining what services and supports their children receive. Thus, families must communicate to service providers their children's strengths and weaknesses, as well as their priorities and expectations. Family members must also inform their service provider as soon as they realize treatment is not working so appropriate modifications can be made (SAMHSA, 2000). It is crucial to remember that children are different and their needs are very diverse.

These recommendations also hold true for children who come in contact with the juvenile justice system. Family involvement is particularly critical for these youth to ensure positive outcomes (Osher & Hunt, 2002). It is imperative that families remain involved in order to provide information on the child's diagnosis and treatment history, use of medications, the families' ability to participate in treatment, special circumstances that affect their child, and their child's education history and status (including whether the child is enrolled in special education) (Osher & Hunt). Ideally, families should remain involved at each stage, so they can be involved in decision-making and treatment (Osher & Hunt). Families and juvenile justice officials must cooperate to ensure that all have mutual responsibility for the child's outcomes (Osher & Hunt).

Without family involvement, it is extremely difficult for service providers to ensure that the gains achieved by the child in treatment are maintained and solidified. Moreover, the combined efforts of service providers, family members, and advocates are necessary to ensure that the services provided in the community effectively meet the needs of all children and families. It is important that parents and caregivers understand the results of any evaluation, the child's diagnosis, and the full range of treatment options. If parents are not comfortable with a particular clinician or treatment option or are confused about specific recommendations, they should consider a second opinion.

If medication is suggested as a treatment option, families must be informed of all associated risks and benefits. The decision about whether to medicate a child as part of a comprehensive treatment plan should be made only after carefully weighing these factors (NAMI, 2007). Children and adolescents who are taking psychotropic medications must be closely monitored and frequently evaluated by qualified mental health providers (NAMI). Figure 1 outlines questions parents should ask about treatment services.

Supplementary Issues for Families

Continuous 24-hour news coverage of events, such as natural disasters, catastrophic events, and crime reports, may cause children to experience stress, anxiety, and fears (AACAP, 2002). According to the AACAP, children may be easily influenced and unable to distinguish the difference between reality and the fantasy presented on television (2001). As a result, children may be exposed to behaviors and attitudes that can be overwhelming and difficult to understand (AACAP, 2001). Caregivers should understand that violent media images may have a greater impact upon children with emotional and behavioral issues than might otherwise be the case (AACAP, 2006).

Figure 1

Questions Parents or Caregivers Should Ask About Treatment Services

Before a child begins treatment, parents should ask the following:

- Does my child need additional assessment and/or testing (medical, psychological etc.)?
- What are the recommended treatment options for my child?
- Why do you believe treatment in this program is indicated for my child? How does it compare to other programs or services which are available?
- What are the advantages and disadvantages of the recommended service or program?
- What will treatment cost, and how long will it take?
- How much of the cost is covered by insurance or public funding? Will we reach our insurance limit before treatment is completed?
- How will my child continue education while in treatment?
- Does my child need medication? If so, what is the name of the medication that will be prescribed? How will it help my child? How long before I see improvement? What are the side effects which commonly occur with this medication?
- What are the credentials and experience of the members of the treatment team?
- How frequently will the treatment sessions occur?
- Will the treatment sessions occur with just my child or the entire family?
- How will I be involved with my child's treatment?
- How will we know if the treatment is working? What are some of the results I can expect to see?
- How long should it take before I see improvement?
- What should I do if the problems get worse?
- What are the arrangements if I need to reach you after-hours or in an emergency?
- As my child's problem improves, does this program provide less intensive/step-down treatment services?
- How will the decision be made to discharge my child from treatment?
- Once my child is discharged, how will it be decided what types of ongoing treatment will be necessary, how often, and for how long?

Source: American Academy of Child & Adolescent Psychiatry (AACAP), 2000.

Systems of Care and Family Involvement

A system of care is defined as "...a comprehensive spectrum of mental health and other necessary services which are organized into a coordinated network to meet the multiple and changing needs of children and their families" (Stroul, 2002). It is not a program, but a philosophy. Information in this section is attributed to *Systems of Care: A Framework for System Reform in Children's Mental Health* (Stroul).

The primary values of the system of care philosophy are that services for children are:

- community-based;
- child-centered and family-focused; and
- culturally competent.

Families are designated partners in the design of effective mental health services and supports. Families have a primary decision-making role in the care of their own children, as well as in the policies and procedures governing care for all children in their communities. This includes:

1. choosing supports, services, and providers;
2. setting goals;
3. designing and implementing programs;
4. monitoring outcomes;
5. partnering in funding decisions; and
6. determining the effectiveness of all efforts to promote the mental health and well-being of children and youth.

Systems of care rely upon family and youth experiences and utilize families' expertise to steer decision-making in service and system design, operation, and evaluation. In recent years, studies have been designed to assess the impact of family partnerships upon child and family outcomes. The findings reveal that children who had families involved in their treatment experienced improved educational outcomes and well-being, as well as reduced length of stay in out-of-home placements and residential settings (Jivanjee, Friesen, Robinson & Pullman, 2002). Systems of care establish partnerships that work because the system is guided by the family.

Sources

- American Academy of Child & Adolescent Psychiatry (AACAP). (2000). *Facts for Families*, February 2000. [Online]. Available: <http://www.aacap.org/web/aacap/publications/factsfam>. *Not available September 2010*.
- American Academy of Child & Adolescent Psychiatry (AACAP). (2001). *Facts for Families, Children and Watching TV*. [Online]. Available: http://www.aacap.org/cs/root/facts_for_families/children_and_watching_tv. [September 2010].
- American Academy of Child & Adolescent Psychiatry (AACAP). (2002). *Facts for Families, Children and the News*. [Online]. Available: <http://aacap.org/page.ww?name=Children+and+The+News§ion=Facts+for+Families>. [September 2010].
- American Academy of Child & Adolescent Psychiatry (AACAP). (2006). *Facts for Families, Children and Video Games: Playing with Violence*. [Online]. Available: <http://www.aacap.org/page.ww?section=Facts+for+Families&name=Children+and+Video+Games%3A+Playing+with+Violence>. [September 2010].
- Curtis, I., & Singh, N. (1996). Family involvement and empowerment in mental health service provision for children with emotional and behavioral disorders. *Journal of Child and Family Studies*, 5, 503-517.
- Friesen, B., & Stephens, B. (1998). Expanding family roles in the system of care: research and practice. In Epstein, M., Kutash, K., & Duchnowski, A., *Outcomes for Children & Youth with Behavioral and Emotional Disorders and their Families*, Austin, TX: Pro-Ed.
- Jivanjee, P., Friesen, B., Robinson, A., & Pullman, M. (2002). Family participation in systems of care: frequently asked questions (and some answers). *Research and Training Center on Family Support and Children's Mental Health*. [Online]. Available: <http://www.dhh.louisiana.gov/offices/publications/pubs-142/Family%20Participation%20FAQ.pdf>. [September 2010].
- Kadzin, A., & Mazurick, J. (1994). Dropping out of child psychotherapy: distinguishing early and late dropouts over the course of treatment. *Journal of Consulting and Clinical Psychology*, 62, 1069-1074.
- Knitzer, J., Steinberg, Z., & Fleisch, B. (1993). *At the Schoolhouse Door: An Examination of Programs and Policies for Children with Behavioral and Emotional Problems*. New York: Bank Street College of Education.
- Koren, P., Paulson, R., Kinney, R., Yatchmonoff, D., Gordon, L., & DeChillo, N. (1997). Service coordination in children's mental health: an empirical study from the caregivers' perspective. *Journal of Emotional and Behavioral Disorders*, 5, 62-172.

- Kutash, K., & Rivera, V. (1995). Effectiveness of children's mental health services: A Review of the Literature. *Education and Treatment of Children, 18*, 443-477.
- National Alliance on Mental Illness (NAMI). (2007). *Choosing the right treatment: what families need to know about evidence-based practices*. [Online]. Available: <http://www.nami.org/Content/NavigationMenu/NAMILand/CAACebpguide.pdf>. [September 2010].
- Osher, T., & Hunt, P. (2002). Involving families of youth who are in contact with the juvenile justice system. Research and program brief. *National Center for Mental Health and Juvenile Justice*. [Online]. Available: <http://www.ncmhjj.com/pdfs/publications/Family.pdf>. [September 2010].
- Pfeiffer, S., & Strzelecki, S. (1990). Inpatient psychiatric treatment of children and adolescents: a review of outcome studies. *Journal of the American Academy of Child and Adolescent Psychiatry, 29*, 847-853.
- Psychiatry 24x7.com (2005). *Mood and Anxiety*. Disease Information. [Online]. Available: <http://www.psychiatry24x7.com/anxiety/index.jhtml?s=7>. *Not available June 2007*.
- Stroul, B. (2002). *Systems of care: a framework for system reform in children's mental health*. Georgetown University Child Development Center, National Technical Assistance Center for Children's Mental Health.
- Thompson, L., Lobb, C., Elling, R., Herman, S., Jurkidzewicz, T., & Helluza, C. (1997). Pathways to family empowerment: effects of family-centered delivery of early intervention services. *Exceptional Children, 64*, 99-113.
- U.S. Substance Abuse and Mental Health Services Administration (SAMHSA) (2000). *Family guide to Systems of Care for children with mental health needs*. National Mental Health Information Center. [Online]. Available: http://www.education.com/reference/article/Ref_Family_Guide_Systems. [September 2010].

Organizations

American Association of Child and Adolescent Psychiatry (AACAP)

www.aacap.org

American Psychiatric Association (APA)

www.psych.org

ParentsMedGuide.org

American Psychological Association (APA)

www.apa.org

Center for Effective Collaboration and Practice

National Resource Network on Child and Family Mental Health Services

<http://cecp.air.org>

FamilyDoctor.org

American Academy of Family Physicians

www.aafp.org

Florida Mental Health Institute

University of South Florida

<http://home.fmhi.usf.edu>

Medscape Today Resource Centers (from WebMD)

www.medscape.com

Mental Health America (MHA) (formerly National Mental Health Association)

<http://www.nmha.org>

National Alliance for the Mentally Ill (NAMI)

<http://www.nami.org>

National Technical Assistance Center for Children's Mental Health

<http://www.dml.georgetown.edu>

Research & Training Center on Family Support and Children's Mental Health

<http://www rtc.pdx.edu>

U.S. Department of Education

Office of Special Education Programs

<http://www.ed.gov/about/offices/list/osers/index.html?src=mr>

U.S. Department of Health and Human Services

Centers for Disease Control and Prevention (CDC)

www.cdc.gov

National Institutes of Health

Medline Plus

U.S. National Library of Medicine and the National Institutes of Health (NIH)

www.nlm.nih.gov/medlineplus

National Institute of Mental Health (NIMH)

<http://www.nimh.nih.gov/index.shtml>

Substance Abuse and Mental Health Services Administration (SAMHSA)

National Mental Health Information Center

Child, Adolescent and Family Branch, Center for Mental Health Services

<http://www.mentalhealth.samhsa.gov/child>

National Registry of Evidence-based Programs and Practices

<http://www.nrepp.samhsa.gov>

Virginia Resources

Children's Services System Transformation

801 East Main Street — Richmond, VA 23219

<http://vafamilyconnections.com>

Mental Health America of Virginia

<http://www.mhav.org>

National Alliance for the Mentally Ill Virginia (NAMI Virginia)

www.namivirginia.org

Virginia Department of Behavioral Health and Developmental Services (DBHDS)

P.O. Box 1797 – Richmond, VA 23218-1797

<http://www.dbhds.virginia.gov>

Virginia Resources *(continued)*

Virginia Office of Comprehensive Services

<http://www.csa.virginia.gov>

Voices for Virginia's Children

<http://www.vakids.org>

Richmond

701 East Franklin Street, Suite 807 — Richmond, VA 23219

Northern Virginia

4031 University Drive, Suite 200 — Fairfax, VA 22030

KEY COMPONENTS OF SUCCESSFUL TREATMENT PROGRAMS

Integrated Programming – the “Systems” Approach
Screening and Assessment
Individualized Care Planning
Engagement of Families in Treatment Efforts
Culturally Competent Service Delivery

While studies have identified numerous strategies and techniques that are effective in the treatment of mental health issues, a growing body of research shows that there are several guiding principles for screening and assessment and individualized care planning which provide the foundation for any treatment program: integrated programming, engagement of families in treatment efforts, and culturally competent service delivery. These principles will be discussed in greater detail in the following paragraphs.

Integrated Programming – the “Systems” Approach

Research continues to support the idea that the mental health needs of children and adolescents are best served within the context of a “system of care” in which multiple service providers work together in an organized, collaborative way. The system of care approach encourages agencies to provide services that are child-centered and family-focused, community-based, and culturally competent. The guiding principles also call for services to be integrated, with linkages between the child-serving agencies and programs that allow for collaborative planning, development, and implementation of services. Additional information on systems of care is provided in the “Role of the Family” section.

Service providers have found that a breakdown in the system of care is frequently encountered in the area of discharge planning. A discharge plan should be created whenever a child is transitioning from inpatient or residential treatment back into the community. These plans should be updated in consultation with the child’s family or guardian before the child is released from treatment. They should describe the therapy and services provided in the facility and recommend any necessary follow-up services, which should then be coordinated by a case manager. While frequently overlooked, discharge plans are a key component of a comprehensive system of care, as they help to ensure that the gains made in an inpatient or residential setting are continued once the child returns to the community.

Systems of care have been found to produce important system improvements. For example, studies have shown reductions in the use of residential and out-of-state placements, as well as improvements in functional behavior. Parents also appear to be more satisfied with services provided within systems of care than with more traditional service delivery systems. However, the effect of systems of care on costs remains uncertain, and there is little evidence to demonstrate that the system of care framework results in improved clinical outcomes when compared to services delivered within more traditional systems (U.S. Department of Health and Human Services, 1999).

The Virginia Department of Behavioral Health and Developmental Services (DBHDS), formerly the Department of Mental Health, Mental Retardation and Substance Abuse Services, emphasizes the need for agency collaboration at both the state and local levels (2004). This can be achieved by promoting integration of services and establishing policies that require services providers to conduct a single comprehensive intake addressing the areas of mental health, intellectual disability, and

substance abuse. Moreover, community partnerships can be strengthened or enhanced to improve the delivery of child and adolescent mental health services.

Screening and Assessment

Comprehensive assessment, screening, and evaluation are necessary for children and adolescents experiencing a mental health crisis. Children should also be screened to identify potential delayed or atypical development, thus determining the appropriate level of assessment (Pires, 2002). In addition to screening, assessment and evaluation collectively address the needs and services of the child and family (Pires). A child or adolescent with emotional and/or behavioral problems should be evaluated by a qualified mental health professional to determine whether a comprehensive psychiatric evaluation for serious emotional behavior problems is necessary (American Academy of Child & Adolescent Psychiatry [AACAP], 2005). Such a step will lead to accurate assessment and, if needed, appropriate, individualized treatment.

Individualized Care Planning

In order to assure continuity of treatment, a framework should be established which ensures that a child can transition with ease from one service to another. The efficiency of these transitions is enhanced through the creation of effective individualized service plans. These plans, which are targeted to the child's specific needs, identify problems, establish goals, and specify appropriate interventions and services.

Once screening and assessment have taken place, an individual care plan ensures that the distinct needs of the child are met. The goal is to plan and provide appropriate services to the child. Elements that must be acknowledged include building trust, engaging the family, and tailoring family supports (Building Systems of Care, 2002). Some of the components to be included in such a plan, as identified by Building Systems of Care, are:

- Background information and family assessment;
- Identifying information;
- Child development and behavior;
- Needs;
- Family functioning style;
- Social support network;
- Safety issues and risks;
- Goals;
- Sources of support and/or resources;
- Action plan; and
- Progress evaluation.

Engagement of Families in Treatment Efforts

Service providers and researchers have increasingly realized the important role that families play in the treatment of children with mental health disorders. The child mental health system has taken steps to make families partners in the delivery of mental health services for children and adolescents (U.S. Department of Health and Human Services, 1999). For further discussion of the roles that families should play in treatment services, see the "Role of the Family in Treatment Programs" section of the *Collection*.

According to the President's New Freedom Commission on Mental Health, local, state, and federal officials must engage families in planning and evaluating treatment and support services (2003). The direct participation of consumers and families in developing a range of community-based, recovery-oriented treatment and support services is important. Consumers and families of children with serious emotional disturbances have a key role in mental health care delivery by advocating for a system that focuses on recovery and on the utilization of appropriate evidence-

based treatments. Goal Two of the President’s New Freedom Commission on Mental Health specifies that mental health care be consumer- and family-driven. Consumers and families should be encouraged to become fully involved and to promote a recovery-based mental health system. Families can take part in this process by becoming educated about appropriate treatments for their child and who is qualified to deliver these treatments. For more information about mental health providers’ qualifications, please see the “General Description of Providers” section of the *Collection*.

Culturally Competent Service Delivery

Virginia’s population of racial minorities grew from approximately 23 to 28 percent between 1990 and 2000 (U.S. Census Bureau, 2000). In 2009, this increased to 32 percent (U.S. Census Bureau, 2010). This growth in diversity has significant implications for service providers in the Commonwealth, as cultural factors are becoming increasingly important in the evaluation and treatment of mental health disorders.

Culture has been found to influence many aspects of mental health disorders. Individuals from specific cultures may express and manifest their symptoms in different ways, and may differ in their styles of coping, their family and community supports, and their willingness to seek and continue with treatment. Moreover, clinicians may be influenced by their own cultural values, which may impact diagnosis, treatment, and service delivery decisions (U.S. Department of Health and Human Services, 2001).

The variability within and between each cultural group is described in Table 1.

Table 1

Addressing Cultural Variability

- Acculturation – This reflects the extent to which a person is familiar and proficient within U.S. mainstream culture.
- Poverty – There may be difference in resources, as well as in “resourceful behaviors” needed for survival. This may include awareness or compliance with traditional mental health interventions.
- Language – Differences exist in fluency in the client’s native language and in English, but also in dialect. Among various ethnicities, there exists many different language sub-groups.
- Transportation, Housing & Childcare – A lack of available supports may interfere with access to treatment and adherence with provider expectations.
- Reading Ability/Educational Background – Individuals may vary substantially in academic experience and aptitude. This is true within ethnic subgroups, as well as between subgroups.
- Beliefs – People from diverse cultures vary in their beliefs about what is considered “illness,” what causes the illness, what should be done to address the illness and what the treatment outcome should be. The provider cannot assume the client’s views match theirs.
- Physical Characteristics – People of color differ in their appearance, even within ethnic groups.

Source: Saldana, 2001.

The following is attributed to Kumpfer and Alvarado (1998). Research has shown that tailoring interventions to the cultural traditions of the family improve outcome effectiveness. Culturally relevant values can be integrated with existing model programs for a variety of ethnic groups. Such an approach can address the various nuances that cultures may exhibit, such as specific values and beliefs. Various cultural beliefs and modifications need to be incorporated into an organized, culturally sensitive treatment framework. Children may be reticent to share elements of their cultural

orientation with persons they do not know. Cultural competency involves addressing the various folkways, mores, traditions, customs, rituals, and dialects that are specific to each culture and ethnicity (Saldana, 2001).

Cultural differences may exacerbate problems of accessing appropriate mental health services. The mental health treatment setting relies significantly on language, communication, and trust between patients and providers. Therefore, therapeutic success may hinge on the clinician's ability to understand a patient's identity, social supports, self-esteem, and perception of stigma. Consequently, mental health service providers must recognize underlying cultural influences so they can effectively address the mental health needs of each segment of the community (U.S. Department of Health and Human Services, 1999).

Culturally competent treatment programs are founded upon an awareness of and respect for the values, beliefs, traditions, customs, and parenting styles of all individuals who reside in the community. Providers are aware of the impact of their own culture on the therapeutic relationship with their clients and consider these factors when planning and delivering the services for youth and their families. Ideally, culturally competent programs include multilingual, multicultural staff and provide extensive community outreach (Cross, Ennis, Isaacs & Bazron, 1989).

The services offered within a community should also reflect a respect for cultural diversity. For example, the inclusion of extended family members in treatment efforts should be incorporated within certain treatment approaches, when appropriate. It would also be beneficial for mental health agencies to display culturally relevant pictures and literature in order to show respect and increase consumer comfort with services. Finally, agencies should consider the holidays or work schedules of the consumers when scheduling office hours and meetings (Cross, Ennis, Isaacs & Bazron, 1989).

Cultural differences other than ethnicity must also be considered. For example, Americans living in rural areas may display unique characteristics that present barriers to mental health services. Many individuals living in these areas may not seek care because there is a perceived stigma attached to mental health disorders, a lack of understanding about mental illnesses and treatments, a lack of information about where to go for treatment, and an inability to pay for care. Furthermore, factors such as poverty, geographic isolation, and cultural differences may affect the amount and quality of mental health care available to these individuals. These issues are further complicated by the limited access to and availability of mental health specialists, such as psychiatrists, psychologists, psychiatric nurses, and social workers in rural areas (National Institute of Mental Health [NIMH], 2000).

It is important to consider the impact of culture on mental health service delivery. Specialized cultural programming has been found to promote service utilization for all ages, including children (Snowden & Hu, 1997). Furthermore, children and families enrolled in mental health programs that are linked to community culture have been found to be less likely to drop out of treatment than families in mainstream programs (Takeuchi, Sue & Yeh, 1995). Cultural training and service planning serve as important components of the mental health delivery system.

Sources

American Academy of Child & Adolescent Psychiatry (AACAP). (2005). *Facts for Families: Comprehensive Psychiatric Evaluation*. [Online]. Available: http://www.aacap.org/cs/root/facts_for_families/comprehensive_psychiatric_evaluation. [October 2010].

Cross, T., Dennis, K., Isaacs, M., & Bazron, B. (1989). *Towards a Culturally Competent System of Care*, National Technical Assistance Center for Children's Mental Health at Georgetown University, Washington, DC.

- Kumpfer, K., & Alvarado, R. (1998). Effective family strengthening interventions. *Juvenile Justice Bulletin*. Office of Juvenile Justice and Delinquency Prevention.
- National Institute of Mental Health (NIMH). (2000). *Fact Sheet: Rural Mental Health Research at the National Institute of Mental Health*. [Online]. Available: <http://www.nimh.nih.gov/publicat/ruralresfact.cfm>. *Not available October 2010*.
- Pires, S. (2002). *Building systems of care: a primer*. Washington, DC: Georgetown University Child Development Center, National Technical Assistance Center for Children's Mental Health Collaborative.
- President's New Freedom Commission on Mental Health. (2003). *Achieving the Promise: Transforming Mental Health Care in America. Final Report*. DHHS Pub. No. SMA-03-3832. Rockville, MD.
- Saldana, D. (2001). Cultural Competency, a Practical Guide for Mental Health Service Providers. *Hogg Foundation for Mental Health*. The University of Texas at Austin.
- Snowden, L., & Hu, T. (1997). Ethnic differences in mental health services among the severely mentally ill. *Journal of Community Psychology*, 25, 235-247.
- Takeuchi, D., Sue, S., & Yeh, M. (1995). Return rates and outcomes from ethnicity-specific mental health programs in Los Angeles. *American Journal of Public Health*, 85, 638–643.
- U.S. Census Bureau (2000). [Online]. Available: <http://www.census.gov>. [October 2010].
- U.S. Census Bureau (2010). *State and County QuickFacts*. Available: <http://quickfacts.census.gov/qfd/states/51000.html>. [October 2010].
- U.S. Department of Health and Human Services. (1999). *Mental Health: A Report of the Surgeon General*. Rockville, MD.
- U.S. Department of Health and Human Services. (2001). *Mental Health: Culture, Race, Ethnicity—Supplement to Mental Health: Report of the Surgeon General*. Rockville, MD.
- Virginia Department of Mental Health, Mental Retardation and Substance Abuse Services. (2004). *Final Report and Recommendations to the Commissioner of the Department of Mental Health, Mental Retardation and Substance Abuse Services and the Restructuring Policy Advisory Committee*. [Online]. Available: <http://www.dmhmrzas.virginia.gov/documents/CFS-ChildrensSpecialPopulationReport.pdf>. *Not available October 2010*.

REFERENCE CHART OF

DISORDERS AND EVIDENCE-BASED PRACTICES

Findings by Treatment Type for Children and Adolescents

Please refer to individual sections of the Collection for discussion of a particular disorder.

Adjustment Disorders

What Works	Currently no medication or psychological treatments meets these criteria.
What Seems to Work	
Interpersonal Psychotherapy (IPT)	IPT has the most support in that it helps children and adolescents address problems in their relationships so that they can become less depressed.
Cognitive Behavioral Therapy (CBT)	CBT is used to improve age-appropriate problem solving skills, communication skills, and stress management skills. It also helps the child's emotional state and support systems to enhance adaptation and coping.
Stress Management	Stress management is particularly beneficial in cases of high stress.
Group Therapy	Group therapy is beneficial in cases of high stress.
Family Therapy	Family therapy helps in making needed changes within the family system. These changes may include improving communication skills and family interactions and increasing support among family members.
What Does Not Work	
Pharmacology Alone	Medication is seldom used as a singular treatment because it does not provide assistance to the child in learning how to cope with the stressor.

Anorexia Nervosa (AN)

What Works	
Nutritional Rehabilitation	Developing meal plans and monitoring intake of adequate nutrition to promote healthy weight gain.
Family Psychotherapy	Family members are included in the therapeutic process to assist in reduction of symptoms and modify maladaptive interpersonal patterns.
In-patient Behavioral Programs	Individuals are rewarded for engaging in healthy eating and weight-related behaviors.
Pharmacological Treatments	Used primarily after weight restoration to minimize symptoms associated with psychiatric comorbidities.
What Does Not Work	
Individual Psychotherapy	While effectiveness is uncertain, it may be beneficial during the refeeding process (not starvation) and to minimize comorbid symptoms.
Group Psychotherapy	May stimulate the transmission of unhealthy techniques among group members, particularly during acute phase of disorder.
12-Step Programs	Not yet tested for their efficacy and are discouraged as a sole form of treatment.
Somatic Treatments	To date, treatments such as vitamin and hormone treatments and electroconvulsive therapy show no therapeutic value.

Attention Deficit Hyperactivity Disorder (ADHD)

What Works	
Behavioral Classroom Management (BCM)	BCM uses contingency management strategies, including teacher-implemented reward programs, token systems, time-out procedures and Daily Report Cards. Clinicians or parents may work in consultation with teachers to develop a classroom treatment plan.
Behavioral Parent Training (BPT)	BPT teaches the parent to implement contingency management strategies similar to BCM techniques at home.
Intensive Behavioral Peer Intervention (BPI)	Intensive BPI is conducted in recreational settings, such as Summer Treatment Programs (STPs) have demonstrated effectiveness and are considered well-established. However, STPs are less feasible to implement than other evidence-based practices.
Stimulant: d-Amphetamine	Short-acting: Adderall, Dexedrine, DextroStat Long-acting: Dexedrine Spansule, Adderall XR, Lisdexamfetamine
Stimulant: Methylphenidate	Short-acting: Focaline, Methylin, Ritalin Intermediate-acting: Metadate ER, Methylin ER, Ritalin SR, Metadate CD, Ritalin LA Long-acting: Concerta, Daytrana patch, Focalin XR
Serotonin and Norepinephrine Reuptake Inhibitor (SNRI): Atomoxetine	Atomoxetine is unique in its ability to act on the brain's norepinephrine transporters without carrying other medications' risk for addiction.
What Does Not Work	
Cognitive, psychodynamic, client-centered therapies	Traditional talk therapies and play therapy have been demonstrated to have little to no effect on ADHD symptoms. ADHD is best treated with intensive behavioral interventions in the youth's natural environment.
Office-based social skills training	Neither once-weekly individual nor group office-based training have demonstrated significant improvement in social skills. (However, intensive group social skills training that use behavioral interventions are considered well-established.)
Dietary Interventions	Interventions include elimination of food additives, elimination of allergens/sensitivities, and use of nutritional supplements.
Antidepressants	Bupropion (i.e., Wellbutrin), Imipramine (i.e., Tofranil), Nortriptyline (i.e., Pamelor, Aventil), Clonidine (i.e., Catapres) and Guanfacine (i.e., Tenex).

Anxiety Disorders

What Works	
Behavior and Cognitive Behavioral Therapy (CBT)	Treatments that involve exposing children to the (non-dangerous) feared stimuli, the goal being that the child learns that anxiety decreases over time.
Selective Serotonin Reuptake Inhibitors (SSRIs)	Treatment with certain SSRIs, e.g., Sertraline
What Seems to Work	
Educational support	Psychoeducational information provided to parents, usually in a group setting.
Not Adequately Tested	
Play Therapy	Therapy that utilizes self-guided play to encourage expression of feelings and healing
Non-SSRI Medication	Treatment with antihistamines or neuroleptics
Psychodynamic Therapy	Therapy designed to uncover unconscious psychological processes to alleviate tension thought to cause distress.
Biofeedback	Minimal support

Autism Spectrum Disorder

What Works	
Applied Behavior Analysis (ABA)	Behavioral intervention aimed at improving cognitive, language, communication, and socialization skills characterized by on-going and objective measurement of behaviors, implementation of individualized curricula, selection and systematic use of reinforcers, use of functional analysis to identify factors that increase or inhibit behaviors, and emphasis on generalization of learned skills.
Discrete Trial Teaching (DTT)	Behavioral intervention based on principles of operant learning; incorporates units of instruction used to teach and assess acquisition of basic skills; discrete trial incorporates same sequential components regardless of skills taught.
Pivotal Response Training (PRT)	Focuses on the most disabling areas of a child's autism by teaching children to respond to multiple environmental cues, increasing motivation, increasing capacity for self-management, and increasing self-initiations.
Learning Experiences: An Alternative Program (LEAP)	Peer-mediated interventions in an educational setting with children with autism and typical peer; individualized, data driven, and focused on generalizing learning skills across context through saturation of learning opportunities throughout the day; family involvement is a significant part of this intervention.
Pharmacological Treatments	May be considered for maladaptive behaviors and when behavioral symptoms cause significant impairment in functioning.
What Seems to Work	
Educational and Communication-focused Interventions, e.g., TEACCH	TEACCH (Treatment and Education of Autistic and Communication related handicapped CHildren) provides strategies that support the individual throughout the lifespan, facilitates autonomy at all levels of functioning, and accommodates individual needs.
Natural Language Methods	Speech and language pathologists often integrate communication training with the child's behavior program to provide a coordinated opportunity for structured and naturalistic language learning. Instruction in communication is designed to provide a generative tool that will serve many immediate needs throughout the child's life.
Picture Exchange Communication System (PECS)	Helps children with ASD acquire functional communication skills. Children using PECS are taught to give a picture of a desired item to a communication partner in exchange for the item, thus linking an outcome with communication.
Other Behavioral Interventions	Joint attention behavior training, which may be especially beneficial in young, pre-verbal children, shows promise for teaching children with autism behavioral skills. Social skills groups, social stories, visual cueing, social games, video modeling, scripts, peer-mediated techniques, and play and leisure curricula are also supported by the literature.
Occupational Therapy & Sensory Integration Therapy (SI)	Occupational therapy helps develop self-care skills, e.g., dressing, using utensils, maintaining personal hygiene and academic skills, and shows promise in promoting play skills and establishing routines to improve attention and organization. SI therapy often is used alone or as part of a broader program of occupational therapy for children with ASD. Goal is to correct deficits in neurological processing and integration of sensory information to allow the child to interact with the environment in a more adaptive way.

Bulimia Nervosa (BN)

What Works	
Cognitive Behavioral Therapy (CBT)	The most effective independent treatment option; it is used to change underlying eating disorder cognitions and behaviors.
Pharmacological Treatments	Antidepressants, namely Selective Serotonin Reuptake Inhibitors (SSRIs), have effectively reduced binge/purging behaviors, as well as comorbid psychiatric symptoms.
Combined Treatments	A combination of CBT and pharmacotherapy seem to maximize treatment outcomes.
What Does Not Work	
Individual Psychotherapy	Compared to CBT, few individual therapeutic approaches have been effective in reducing symptoms.
Behavioral Therapy	Behavioral techniques, such as exposure, have been less effective than CBT techniques.
12-Step Programs	Not yet tested for efficacy and are discouraged as a sole form of treatment.

Depression/Dysthymia — Interventions for Children

What Works	
Stark's Cognitive Behavioral Therapy (CBT) - child-only group or child group plus parent component	Stark's CBT includes mood monitoring, mood education, increasing positive activities and positive self-statements, and problem-solving.
What Seems to Work	
Penn Prevention Program (PPP)	A CBT-based program that targets pre-adolescents and early adolescents who are at-risk for depression.
Self-Control Therapy	A school-based CBT that focuses on self-monitoring, self-evaluating, and causal attributions.
Behavioral Therapy	Includes pleasant activity monitoring, social skills training and relaxation.

Depression/Dysthymia — Interventions for Adolescents

What Works	
Cognitive Behavioral Therapy (CBT) provided in a group setting	CBT for depression focuses on identifying thought and behavioral patterns that lead to or maintain the problematic symptoms.
Interpersonal therapy (IPT) provided individually	In IPT, the therapist and patient address the adolescent's interpersonal communication skills, interpersonal conflicts, and family relationship problems.
What Seems to Work	
CBT provided in a group or individual setting with a parent/family component	CBT for depression focuses on identifying thought and behavioral patterns that lead to or maintain the problematic symptoms.
Adolescent Coping with Depression (CWD-A)	Includes practicing relaxation and addressing maladaptive patterns in thinking, as well as scheduling pleasant activities and learning communication and conflict resolution skills.
Interpersonal Psychotherapy for Depressed Adolescents (IPT-A)	Addresses the adolescent's specific interpersonal relationships and conflicts, and helps the adolescent be more effective in their relationships with others.
Selective Serotonin Reuptake Inhibitors (SSRIs)	Fluoxetine is the only pharmacological treatment approved for youth by the FDA. Most effective when combined with CBT, although there is debate about the use of SSRIs to treat depression in youth.

Disruptive Behavior Disorders

What Works	
Assertiveness training: Group Assertive Training	School-based group treatment for middle-school youth
Parent Management Training (PMT) Programs	Programs which focus on teaching and practicing parenting skills with parents or caregivers include: <ul style="list-style-type: none"> • Helping the Noncompliant Child • Incredible Years Parent-Child Interaction Therapy • Parent Management Training to Oregon Model • Positive Parenting Program
Multisystemic Therapy (MST)	An integrative, family-based treatment for youth with serious antisocial and delinquent behavior. Interventions last 3-5 months and focus on improving psychosocial functioning for youth and families.
Cognitive Behavioral Therapy (CBT)	CBT emphasizes problem solving skills and anger control/coping strategies and includes: <ul style="list-style-type: none"> • Problem-Solving Skills Training • Anger Control Training
CBT & Parent Management Training (PMT)	Combines CBT and PMT
What Seems to Work	
Multidimensional Treatment Foster Care (MTFC)	Community-based program alternative to institutional, residential, and group care placements for use with severe chronic delinquent behavior. Foster parents receive training and provide intensive supported treatment within the foster home setting.
What Does Not Work	
Atypical Antipsychotics Medications	Risperidone (risperdal), quetiapine (seroquel), olanzapine (zyprexa), and Abilify (aripiprazole). Limited evidence for effectiveness in youth with intellectual disability or pervasive developmental disorder.
Stimulant or Atomoxetine	Methylphenidate; d-Amphetamine; atomoxetine. Limited evidence when comorbid with primary diagnosis of ADHD.
Mood Stabilizers	Divalproex sodium; lithium carbonate. Limited evidence when comorbid with primary diagnosis of bipolar disorder.
Selective Serotonin Reuptake Inhibitors (SSRIs)	Limited evidence when comorbid with primary diagnosis of depressive disorder.
Boot camps, shock incarcerations	Ineffective at best; can lead worsening of symptoms.
Dramatic, short-term or talk therapy	Little to no effect as currently studied.

Early-onset Schizophrenia

What Works	Currently, no medication or psychological treatments meets these criteria.
What Seems to Work	
Traditional Neuroleptics/First-generation Antipsychotics	Molindone, Haloperidol
Second-generation (atypical) Antipsychotics	Clozapine risperidone, olanzapine, ziprasidone
Family Psychoeducation and Support	Helps to improve family functioning, problem-solving and communication skills, and decrease relapse rates.
Cognitive Behavioral Therapy (CBT)	Includes social skills training, problem-solving strategies, and self-help skills.
What Does Not Work	
Psychodynamic Therapy	May be harmful for this population.

Habit Disorders

<p>What Works</p> <p>Habit Reversal Therapy for Tic Disorder</p>	<p>Treatment increases awareness to the feelings and context associated with the urges and implements a competing and inconspicuous habit in place of the tic.</p>
<p>What Seems to Work</p> <p>Cognitive Behavioral Therapy (CBT) for recurrent hair-pulling (trichotillomania [TTM])</p>	<p>Treatment involves exposing children to the stimuli associated with the urge while challenging thoughts associated with high-risk situations.</p>
<p>Not Adequately Tested</p> <p>Massed Negative Practice</p> <p>Pharmacotherapy</p>	<p>Treatment involves children over-rehearsal of target tic in high-risk ticking situations.</p> <p>Prescription medications to treat habit disorders in children.</p>
<p>What Does Not Work</p> <p>Plasma Exchange or Intravenous Immunoglobulin Treatment (IVIG)</p>	<p>Blood transfusions to alter levels of plasma or immunoglobulin.</p>

Juvenile Firesetting

<p>What Works</p>	<p>Currently no medication or psychological treatments meets these criteria.</p>
<p>What Seems to Work</p> <p>Cognitive Behavioral Therapy (CBT)</p> <p>Fire Safety Education</p>	<p>Structured treatments designed to intervene with children who set fires.</p> <p>Includes information about the nature of fire, how rapidly it spreads, and its potential for destructiveness, as well as information about how to maintain a fire-safe environment, utilizing escape plans and practice, and the appropriate use of fire.</p>
<p>What Does Not Work</p> <p>Ignoring the problem</p> <p>Satiation</p>	<p>Leaving the youth untreated is not beneficial because they typically do not outgrow this behavior and ignoring these behaviors may even increase dysfunctional behavior patterns.</p> <p>The practice of repetitively lighting and extinguishing fire. Satiation may cause youth to feel more competent around fire and actually increase the behavior.</p>

Juvenile Offenders

What Works	
Multisystemic Therapy (MST)	Integrative, family-based treatment with a focus on improving psychosocial functioning for youth and families.
Functional Family Therapy (FFT)	Family-based program that focuses on delinquency, treating maladaptive and acting out behaviors, and identifying obtainable changes.
Multidimensional Treatment Foster Care (MTFC)	As an alternative to corrections, MTFC places juvenile offenders who require residential treatment with carefully trained foster families who provide youth with close supervision, fair and consistent limits, consequences and a supportive relationship with an adult.
Cognitive Behavioral Therapy (CBT)	Structured, therapeutic approach that involves teaching youth about the thought-behavior link and working with them to modify their thinking patterns in a way that will lead to more adaptive behavior in challenging situations.
Dialectical Behavior Therapy (DBT)	Therapeutic approach that includes individual and group therapy components and specifically aims to increase self-esteem and decrease self-injurious behaviors and behaviors that interfere with therapy.
What Seems to Work	
Family Centered Treatment (FCT)	FCT seeks to address the causes of parental system breakdown while integrating behavioral change. FCT provides intensive in home services and is structured into four phases: joining and assessment; restructuring; value change; and generalization.
Brief Strategic Family Therapy	A short-term, family-focused therapy that focuses on changing family interactions and contextual factors that lead to behavior problems in youth.
Aggression Replacement Therapy (ART)	A short-term, educational program that focuses on anger management and provides youth with the skills to demonstrate non-aggressive behaviors, decrease antisocial behaviors, and utilize prosocial behaviors

Non-Suicidal Self-Injurious Behavior (NSIB)

What Works	Currently no medication or psychological treatments meets these criteria.
What Seems to Work	
Cognitive Behavioral Therapy (CBT)	Involves providing skills designed to assist youth with affect regulation and problem solving
Dialectical Behavior Therapy (DBT)	Similar to CBT, but additionally involves an emphasis on acceptance strategies.

Obsessive-compulsive Disorder (OCD)

What Works	
Exposure and Response Prevention (ERP)	Individual child (probably efficacious); family-focused individual and family-focused group treatments (possibly efficacious). ERP meets well-established criteria for adult OCD.
Selective reuptake inhibitors (SRIs)	Clomipramine: Approved for children age 10 years and older. Recommend periodic ECG monitoring.
Selective Serotonin Reuptake Inhibitors (SSRIs)	Newer than SRIs, SSRIs primarily affect the serotonin neurotransmitters: Fluoxetine (Prozac): Approved for children 8 yrs + Sertraline (Zoloft): Approved for children 6 yrs + Fluvoxamine (Luvox): Approved for children 8 years +
Not Adequately Tested	
Cognitive Therapy only Psychodynamic Therapy Client-centered Therapy	Systematic controlled studies have not been conducted using these approaches.
What Does Not Work	
Antibiotic Treatments	Antibiotic treatments are only indicated when the presence of an autoimmune or strep-infection has been confirmed and coincided with onset or increased severity of OCD symptoms.
Herbal Therapies	Herbs such as St. John's Wort have not been rigorously tested and are not FDA-approved. In some instances, herbal remedies may make symptoms worse or interfere with pharmacological treatment.

Pediatric Bipolar Disorder (PBD)

What Works	Currently no medication or psychological treatments meets these criteria.
What Seems to Work	
Mood stabilizers/ Anticonvulsants	Lithium, divalproex sodium
Second-generation Antipsychotics	Clozapine, risperidone, olanzapine, quetiapine
Family-focused Psychoeducational Therapy (FFT)	Family therapy format. Helps adolescents make sense of their illness and accept it, along with their medications. Also helps to manage stress, reduce negative life events, and promote a positive family environment.
Child- and family-focused Cognitive Behavioral Therapy (CFF-CBT)	Emphasizes individual psychotherapy with children and parents, parent training and support, and family therapy
Multifamily Psychoeducation Groups (MFPG)	Child and parent group therapy has been shown to increase parental knowledge, promote greater access to services, and increase parental social support for youth.
Not Adequately Tested	
Interpersonal social rhythm therapy	No current evidence of its usefulness for youth.

Sexual Offending

What Works	Currently no medication or psychological treatments meets these criteria.
What Seems to Work	
Multisystemic Therapy (MST)	Intensive family and community-based treatment addressing the multiple factors of serious antisocial behavior in juvenile sexual abusers.
Residential Sexual Offender Treatment	May be necessary for public safety. For offenders, addresses both sexual and non-sexual behaviors and provides milieu treatment that is delivered by trained staff in a highly structured setting. Length of stay varies.
Community-based Programming	Effective element to treatment continuum; offers advantage of shortening residential lengths of stay, and improving post-residential transitioning.
Not Adequately Tested	
Selective Serotonin Reuptake Inhibitors (SSRIs)	Impacts sexual preoccupations, sex drive, and arousal.

Substance Use Disorders

What Works	
Cognitive Behavioral Therapy (CBT)	A structured therapeutic approach to teaching youth about the thought-behavior link and working with them to modify their thinking patterns in a way that leads to more adaptive behavior in challenging situations.
Family Therapy	Aimed at providing education, improving communication and functioning among family members, and reestablishing parental influence through parent management training. <i>NOTE: Only specific family therapies have been tested; not ALL family therapies are considered effective.</i>
Multisystemic Therapy (MST)	An integrative, family-based treatment focusing on improving psychosocial functioning for youth and families.
What Seems to Work	
Behavioral Therapies	Treatment which focuses on identifying specific problems and areas of deficit and working on improving these behaviors.
Motivational Interviewing Approaches	A brief treatment approach to increase motivation for behavior change. It focuses on expressing empathy, discrepancies, avoiding argumentation, rolling with resistance, and supporting self-efficacy.
Some Medications	Psychopharmacological medication can be used for detoxification purposes, as directed by a doctor. Medication may also be used to treat comorbid mental health disorders.
What Does Not Work	
Interpersonal and Psychodynamic Therapies	Methods of individual counseling often incorporated into the treatment plan and focusing on unconscious psychological conflicts, distortions, and faulty learning.
Client-centered Therapies	Creates a non-judgmental environment, such that the therapist provides empathy and unconditional positive regard. This facilitates change and solution-making on behalf of the client.
Psychoeducation	Educates youth on substance use and may cover topics like peer pressure and consequences of substance use.
Project CARE	Raises awareness about chemical dependency through education and training.
Twelve-Step Programs	Uses steps as principles for treating addictive behaviors.
Process Groups	A type of psychotherapy that is conducted in small groups which can be specialized for specific purposes; therapy utilizes the group as a mechanism of change.

Trauma

<p>What Works</p> <p>Trauma-focused Cognitive Behavioral Therapy (TF-CBT)</p>	<p>Treatment that involves reducing negative emotional and behavioral responses related to trauma, by providing psychoeducation on trauma, addressing distorted beliefs and attributes related to trauma, introducing relaxation and stress management techniques, and developing a trauma narrative in a supportive environment.</p>
<p>What Seems to Work</p> <p>School-Based Group Cognitive Behavioral Therapy (CBT)</p>	<p>Similar components to TF-CBT, but in a group, school-based format.</p>
<p>Not Adequately Tested</p> <p>Child-centered Play Therapy</p> <p>Psychological Debriefing</p> <p>Pharmacological Treatments</p>	<p>Therapy that utilizes child-centered play to encourage expression of feelings and healing.</p> <p>An approach in which youth talk about the facts of the trauma (and associated thoughts and feelings) and then are encouraged to reenter into the present.</p> <p>Treatment with selective serotonin reuptake inhibitors (SSRIs).</p>
<p>What Does Not Work</p> <p>Restrictive rebirthing or holding techniques</p>	<p>Restrictive rebirthing or holding techniques may forcibly bind, restrict, coerce, or withhold food or water from children and have resulted in some cases of death and are not recommended.</p>

Youth Suicide

<p>What Works</p>	<p>Currently no medication or psychological treatments meets these criteria.</p>
<p>What Seems to Work</p> <p>Dialectical Behavior Therapy (DBT)</p> <p>Cognitive Behavioral Therapy (CBT)</p> <p>Interpersonal Therapy</p> <p>Psychodynamic Therapy</p> <p>Family Therapy</p> <p>Selective serotonin reuptake inhibitors (SSRIs) for co-occurring disorders</p>	<p>Outperformed the treatment for the control group in reducing suicide attempts. However, it did not help reduce depressive symptoms.</p> <p>Psychotherapy, while not by itself an evidence-based practice, is an important component to the treatment of suicidality in youth. A minimum standard of therapy should be adapted to the youth. All are options when choosing a treatment modality.</p> <p>Necessary to closely monitor youth taking SSRIs because of the risk that SSRIs can increase suicidality in youth and young adults under age 24.</p>
<p>What Does Not Work</p> <p>No-suicide Contracts</p> <p>Tricyclic Antidepressants</p> <p>Benzopines</p> <p>Barbiturates</p>	<p>Study findings are diverse; there have been results which find that that using the contract reduces suicidal behavior and others suggesting that they increase suicidal behavior.</p> <p>Not recommended because their effectiveness has not been demonstrated. They can potentially be lethal due to the small difference between therapeutic and toxic doses.</p> <p>Should be used with great caution as they may result in impulsivity.</p> <p>Should be used with great caution as they may result in impulsivity.</p>

AJUSTMENT DISORDERS

Introduction

Causes and Risk Factors

Classifications

Diagnosis

Comorbidity

Evidence-based Treatments

Psychotherapy

Pharmacological Treatment

Introduction

An adjustment disorder is a behavioral response to a stressful event or variation in a child or adolescent's life that is not a healthy response to the event or change (Medical Center of Central Georgia, 2002). Youth who experience distress in excess of what is an expected response may experience significant impairment in normal daily functioning and activities (Institute for Health, Health Care Policy and Aging Research, 2002).

Adjustment disorders in youth are created by factors similar to those in adults. Factors that may contribute to the development of adjustment disorders are the nature of the stressor, vulnerabilities of the child, and intrinsic and extrinsic factors (Benton & Lynch, 2009). In order to be diagnosed as an adjustment disorder, the child's reaction must occur within three months of the identified event (Medical Center of Central Georgia, 2002). Typically, the symptoms do not last more than six months, and the majority of children quickly return to normal functioning (United Behavioral Health, 2002). Adjustment disorders differ from post-traumatic stress disorder (PTSD) in that PTSD usually occurs in reaction to a life-threatening event and may be longer-lasting (Access Med Health Library, 2002).

In 1997, the U.S. Department of Health and Human Services, the Substance Abuse and Mental Health Service Administration (SAMHSA) and Center for Mental Health Services conducted a client/patient sample survey of 8,000 children in mental health facilities. These children were randomly selected and surveyed in order to calculate national estimates of mental health services. The findings of the study indicated that 16 percent of the children who were admitted had an adjustment disorder (Institute for Health, Health Care Policy and Aging Research, 2002). In clinical samples of children and adolescents, males and females are equally likely to be diagnosed with an adjustment disorder (American Psychiatric Association [APA], 2000).

The following information is attributed to the University of Chicago Comer Children's Hospital (2005). Adjustment disorders occur at all ages; however, characteristics of the disorder in children and adolescents are different from those in adults. Differences are noted in the symptoms experienced, severity and duration of symptoms, and in outcomes. Adolescent symptoms of adjustment disorders are more behavioral, such as acting out, while adults experience more depressive symptoms.

Causes and Risk Factors

Adjustment disorders are a behavioral or emotional reaction to an outside stressor and, accordingly, there is no single trigger between the stressor and the child's reaction to it (Medical Center of Central Georgia, 2002). Because children possess varying dispositions, as well as different vulnerabilities and coping skills, it is impossible to attribute a single cause to this mental disorder. The developmental stage of the child and the strength of the child's support system influence their reaction to the stressor (Medical Center of Central Georgia). There is no evidence to indicate that biological factors influence the cause of adjustment disorders. The common thread is that stress is the precipitating factor (Benton & Lynch, 2009).

According to Benton and Lynch (2009), an important factor in the development of an adjustment disorder is the vulnerability of the child. Vulnerability depends on the characteristics of both the child and the child's environment. Unfortunately, there is no reliable assessment available to identify this as a variable.

Classifications

According to the University of Chicago Comer Children's Hospital, in adjustment disorders, the reaction to the stressor is beyond a normal reaction or the reaction significantly interferes with social, occupational, or educational functioning (2005). There are six subtypes of adjustment disorder that are based on the major symptoms experienced. In children and adolescents, however, there may be a predominance of mixed, rather than discrete, symptom presentations (Newcorn & Strain, 1992).

Clinical symptoms in children and adolescents differ from those in adults (Benton & Lynch, 2009). Research has revealed that, in children and adolescents, more serious mental health disorders were present after five years of follow-up (Andreasen & Hoenk, as cited by Benton & Lynch).

The following six types of adjustment disorders are listed in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR)*:

- Adjustment disorder with depressed mood: Symptoms are that of a minor depression.
- Adjustment disorder with anxious mood: Symptoms of anxiety are dominant.
- Adjustment disorder with mixed anxiety and depressed mood: Symptoms are a combination of depression and anxiety.
- Adjustment disorder with disturbance of conduct: Symptoms are demonstrated in behaviors that break societal norms or violate the rights of others.
- Adjustment disorder with mixed disturbance of emotions and conduct: Symptoms include combined affective and behavioral characteristics with mixed emotional features and with disturbance of conduct.
- Adjustment disorder not otherwise specified: This residual diagnosis is used when a maladaptive reaction that is not classified under other adjustment disorders but occurs in response to stress.

Source: Benton & Lynch, 2009.

Table 1 outlines these classifications.

Diagnosis

Because most features of adjustment disorders are subjective (e.g., the stressor, the maladaptive reaction, the accompanying mood and feature, and the time and relationship between the stressor and the response), these disorders can be particularly difficult to diagnose (Benton & Lynch, 2009). A qualified mental health professional should assess the child for an adjustment

disorder following a comprehensive psychiatric evaluation and interview with the child and the family (Medical Center of Central Georgia, 2002). Specifically, a personal history appraising development, life events, emotions, behaviors, and the identified stressful event is performed during the assessment process in order to correctly diagnose the adjustment disorder (Medical Center of Central Georgia). Table 2 outlines the characteristics of adjustment disorders.

Table 1

Classifications of Adjustment Disorders

Adjustment Disorder	Symptoms
With depressed mood	Depressed mood Tearfulness Feelings of hopelessness
With anxiety	Nervousness Worry Jitteriness Fear of separation from major attachment figures
With depressed mood and anxiety	Combination of symptoms from both of the above subtypes is present (depressed mood and anxiety).
With disturbance of conduct	Violation of the rights of others and/or societal norms and rules (truancy, destruction of property, reckless driving, fighting).
With mixed disturbance of emotions and conduct	Combination of symptoms from both of the above subtypes is present (depressed mood, anxiety, and conduct).
Unspecified	Reactions to stressful events that do not fit into one of the subtypes above; reactions may include behaviors such as withdrawal or inhibitions to normally expected activities (school or work).

Source: University of Chicago Comer Children's Hospital, 2005.

Table 2

Characteristics of Adjustment Disorders

- Disorders occur equally in males and females.
- Stressors and symptoms may vary, depending on cultural influences.
- Children's disorders characteristics differ from adults'.
- Adolescent's symptoms are more behavioral; adult's are more depressive.

Source: Medical Center of Central Georgia, 2002.

Comorbidity

Benton & Lynch (2009) indicate that adjustment disorders are most likely to occur with personality disorders, anxiety disorders, and affective disorders. More studies are needed to focus on the association between adjustment disorders and other mental disorders, including substance abuse disorders. In children, adjustment disorders are also most likely to occur with conduct or behavioral problems (Wood, 2003). Patients with adjustment disorders may engage in deliberate self-harm at a rate that surpasses most other disorders and may also have an increased risk for substance abuse disorders (Benton & Lynch).

Evidence-based Treatments

The consensus on treating adjustment disorders is that, because an adjustment disorder is a psychological reaction to a stressor, the stressor must be identified and communicated by the child (Benton & Lynch, 2009). If the stressor is eliminated, reduced, or accommodated (Strain, as cited by Benton & Lynch), the child’s maladaptive response can also be reduced or eliminated. Accordingly, treatment of adjustment disorder usually involves psychotherapy that seeks to reduce or remove the stressor or improve coping ability.

Treatments for adjustment disorders must be customized to the needs of the child, based on the child’s age, health and medical history (Medical Center of Central Georgia, 2002). Other determining factors include the extent of the symptoms and the subtype of the adjustment disorder.

For this review, treatments are divided into two categories: What Seems to Work and What Does Not Work. These treatments are discussed in the paragraphs which follow and outlined in Table 3.

Table 3

Summary of Treatments for Adjustment Disorder

What Seems to Work	Description
Interpersonal Psychotherapy (IPT)	IPT has the most support in that it helps children and adolescents address problems in their relationships so that they can become less depressed.
Cognitive Behavioral Therapy (CBT)	CBT is used to improve age-appropriate problem-solving skills, communication skills, and stress management skills. It also helps the child’s emotional state and support systems to enhance adaptation and coping.
Stress Management	Stress management is particularly beneficial in cases of high stress and helps the youth learn how to manage stress in a healthy way.
Group Therapy	Group therapy is beneficial in cases of high stress.
Family Therapy	Family therapy is helpful for identifying needed changes within the family system. These changes may include improving communication skills and family interactions and increasing support among family members.
What Does Not Work	Description
Pharmacology alone	Medication is seldom used as a singular treatment because it does not provide assistance to the child in learning how to cope with the stressor.

Sources: Commission on Youth Graphic of citations provided in text.

Psychotherapy

Psychotherapy is the treatment of choice for adjustment disorders, since the symptoms are a direct reaction to a specific stressor (Turkington, 1995). However, the type of therapy depends on the needs of the child, with the focus being on addressing the stressors and resolving the problem. Interpersonal psychotherapy (IPT) has the most support for treating children with adjustment disorders (Society of Clinical Child and Adolescent Psychology, 2006). For depressed adolescents, IPT is a well-established treatment (Mufson et al., 2004). IPT helps children and adolescents to address problems in their relationships with family members and friends so that they can become less depressed (Society of Clinical Child and Adolescent Psychology). Typically, IPT takes place in an individual format, in which the clinician works one-on-one with the child and his/her family. One

study reported that adolescents who received IPT had significant reductions in their depressive symptoms and noted improvements in their social functioning (Mufson et al.) The largest treatment effect was noted in adolescents who are older and more severely depressed (Mufson et al.).

Brief treatment using cognitive-behavioral strategies shows promise (Society of Clinical Child and Adolescent Psychology, 2006). Cognitive-behavioral approaches are used to improve age-appropriate problem solving skills, communication skills, impulse control, anger management skills, and stress management skills (Medical Center of Central Georgia, 2002). Additionally, therapy assists with formatting an emotional state and support systems to enhance adaptation and coping (Benton & Lynch, 2009).

Research conducted by Strain, as cited by Benton & Lynch (2009), suggests that the goals of psychotherapy should include the following:

- analyze the stressors affecting the child, and determine whether they can be eliminated or minimized;
- clarify and interpret the meaning of the stressor for the child;
- reframe the meaning of the stressor;
- illuminate the concerns and conflicts the child experiences;
- identify a means to reduce the stressor;
- maximize coping skills; and
- assist the child to gain perspective on the stressor and manage themselves and the stressor.

Stress management and group therapy are particularly beneficial in cases of work and/or family stress. Family therapy is frequently utilized, with the focus being on making needed changes within the family system. These changes may include improving communication skills and family interactions and increasing support among family members (Medical Center of Central Georgia, 2002).

Preventive measures to reduce the incidence of adjustment disorders in children are not known at this time. However, early detection and intervention can reduce the severity of symptoms, enhance the child's normal growth and development, and improve the quality of life experienced by children or adolescents with adjustment disorders (University of Chicago Comer Children's Hospital, 2005).

Pharmacological Treatment

Medication is seldom used as a single treatment for adjustment disorders because the child requires assistance in coping with the stressor, as well as his/her reaction to it. However, targeted symptomatic treatment of the anxiety, depression, and insomnia that occur with adjustment disorders may effectively augment therapy, but is not recommended as the primary treatment for adjustment disorders. As cited in Benton & Lynch (2009), in a retrospective study of 72 adolescents diagnosed with adjustment disorder, researchers Ansari & Matar found that disappointment in relationships was the primary stressor causing the disorder. Accordingly, the symptoms of the disorder must be addressed through psychotherapy, rather than pharmacology.

If a clinician determines that pharmacotherapy is necessary, short-term use of anxiolytics and hypnotics may be beneficial. Some research findings also suggest that selective serotonin reuptake inhibitors (SSRIs) may help relieve depressive symptoms, especially in adolescents (Society of Clinical Child and Adolescent Psychology, 2006). A more detailed discussion of the use of antidepressants in treating children and adolescents is included in the "Antidepressants and the Risk of Suicidal Behavior" section of the *Collection*.

Sources

Access Med Health Library. (2002). Adjustment Disorders. [Online]. Available: <http://www.ehendrick.org/healthy/index.htm>. *Not available November 2010.*

- American Psychiatric Association (APA). (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.) (DSM-IV-TR). Washington, DC: Author.
- Benton, T., & Lynch, J. (2009). Adjustment Disorders. *EMedicine*. [Online]. Available: <http://www.emedicine.com/Med/topic3348.htm>. [December 2010].
- Institute for Health, Health Care Policy and Aging Research. (2002). *Update: Latest Findings in Children's Mental Health*, 1 (1). [Online]. Available: <http://www.ihhpcpar.rutgers.edu/downloads/issuebrief.pdf>. [December 2010].
- Medical Center of Central Georgia. Child and Adolescent Mental Health. (2002). *Adjustment Disorders*. [Online]. Available: <http://www.mccg.org/childrenshealth/content.asp?PageID=P02567>. [January 2008].
- Mufson, L., Pollack, K., Wickramaratne, P., Nomura, Y., Olfson, M., & Weissman, M. (2004). A Randomized effectiveness trial of interpersonal psychotherapy for depressed adolescents. *Archives of General Psychiatry*, 61, 577-584. [Online]. Available: <http://archpsyc.highwire.org/cgi/content/full/61/6/577>. [December 2010].
- Newcorn, J., & Strain, J. (1992). Adjustment disorder in children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, 31 (2), 318-326.
- Society of Clinical Child and Adolescent Psychology. (2006). *Evidence-based treatment for children and adolescents*. American Psychological Association & the Network on Youth Mental Health. [Online]. Available: <http://www.wjh.harvard.edu/~nock/Div53/EST/index.htm>. [December 2007]. *Not available November 2010.*
- Turkington, C. (1995). *Gale Encyclopedia of Medicine*. Adjustment Disorders.
- United Behavioral Health. (2002). Preferred Practice Treatment Guidelines. Adjustment Disorders. [Online]. Available: <http://www.ubhonline.com/html/guidelines/preferredPracticeGuidelines/adjustmentdisorders.html>. *Not available November 2010.*
- University of Chicago Comer Children's Hospital. (2005). Adjustment disorders. *Child and Adolescent Mental Health Home Page*. [Online]. Available: <http://www.uchicagokidshospital.org/online-library/content=P02553>. [August 2005].
- Wood, D. (2003). Adjustment disorders. *Mental Health Matters*. [Online]. Available: <http://www.mental-health-matters.com/articles/article.php?artID=50>. [August 2005]. *Not available November 2010.*

Additional Resources

- Horowitz, Mardi Jon. *Stress Response Syndromes: PTSD, Grief, and Adjustment Disorders*. (Hardcover - August 1997).
- Luther, S., Burack, J., & Cicchetti, D. *Developmental Psychopathology: Perspectives on Adjustment, Risk, and Disorder*. London: Cambridge University Press, 1997.
- Newcorn, J., & Strain, J. Adjustment Disorder in Children and Adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, 31 (March 1992), 318-327.

Noshpitz, J., & Coddington, R. (Ed.). *Stressors and the Adjustment Disorders* (Wiley Series in General and Clinical Psychiatry). Paperback. 1990.

Organizations

American Academy of Child Adolescent Psychiatry (AACAP)

<http://www.aacap.org>

Child Welfare Information Gateway

<http://www.childwelfare.gov>

Internet Mental Health

<http://www.mentalhealth.com>

Mental Health Matters

http://www.mental-health-matters.com/disorders/dis_details.php?disID=2

New York University School of Medicine Child Study Center

<http://www.aboutourkids.org>

U.S. Department of Health and Human Services

<http://www.hhs.gov>

ATTENTION DEFICIT HYPERACTIVITY DISORDER

- Introduction**
- Causes and Risk Factors**
- Assessment**
- Diagnostic Categories**
- Comorbidity**
- Evidence-based Treatments**
 - Psychological Treatments*
 - Pharmacological Treatments*
- Unproven Treatments**
- Cultural Considerations**

Introduction

Attention Deficit Hyperactivity Disorder (ADHD) is one of several childhood disorders brought into the public arena in recent years. It is found in an estimated 5 to 10 percent of children and adolescents. ADHD is characterized by multiple symptoms and persistent patterns of overactivity, impulsiveness, inattention and distractibility (Murphy, Cowan & Sederer, 2001).

A survey administered to a nationally representative sample of children ages eight to 15 in the United States found that close to nine percent reported meeting the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR)* (American Psychiatric Association [APA], 2000) criteria for ADHD (Froehlich, as cited by Busko, 2007). However, among children meeting the criteria, only 47 percent had been diagnosed and only 32 percent were receiving treatment (Froehlich, as cited by Busko).

ADHD is a chronic disorder. Contrary to previous theories, children with ADHD typically do not outgrow the disorder, although they may experience some reduction in symptoms of hyperactivity. Studies report that as many as 80 percent of children diagnosed with ADHD will continue to show symptoms of ADHD into adolescence and as many as 65 percent will remain symptomatic into adulthood (American Academy of Child & Adolescent Psychiatry [AACAP], 2007).

Numerous studies of youth with ADHD have documented chronic and serious impairment in social and emotional, family, and academic functioning (Anastopoulos, Guevremont, Shelton & DuPaul, 1992; Anastopoulos, Shelton, DuPaul & Guevremont, 1993; Barkley, Anastopoulos, Guevremont & Fletcher, 1992; Barkley, Edwards, Laneri, Fletcher & Metevia, 2001; Cunningham, Benness & Siegel, 1988; Whalen, Jamner, Henker, Delfino & Lozano, 2002). Youth with ADHD are more likely than their non-ADHD peers to engage in risky behaviors, including tobacco and alcohol use (Barkley, Anastopoulos, Guevremont & Fletcher, 1991). Compared to their peers, these youth have more difficulty in school, are more likely to be retained a grade, and are less likely to graduate from high school (Barkley, Anastopoulos, Guevremont, & Fletcher, 1991). Moreover, these youth frequently experience peer rejection and academic and social difficulties which may have long-term effects.

Causes and Risk Factors

Mounting evidence has demonstrated a neurological and a genetic basis for ADHD (AACAP, 2007). Studies in the past 20 years involving twins, adoptions, and molecular investigations have confirmed this genetic link (MediFocus, 2002). A child diagnosed with ADHD is more likely than one without ADHD to have family members with the disorder. The heritability of ADHD averages approximately 80 percent, rivaling the heritability factor for the trait of height (Barkley, 2001).

Deficits in executive functioning in the frontal lobes of the brain are associated with the core features of ADHD (AACAP, 2007). Executive functions include planning, inhibition of behavior, and selection of attention. Brain imaging studies have shown that many youth with ADHD show differences in brain function and structure in areas of the brain responsible for executive functions (Bush, Valera & Seidman, 2005; Castellanos et al., 2002; Sowell, Thompson, Welcome, Henkenius, Toga & Peterson, 2003).

A study conducted by the National Institute of Mental Health (NIMH) linked ADHD to changes in production of the brain's chemical dopamine (2007). Evidence from several previous studies led scientists to suspect involvement of a gene that codes for a receptor protein, which binds to the brain's chemical messenger dopamine. Children possessing a variant of this gene had an increased risk of having ADHD (NIMH). The report indicated that this version of the dopamine D4 receptor gene, called the 7-repeat variant, accounted for approximately 30 percent of the genetic risk for ADHD, making it by far the strongest candidate gene implicated in the disorder (NIMH). Traits linked to the 7-repeat version may include novelty-seeking and impulsiveness (NIMH). Researchers are following up with studies on the relationship between cortex thickness and the cognitive features present in ADHD (NIMH).

Assessment

Careful assessment is critical to meeting the needs of youth with ADHD. An appropriate and comprehensive assessment of ADHD includes gathering information from multiple sources, assessing functioning in multiple domains, ruling out alternative diagnoses, and assessing for comorbid conditions (AACAP, 2007). Diagnosis of ADHD should be made by a professional with training in ADHD or in the diagnosis of mental disorders (NIMH, 2007). Those most often trained in diagnosing ADHD are child psychiatrists, psychologists, developmental/behavioral pediatricians, behavioral neurologists and, in some cases, clinical social workers (NIMH).

A multimodal strategy should be used to assess for the presence of ADHD. A diagnosis of ADHD requires that the symptoms be present and affect multiple domains of the youth's life (APA, 2000). Therefore, assessment should involve the youth, the parents/caregivers, and the teachers. Accordingly, it is important to assess the youth's functioning at home, school, day care or in other settings (AACAP, 2007). Structured clinical interviews should be used to determine the presence, duration and age of onset for each symptom. Validated behavior rating scales should also be completed by parents and teachers to compare the youth's behavior to established normative behavior (AACAP). Onset should be before age seven and follow a chronic course (APA, 1994). Although most parents notice inattention, hyperactivity, and impulsivity before their child is school age, these symptoms may go unnoticed until the child runs into problems at school (NIMH, 2003). An alternative diagnosis should be considered if the majority of symptoms began after age seven, there are patterns of remission, or symptoms are present in only one setting (e.g., at home or at school).

Before diagnosing a child with ADHD, the clinician should rule out other potential reasons for the child's behavior. Behaviors which mimic ADHD may be the result of a sudden change in the child's life, undetected seizures, a middle ear infection causing hearing problems, medical disorders affecting brain functioning, a learning disability, communication disorders, anxiety or depression

(NIMH, 2003). Children should be referred to a specialist for additional testing if seizures or other medical disorders are suspected (AACAP, 2007). A qualified professional should administer tests of intelligence and learning achievement to rule out whether a cognitive impairment is contributing to the symptoms or a learning disability is present (AACAP).

Comorbid conditions should also be assessed during an evaluation for ADHD. The presence of a comorbid disorder will influence treatment planning, especially pharmacological interventions. The diagnosis that is the most impairing to the child is usually the initial focus of treatment. In instances of disruptive behavior, the clinician must determine whether the disruptive behavior is the primary diagnosis or is secondary to ADHD (AACAP, 1994). If ADHD is the primary cause, it must be diagnosed and treated in most instances so that the secondary disruptive behavioral disorder can also be successfully addressed (AACAP). In other cases, the disruptive behaviors can be treated first. Similarly, other comorbid disorders, such as anxiety and depression, can be treated successfully either concurrently or before or after the treatment of ADHD.

Table 1 outlines evidence-based assessment tools for ADHD.

Table 1

Evidence-based Assessment Tools for ADHD

Structured Diagnostic Interviews

- NIMH Diagnostic Interview Schedule for Children-IV (NIMH DISC-IV, 1997).
- Schedule of Affective Disorders and Schizophrenia for School-Aged Children, Present and Lifetime Version (K-SADS-PL; Kaufman et al., 1996).
- Anxiety Disorders Interview Schedule (ADIS C/P; Jarrett, Wolff & Ollendick, 2007).

Behavior Rating Scales

- ADHD Rating Scale-IV (DuPaul, Power, Anastopoulos & Reid, 1998).
- Child Behavior Checklist/Teacher Report Form (www.aseba.org/index.html).
- Conners Rating Scale (Parent, Teacher, and Adolescent Self Report Scales; Conners 1997; Conners & Wells, 1997).
- Disruptive Behavior Disorders Rating Scale (Parent, Teacher, Youth Report Scales; Barkley, 1997).
- Home Situations Questionnaire-Revised (School and Home Situations Questionnaire-Revised; available: Barkley, 1990).

Sources: Commission on Youth Graphic of citations provided in table.

Diagnostic Categories

The three subtypes of ADHD are Hyperactive-Impulsive Type, Predominantly Inattentive Type and Combined Type (APA, 2000):

- Hyperactive-Impulsive Type is used to describe children who present with a greater number of symptoms (six or more) of hyperactivity (excessive talking, restlessness, excessive climbing) and impulsivity (blurting, difficulty waiting turns), but have fewer than six symptoms of inattention.
- Predominantly Inattentive Type is used when the child shows greater number of symptoms (six or more) of inattention (difficulty maintaining attention, easily distracted, poor organization). (Predominantly Inattentive Type is sometimes referred to as ADD, although the preferred term is ADHD, Predominately Inattentive Type.)
- Combined Type is the most common form of ADHD (Kids Health, 2005). This subtype should be used to describe children who present six or more symptoms of both inattention and hyperactive-impulse and these symptoms of hyperactivity-impulsivity have persisted for at least six months.

Comorbidity

According to the NIMH (2000), ADHD is not typically an isolated disorder and comorbidities may complicate research studies. ADHD can occur with learning disabilities (15 to 25 percent), language disorders (30 to 35 percent), conduct disorder (15 to 20 percent), oppositional defiant disorder (up to 40 percent), mood disorders (15 to 20 percent) and anxiety disorders (20 to 25 percent). Up to 60 percent of children with tic disorders also have ADHD. There is research which also estimates that 16 percent of youth with ADHD show signs of mania (Jensen, 2001). The estimates of comorbidity of ADHD and bipolar disorder are controversial due to some overlap in symptoms (Biederman, 1998).

Evidence-based Treatments

ADHD is a chronic disorder; therefore, management of symptoms is the goal of treatment. Treatment must be provided over long periods to assist those with ADHD in the on-going management of their disorder. A wide variety of treatments have been used to treat ADHD. Foremost is education of the family and school staff about ADHD and its management. A comprehensive treatment plan involving the youth, parents, and school personnel should be implemented to address all relevant areas of impairment. Current research suggests that a combination of behavioral and pharmacological treatments is the most effective (AACAP, 2007; Pelham & Fabiano, 2008).

Effective treatment includes the development and utilization of an appropriate educational program, behavior modification, parent, child and teacher education, counseling, and medication (Children and Adults with Attention Deficit Disorders [CHADD], 2001). Caregivers need to advocate for their children in academic settings. Children with ADHD may be eligible for special educational services in the public schools under both the Individuals with Disabilities in Education Act (IDEA: Public Law 101-476) and Section 504 of the Rehabilitation Act of 1973 (Public Law 93-112) (Barkley, 2001). IDEA governs special education requirements and Section 504 provides for reasonable accommodations for children with disabilities (Gephart, 2002). Caregiver involvement, under these laws, can help to optimize positive outcomes.

For this review, evidence-based treatments are divided into two categories: What Works and What Does Not Work. These treatments are outlined in Table 2 and in the paragraphs which follow.

Psychological Treatments

Behavior therapy is the psychological treatment of choice for ADHD (Pelham & Fabiano, 2008; AACAP, 2007). One behavior therapy which has consistently worked is classroom management. Another behavior therapy treatment approach that also has research support is behavioral parent training (Pelham & Fabiano).

Behavior therapy uses contingency management strategies (e.g., point/token reward systems, timeout, response cost) to reinforce appropriate behavior and reduce unwanted behaviors. Contingency management strategies employ reward systems which are designed to provide reinforcements to increase desired behaviors, including following directions, attentiveness or turn-taking. Rewards systems can take many forms including, but not limited to, points, stickers, poker chips or other tokens that can be traded for small prizes or special privileges. Careful consideration must be taken to ensure that rewards are age appropriate and salient to the youth. Young children may benefit more from tangible rewards, while adolescents may appreciate point systems to earn special privileges. Response-cost programs remove a reinforcer, or desired object or activity, when an undesirable behavior occurs in order to reduce that behavior. This can include loss of points or tokens from a reward system, loss of privilege or time-out. Time-outs—also called “time out from reinforcement”—are a form of response-cost used to decrease undesirable behaviors. For time-outs to be effective, they must remove children from a desirable activity (television, video games, contact with other children) and place them in a neutral location. Behavioral intervention systems can be put

in place both in the classroom and at home (Evans, Langberg, Raggi, Allen & Buvinger, 2005; Barkley, 2000).

Table 2

Summary of Treatments for ADHD

What Works – Psychological	Description
Behavioral Classroom Management (BCM)	BCM uses contingency management strategies, including teacher-implemented reward programs, token systems, time-out procedures and Daily Report Cards (DRCs). Clinicians or parents may work in consultation with teachers to develop a classroom treatment plan.
Behavioral Parent Training (BPT)	BPT teaches the parent to implement contingency management strategies similar to BCM techniques at home.
Intensive Behavioral Peer Intervention (BPI)	Intensive BPI is conducted in recreational settings, such as Summer Treatment Programs (STPs) (Pelham & Hoza, 1996) have demonstrated effectiveness and are considered well-established. However, STPs are less feasible to implement than other evidence-based practices (Pelham & Fabiano, 2008).
What Works – Pharmacological	Description
Stimulant: d-Amphetamine	Short-acting: Adderall, Dexedrine, DextroStat Long-acting: Dexedrine Spansule, Adderall XR, Lisdexamfetamine
Stimulant: Methylphenidate	Short-acting: Focaline, Methylin, Ritalin Intermediate-acting: Metadate ER, Methylin ER, Ritalin SR, Metadate CD, Ritalin LA Long-acting: Concerta, Daytrana patch, Focalin XR
Serotonin and Norepinephrine Reuptake Inhibitor (SNRI): Atomoxetine	Atomoxetine is unique in its ability to act on the brain's norepinephrine transporters without carrying the same risk for addiction as other medications.
What Does Not Work (Psychological/Pharmacological/Other)	Description
Cognitive, psychodynamic, client-centered therapies	Traditional talk therapies and play therapy have been demonstrated to have little to no effect on ADHD symptoms. ADHD is best treated with intensive behavioral interventions in the youth's natural environments.
Office-based social skills training	Neither once-weekly individual nor group office-based training have demonstrated significant improvement in social skills. (However, intensive group social skills training that use behavioral interventions, such as STPs, are considered well-established.)
Dietary Interventions	Interventions include elimination of food additives, elimination of allergens/sensitivities, and use of nutritional supplements.
Antidepressants	These include Bupropion (Wellbutrin), Imipramine (Tofranil), Nortriptyline (Pamelor, Aventil), Clonidine (Catapres) and Guanfacine (Tenex).

Sources: AACAP, 2007; Pelham & Fabiano, 2008.

Behavioral classroom management (BCM) has received the most support of any psychological treatment for youth with ADHD (Pelham & Fabiano, 2008). BCM are teacher implemented behavior modification strategies. Effective classroom management strategies include reward programs, point systems and time-outs. The Daily Report Card (DRC) (Jurbergs & Kelley, 2008) is another effective classroom management strategy included in many of the studies of BCM reviewed (Pelham & Fabiano; Pelham, Wheeler & Chronis, 1998). The DRC provides feedback to youth, parents, and/or the therapist about target behaviors occurring in the classroom, and bridges BCM and home-based interventions.

Behavioral parent training (BPT) teaches parents behavior management and discipline skills to extend treatment from the therapist's office to the home in order to address a wide array of problematic behaviors. The behavioral techniques used in parent training programs include positive reinforcement, time-out from reinforcement and/or response cost techniques. BPT takes many different forms, ranging from brief problem-focused programs to more extensive programs lasting 18 sessions or more in individual or group settings. The most frequent training method involves providing verbal instruction through one-on-one discussion with parents, followed by educational reading materials, such as pamphlets or manuals (Moreland, Schwebel, Beck & Wells, 1982). BPT has been shown to be effective in improving problematic child behavior and negative parent-child interactions.

Pharmacological Treatments

Pediatricians, family physicians, specialized psychiatrists or child psychiatrists most frequently prescribe stimulant medications for the treatment of ADHD. Studies have found a significant majority of children with ADHD derive benefits from these medications and that they are effective at reducing ADHD symptoms in the short-term (AACAP, 2007). Medications for ADHD act on dopaminergic pathways in the prefrontal cortex, striatum and nucleus accumbens (Sauer, Ring & Witcher, 2005) and increase the availability of dopamine in the brain.

The two most frequently prescribed medications for ADHD are methylphenidate and dexamphetamines (National Institute of Drug Abuse [NIDA], 2008), i.e., Adderall, Adderall XR. The tolerability and safety of stimulant medications are comparable, with all medications demonstrating similar side effects, including effects on cardiovascular functioning, sleep disturbance, appetite suppression, and anxiety (Wernicke & Kratochvil, 2002). The major drawback of stimulant medications is the lack of selectivity on the subcortical regions upon which they act. There is a marked potential for abuse of stimulant medications due to their effects on the brain (Bymaster et al., 2002; Wee & Woolverton, 2004). As a result, methylphenidate and dexamphetamine are listed as Schedule II drugs with the U.S. Food and Drug Administration (FDA).

Recently, the FDA approved a medication for treating ADHD that is not a stimulant (NIMH, 2003). Atomoxetine acts specifically on the prefrontal cortex to increase levels of dopamine and norepinephrine and leads to improved executive functioning and reduced ADHD symptoms. Atomoxetine is unique in its ability to act on norepinephrine transporters in the prefrontal cortex without acting on striatum or nucleus accumbens regions of the brain (Bymaster et al., 2002; Wee & Woolverton, 2004). The side effects of atomoxetine are similar to those of stimulant medications. Despite side effects, atomoxetine is considered well-tolerated in most children and adults (Spencer et al., 1998). An examination of four clinical trials reported to the FDA showed the percentage of overall discontinuation of use due to adverse events was 3.8 percent (Wernicke & Kratochvil, 2002). Other medications for ADHD, such as methylphenidate and dexamphetamine, act on the entire norepinephrine and dopamine regions, including the striatum and nucleus accumbens. Increases in dopamine in these regions of the brain are implicated in the reward system of the brain and heighten the potential for abuse. Because atomoxetine does not act on these regions, it does not carry the same risk of addiction and is not a scheduled drug (Sauer, Ring & Witcher, 2005).

Unproven Treatments

There is a long list of other interventions for the treatment of ADHD including: dietary replacement, exclusion or supplementation; various vitamin, mineral or verbal regimens; and perceptual stimulation. Other treatment approaches that were tested and found to have no support in recent studies include client-centered therapy, self-control training, skill development, and the combination of parent management training and self-verbalization (AACAP, 2007). It is important, however, to note that some of these treatments may offer benefits to the accompanying symptoms of ADHD, so further study is needed (Chorpita & Daleiden, 2007).

Anecdotal evidence of the effects of diet on ADHD abounds. Unfortunately, many studies on diet lack the rigorous scientific methods necessary to draw conclusions about their efficacy. Several foods are mentioned, particularly casein (derived from milk). More recently, gliadin (derived from wheat gluten) has been frequently cited (Lilienfeld, 2005). There are studies linking ADHD to certain food sensitivities. Some of the dietary elimination strategies showed intriguing results, suggesting the need for future research. One dietary study determined that food additives might have an impact on a child's hyperactivity level (Warner, 2004). Treatments focusing on mineral supplementation merit further study, but current data suggest that mineral supplementation is useful only when true deficiency has been demonstrated. Although these approaches have generated considerable interest and there are studies exploring various treatment strategies, the research does not currently support their use.

Antidepressant medications are sometimes prescribed "off-label" for the treatment of ADHD, meaning they have not been approved by the FDA for the treatment of ADHD. These include Bupropion, Imipramine, and Nortriptyline. Another class of medications prescribed off-label is α_2 -Adrenergic agonists, which include Clonidine and Guanfacine. These medications have not been researched sufficiently to determine their efficacy for the treatment of ADHD. Despite this, they are frequently used when either the symptoms do not respond to approved medications (stimulants or atomoxetine) or the side effects of other medications are intolerable (e.g., the increased risk of tics associated with stimulants) (AACAP, 2007).

Cultural Considerations

Research suggests that the prevalence of ADHD is similar in all youth, regardless of ethnicity. Caucasian youth, however, are significantly more likely to be diagnosed and receive treatment for ADHD (Eiraldi, Mazzuca, Clarke & Power, 2006). A combination of factors may impact the likelihood that minority youth are identified as having ADHD, including cultural perceptions of child behavior, the stigma of mental health problems and mistrust of mental health professionals. The lack of culturally sensitive assessment tools and the prevalence of stereotypes play a role in under-diagnosis or misdiagnosis (Eiraldi et al.). Further, there are prevailing barriers to treatment when families, regardless of ethnicity, are living below the poverty line. (Eiraldi et al.). As a result, it is critical that health care professionals receive training in multicultural mental health issues to ensure proper diagnosis and treatment of youth with ADHD. Recommendations include understanding how minority families perceive the youth's behavior, the use of culturally sensitive assessment methods, and education about the causes and treatment of ADHD, while maintaining respect for cultural beliefs.

Sources

American Academy of Child & Adolescent Psychiatry (AACAP). (2007). Practice parameter for the assessment and treatment of children and with attention-deficit/hyperactivity disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, 46, 894-921.

American Academy of Child & Adolescent Psychiatry (AACAP). (1994). Attention-deficit hyperactivity/disorder. *AACAP information on benefit coverage*. [Online]. Available: <http://www.aacap.org/clinical/beneadhd.htm>. *Not available November 2009*.

American Psychiatric Association (APA). (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.) (*DSM-IV-TR*). Washington, DC: Author.

American Psychiatric Association (APA). (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). (*DSM-IV*). Washington, DC: Author.

- Anastopoulos, A., Guevremont, D., Shelton, T., & DuPaul, G. (1992). Parenting stress among families of children with attention deficit hyperactivity disorder. *Journal of Abnormal Child Psychology*, 20 (5), 503-520.
- Anastopoulos, A., Shelton, T., DuPaul, G., & Guevremont, D. (1993). Parent training for attention deficit hyperactivity disorder: its impact on parent functioning. *Journal of Abnormal Child Psychology*, 21, 581-596.
- Barkley, R. (2007). *Defiant children: a clinician's manual for assessment and parent training* (2nd ed.). New York: NY: Guilford Press.
- Barkley, R. (2001). *ADHD fact sheet*. [Online]. Available: www.russellbarkley.org/adhd-facts.htm. [December 2010].
- Barkley, R. (2000). *Taking charge of ADHD: the complete, authoritative guide for parents*. New York: Guilford Press.
- Barkley, R. (1990). *Attention deficit hyperactivity disorder: a handbook for diagnosis and treatment*. New York: Guilford Press.
- Barkley, R., Anastopoulos, A., Guevremont, D., & Fletcher, K. (1991). Adolescents with attention deficit hyperactivity disorder: Patterns of behavioral adjustment, academic functioning, and treatment utilization. *Journal of the American Academy of Child and Adolescent Psychiatry*, 30, 752-761.
- Barkley, R., Anastopoulos, A., Guevremont, D., & Fletcher, K. (1992). Adolescents with ADHD: Mother-adolescent interactions, family beliefs and conflicts, and maternal psychopathology. *Journal of Abnormal Child Psychology*, 20, 263-288.
- Barkley, R., Edwards, G., Laneri, M., Fletcher, K., & Metevia, L. (2001). Executive functioning, temporal discounting, and sense of time in adolescents with attention deficit hyperactivity disorder (ADHD) and oppositional defiant disorder (ODD). *Journal of Abnormal Child Psychology*, 29 (6), 541-556.
- Biederman, J. (1998). Resolved: mania is mistaken for ADHD in prepubertal children, affirmative. *Journal of American Academy of Child and Adolescent Psychiatry*, 37, 1091-1093.
- Bush, G., Valera, E., & Seidman, L. (2005). Functional neuroimaging of attention-deficit/hyperactivity disorder: a review and suggested future directions. *Biological Psychiatry*, 57, 1273-1284.
- Busko, M. (2007). *Study finds almost 9% of American children meet DSM-IV criteria for ADHD*. Medscape Medical News.
- Bymaster, F., Katner, J., Nelson, D., Hemrick-Luecke, S., Threlkeld, P., Heiligenstein, J., & Perry, K. (2002). Atomoxetine increases extracellular levels of norepinephrine and dopamine in prefrontal cortex of rat: a potential mechanism for efficacy in attention deficit/hyperactivity disorder. *Neuropsychopharmacology*, 27 (5), 699-711.
- Castellanos, F., Lee, P., Sharp, W., Jeffries, N., Greenstein, D., Clasen, L., & Rapoport, J. (2002). Developmental trajectories of brain volume abnormalities in children and adolescents with attention deficit/hyperactivity disorder. *Journal of the American Medical Association*, 288, 1740-1748.

- Children and Adults with Attention Deficit Disorders (CHADD). (2001). *The disorder named AD/HD-CHADD Fact Sheet #1*. 2001.
- Chorpita, B., & Daleiden, E. (2007). *2007 biennial report: effective psychosocial interventions for youth with behavioral and emotional needs*. Child and Adolescent Mental Health Division, Hawaii Department of Health.
- Conners, C. (1997). *Conners Rating Scales-Revised*. Toronto: Multi-Health Systems.
- Conners, C., & Wells, K. (1997). *Conners Wells adolescent self-report scale*. Toronto: Multi-Health Systems.
- Cunningham, C., Benness, B., & Siegel, L. (1988). Family functioning, time allocation, and parental depression in the families of normal and attention-deficit hyperactivity children. *Journal of Clinical Child Psychology, 17*, 169-177.
- DuPaul, G., Power, T., Anastopoulos, A., & Reid, R. (1998). *ADHD rating scales-IV: Checklists, norms and clinical interpretation*. New York: Guilford Press.
- Eiraldi, R., Mazzuca, L., Clarke, A., & Power, T. (2006). Service utilization among ethnic minority children with ADHD: a model of help-seeking behavior. *Administration and Policy in Mental Health and Mental Health Services Research, 33* (5), 607-622.
- Evans, S., Langberg, J., Raggi, V., Allen, J., & Buvinger, E. (2005). Development of a school-based treatment program for middle school youth with ADHD. *Journal of Attention Disorders, 9*, 343-353.
- Gephart, H. (2002). *Diagnosis and treatment of ADHD: Professional interview series*. [Online]. Available: <http://www.athealth.com/Practitioner/HarlanGephartMD.html>. [May 2010].
- Jarrett, M., Wolff, J., & Ollendick, T. (2007). Concurrent validity and informant agreement of the ADHD module of the Anxiety Disorders Interview Schedule for DSM-IV. *Journal of Psychopathology and Behavioral Assessment, 29*, 159-168.
- Jensen, P., Hinshaw, S., Kraemer, H., Lenora, N., Newcorn, J., Abikott, H., & Virielio, B. (2001). ADHD comorbidity findings from the MTA study: comparing comorbid subgroups. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 147-158.
- Jurbergs, N., & Kelley, M. (2008). Daily report cards. In K. McBurnett & L. Pfiffner (Eds.). *Attention Deficit Hyperactivity Disorder: Concepts, Controversies, New Directions*. New York: Informa Healthcare.
- Kaufman, J., Birmaher, B., Brent, D., Rao, U., Flynn, C., Moreci, P., & Ryan, N. (1996). Schedule of affective disorders and schizophrenia for school aged children, present and lifetime version (K-SADS-PL). University of Pittsburgh: Pittsburgh, PA. [Online]. Available: <http://www.wpic.pitt.edu/ksads/default.htm>. [May 2010].
- Kids Health. (2005). *What is ADHD?* [Online]. Available: <http://www.kidshealth.org/parent/medical/learning/adhd.html>. [May 2010].
- Lilienfeld, S. (2005). Scientifically unsupported and supported interventions for childhood psychopathology: a summary. *Pediatrics, 115* (3), 761-764.

- MediFocus. (2002). *Attention deficit hyperactivity disorder*. [Online]. Available: http://www.medifocus.com/guide_detail.asp?gid=PS001&a=a. [May 2010].
- Moreland, J., Schwebel, A., Beck, S., & Well, R. (1982). Parents as therapists: a review of the behavior therapy parent training literature 1975 to 1981. *Behavior Modification*, 6 (2), 250-276.
- Murphy, M., Cowan, R., & Sederer, L. (2001). Disorders of childhood and adolescence. *Blueprints in psychiatry* (2nd ed.). Malden, Mass: Blackwell Science, Inc., (pp. 40-41).
- National Institute of Drug Abuse (NIDA). (2008). Stimulant ADHD Medications: Methylphenidate and Amphetamines. NIDA Info Facts. Available: <http://www.nida.nih.gov/pdf/infofacts/ADHD08.pdf>. [July 2010].
- National Institute of Mental Health (NIMH). (2000). *Attention deficit hyperactivity disorder. Questions and answers*. [Online]. Available: <http://www.nimh.nih.gov/publicat/adhdqa.cfm>. *Not available August 2005*.
- National Institute of Mental Health (NIMH). (2007). Gene predicts better outcome as cortex normalizes in teens with ADHD. *Science Update*. [Online]. Available: <http://www.nimh.nih.gov/science-news/2007/gene-predicts-better-outcome-as-cortex-normalizes-in-teens-with-adhd.shtml>. [May 2010].
- National Institute of Mental Health (NIMH). (2003). *Attention deficit hyperactivity disorder. Questions and answers*. [Online]. Available: <http://www.nimh.nih.gov/publicat/adhd.cfm>. *Not available May 2010*.
- National Institute of Mental Health (NIMH). (1998). *Diagnosis and treatment of attention deficit hyperactivity disorder*. NIH Consensus Statement Online. [Online]. Available: http://www.healthyplace.com/communities/add/nimh/diagnosis_treatment.htm. [May 2010].
- National Institute of Mental Health (NIMH). (1997). NIMH diagnostic interview schedule for children-IV (NIMH DISC-IV). [Online]. Available: <http://www.ncbi.nlm.nih.gov/pubmed/10638065>. *Not available November 2010*.
- Pelham, W., & Fabiano, G. (2008). Evidence-based psychosocial treatments for attention-deficit/hyperactivity disorder. *Journal of Clinical Child & Adolescent Psychology*, 37, 184-214.
- Pelham, W., & Hoza, B. (1996). *Psychosocial treatments for child and adolescent disorders: empirically based strategies for clinical practice*. Washington, DC: American Psychological Association.
- Pelham, W., Wheeler, T., & Chronis, A. (1998). Empirically supported psychosocial treatments for attention deficit hyperactivity disorder. *Journal of Clinical Child Psychology*, 27 (2), 190-205.
- Sauer, J., Ring, B., & Witcher, J. (2005). Clinical pharmacokinetics of atomoxetine. *Clinical Pharmacokinetics*, 44 (6), 571-590.
- Sowell, E., Thompson, P., Welcome, S., Henkenius, A., Toga, A., & Peterson, B. (2003). Cortical abnormalities in children and adolescents with attention-deficit hyperactivity disorder. *The Lancet*, 362 (9397), 1699-1707.

Spencer, T., Biederman, J., Wilens, T., Prince, J., Hatch, M., Jones, J., et al. (1998). Effectiveness and tolerability of tomoxetine in adults with attention deficit hyperactivity disorder. *American Journal of Psychiatry*, 155 (5), 693-695.

Warner, J. (2004). Food additives may affect kids' hyperactivity. *WebMD Health*. [Online]. Available: <http://webmd.com/content/article/87/99567.htm>. [December 2010].

Wee, S., & Woolverton, W. (2004). Evaluation of the reinforcing effects of atomoxetine in monkeys: comparison to methylphenidate and desipramine. *Drug and Alcohol Dependence*, 75, 271-276.

Wernicke, J., & Kratochvil, C. (2002). Safety profile of atomoxetine in the treatment of children and adolescents with ADHD. *Journal of Clinical Psychiatry*, 63(suppl 12), 50-55.

Additional Resources

Clark, L. (1985). *SOS! Help for Parents—A Practical Guide for Handling Common Everyday Behavior Problems*. Bowling Green, KY: Parents Press.

Identifying and Treating Attention Deficit Hyperactivity Disorder: A Resource for School and Home, 2003. [Online]. Available: U.S. Office of Special Education Programs. http://www.pluk.org/Pubs/Fed/ADHDresource_2003_421K.pdf.

U.S. National Institute of Health (NIH). (1998). Diagnosis and treatment of attention deficit hyperactivity disorder. *NIH Consensus Statement Online*, 16, 2. [Online]. Available: <http://consensus.nih.gov/1998/1998AttentionDeficitHyperactivityDisorder110html.htm>. [May 2010].

National Organizations

American Academy of Child & Adolescent Psychiatry (AACAP)

Children Who Can't Pay Attention/Attention-Deficit/Hyperactivity Disorder

http://www.aacap.org/cs/root/facts_for_families/children_who_cant_pay_attention/attention_deficit_hyperactivity_disorder

American Psychiatric Association (APA)

<http://www.ParentsMedGuide.org>

Attention Deficit Disorder Resources

<http://www.addresources.org>

Centers for Disease Control and Prevention (CDC)

Attention-Deficit/Hyperactivity Disorder

<http://www.cdc.gov/ncbddd/adhd/index.html>

Children and Adults with Attention Deficit Disorders (CHADD)

8181 Professional Place, Suite 201 – Landover, MD 20785

National Resource Center on ADHD

<http://www.help4adhd.org>

National Call Center – 800-233-4050

<http://www.chadd.org>

Virginia Resources

Children and Adults with Attention Deficit Disorders (CHADD)

Central Virginia Chapter

804-385-3139

Northern Virginia CHADD

24-Hour Information Line - 703-641-5451

www.novachadd.com

CHADD of Tidewater

866-633-4871 (Toll free)

CHADD Shenandoah Valley Satellite

540-241-4754

Virginia's Parental and Information Resource Center at PEATC

<http://www.pirc.peatc.org>

OPOSITIONAL DEFIANT & CONDUCT DISORDERS

Introduction

Oppositional Defiant Disorder

Conduct Disorder

Disruptive Behavior Disorder, Not Otherwise Specified

Causes and Risk Factors

Biological Factors

Psychological Factors

Social Factors

Assessment

Comorbidity

Evidence-based Treatments

Psychosocial Treatments

Pharmacological Treatments

Unproven Treatments

Cultural Considerations

Introduction

Disruptive behavior disorders (DBDs) are a cluster of disorders defined by the persistent presence of negative, defiant or rule-breaking behaviors which are disruptive to the youth's social, academic, familial or personal functioning. DBDs include oppositional defiant disorder (ODD) and conduct disorder (CD). A diagnosis of disruptive behavior disorder not otherwise specified (DBD-NOS) is available when patterns of behavior do not fit the criteria for ODD or CD, yet present significant disruption and impairment in functioning, and thus require intervention (American Psychiatric Association [APA], 2000). DBDs are associated with a pattern of escalating problem behaviors leading to negative life consequences, including social, academic, and occupational functioning, substance abuse and, potentially, incarceration (American Academy of Child & Adolescent Psychiatry [AACAP], 2007).

The *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR)*, provides the standard criteria for a diagnosis of DBDs (APA, 2000). The criteria for ODD, CD, and DBD-NOS are outlined in the paragraphs which follow.

Oppositional Defiant Disorder

According to Chandler (2002), ODD is a psychiatric disorder characterized by two different sets of problems: aggressiveness and a tendency to purposefully bother and irritate others. ODD is an enduring pattern of uncooperative, defiant, and hostile behavior to authority figures without major antisocial violations (Christophersen & Mortweet, 2001). Youth must demonstrate at least four of the following behaviors for at least six months to meet criteria for a diagnosis of ODD:

- often loses temper;
- often argues with adults;
- often actively defies or refuses to comply with adult's requests or rules;
- often deliberately annoys people;
- often blames others for his or her mistakes or misbehaviour;
- is often touchy or easily annoyed by others;
- is often angry or resentful; and
- is often spiteful or vindictive (APA, 2000).

Oppositional behaviors almost always manifest in the home setting and with adults the youth knows well. Behaviors may or may not be present in the school and/or community settings, and thus may not be present in the mental health professional's office (APA, 2000). In addition to the presence of the prerequisite number of symptoms, significant distress or impairment in functioning must also be present in order to make a diagnosis of ODD or other DBDs. This may include impairment in academic functioning, inability to form and maintain appropriate peer relationships, and/or familial distress (APA).

Conduct Disorder

Children and adolescents with CD exhibit persistent and critical patterns of misbehavior. These youth may have an issue with controlling their tempers, like children with ODD; however, they also violate the rights of others (Center for the Advancement of Children's Mental Health at Columbia University, 2000). Behaviors exhibited by children with CD include aggression towards people or animals, destruction of property, deceitfulness, theft, or serious violation of rules (Murphy, Cowan & Sederer, 2001).

Children diagnosed with CD have more difficulty in areas of academic achievement, interpersonal relationships, drugs, and alcohol use (Boesky, 2002). They also are often exposed to the juvenile justice system because of their delinquent or disorderly behaviors. For example, Ferguson and Horwood, (as cited in Boesky), found that 90 percent of children with three or more CD symptoms at age 15 were self-reported frequent offenders a year later, compared to 17 percent of children with no CD symptoms. In addition, according to Murphy, Cowan & Sederer (2001), 25 to 40 percent of children with CD have adult antisocial personality disorder later in life.

According to research compiled by Christophersen & Mortweet (2001), the diagnosis of CD is usually based on the persistence and the repetition of rule breaking and behaviors that violate the rights of others. CD may first occur in childhood or in adolescence and may have mild, moderate or severe classifications.

The information discussed in this paragraph is taken from Braithwaite, Duff & Westworth (2001). There are two specific subtypes of CD: childhood onset and adolescent onset. In the first, onset occurs before age 10, with the child's displaying one criterion. Youth diagnosed with childhood onset CD are typically male, often display physical aggression, have disturbed peer relationships, and may have had ODD during early childhood. These youth typically develop full criteria for CD before they reach puberty. In the second subtype, onset usually occurs during adolescence, and is defined by the absence of CD at the age of 10. These youth are less likely to display aggressive behaviors than youth in the first subtype. They will also have more normal peer relationships and are less likely to develop adult antisocial personality disorder.

Disruptive Behavior Disorder, Not Otherwise Specified (DBDNOS)

A diagnosis of DBD-NOS can be made when there is a clear indication of impairment or distress, but full diagnostic criteria for ODD or CD is not met. For example, ODD requires at least four symptoms be present for six months or longer. Youth who exhibit three criteria and have symptoms that cannot be explained by another disorder (e.g., attention deficit hyperactivity disorder [ADHD] or depression), and also experience significant problems in functioning, may be given a diagnosis of DBD-NOS rather than ODD. A diagnosis of DBD-NOS, ODD, or CD should not be given if the symptoms can be attributed to depression, anxiety, ADHD or adjustment disorder. Youth may exhibit increased irritability, loss of temper, and argue with adults during depressive episodes and should not be given a secondary diagnosis of ODD unless these behaviors occur persistently with concurrent reductions in depressive episodes (APA, 2000).

Causes and Risk Factors

The majority of the research on the causes of DBDs focuses on CD or on CD and ODD combined (AACAP, 2007). As with most psychiatric disorders, there is no single cause of DBDs. Rather, they arise out of a complex combination of risk and protective factors related to biological and environmental/social influences (AACAP). These risk factors, which are outlined in the following paragraphs, are believed to build gradually upon each other as the child develops (AACAP).

Biological Factors

Researchers agree that there is a strong genetic and biological influence on the development of DBDs. These and related behavioral disorders (e.g., ADHD, substance abuse disorders, and mood disorders) tend to cluster in families (AACAP, 2007). Research has consistently found that youth with DBDs have an underaroused baseline (e.g., low resting-heart rate) (Mawson, 2009). Several theories have tried to explain why underarousal may be associated with increased behavior problems. Some researchers suggest that underarousal results in sensation-seeking and perhaps in disruptive behaviors to maintain optimal arousal (Eysenck, 1997). Others have suggested that the underarousal results in an under-reaction of guilt or anxiety, which in turn would inhibit these behaviors in typically developed individuals (van Goozen, Snoek, Matthys, Rossum & Engeland, 2004). A third theory suggests that both underarousal and aggressive behaviors are results of deficiencies in the functioning of the prefrontal cortex, limiting the youth's reasoning, foresight, and ability to learn from experience (Raine, 2002).

Psychological Factors

Attachment theories for DBDs have not been consistently confirmed in studies of DBD (AACAP, 2007). Researchers have studied the relationship between DBDs, unresponsive parenting, and attachment between the child and the caregiver. However, empirical findings have been inconsistent (AACAP). Youth with DBDs consistently exhibit deficiencies in social processing and problem-solving. Specifically, youth with DBDs tend to miss social cues, attribute hostile intentions to the behaviors of others, have difficulty formulating solutions to social problems, and expect reinforcement from aggressive behaviors (AACAP).

Social Factors

Several social factors have been associated with the development of DBDs, including include poverty, lack of structure, community violence, and dysfunctional family environment. Youth who are neglected through lack of parental supervision and positive parenting behaviors and/or who experience harsh treatment, including child abuse are at higher risk (AACAP, 2007). Those with deviant peer associations are also more likely to meet criteria for DBDs. This may be explained because youth learn deviant behaviors and have their negative behavior patterns reinforced in these types of relationships. Youth with these peer relationships may experience poorer treatment outcomes (AACAP).

Assessment

The accurate diagnosis of DBDs requires an assessment involving at least two different assessment methods, such as behavior rating scales from multiple informants and structured diagnostic interviews (Christophersen & Mortweet, 2001). Interviews typically focus on the family's history and the caregivers' child-rearing practices. After interviewing the child and parents, the provider should interview teachers and evaluate the course of the child's development, including a review of school records. Particular attention should be paid to any oppositional or aggressive behavior that is not age-appropriate. In the course of assessment, the mental health provider may also identify co-occurring disorders.

For a diagnosis of ODD, a pattern of negative, hostile defiant behavior which reflects significant impairment in social and academic functioning and which has persisted for at least six months must

be established. It must also be confirmed that the behavior has not occurred in the course of a psychotic or mood disorder (AACAP, 2007).

To make a diagnosis of CD, the provider must ascertain whether the child or adolescent has shown at least three major symptoms in the past three months, with one of the symptoms having occurred in the last six months. In addition, these symptoms must have occurred in various settings. The behavior must cause significant impairment in the child's social or academic life. Because CD usually occurs with another disorder, mental health clinicians should also look for other co-occurring disorders, such as ADHD. CD has no age limit and, in a child younger than age 10, the repetitive presence of only one of the 15 behaviors in the *DSM-IV* is sufficient for diagnosis (Tynan, 2010).

A functional analysis of the child's behavior will not only assist in making an appropriate diagnosis, but also aid in developing an effective treatment plan (Mash and Terdal, 2001, as cited in AACAP, 2007). This involves identifying antecedents and consequences of the child's problematic behavior through a parent interview and/or direct observation in environment where the behavior occurs. The functional analysis may help determine whether caregivers are inadvertently reinforcing negative behaviors or if the child lacks appropriate emotion regulation skills. Table 1 lists the suggested assessment tools for DBDs.

Table 1

Suggested Assessment Tools for DBDs

Type	Name of Measure	Who Completes	What Is Learned
Clinical Interview	Washington University version of the Kiddie-Schedule for Affective Disorders and Schizophrenia	Clinician with youth and parent	Diagnosis
Clinical Interview	The Children's Interview for Psychiatric Syndromes (ChIPS)	Clinician with youth and parent	Diagnosis
Clinical Interview	NIMH Diagnostic Interview Schedule for Children-IV (NIMH DISC-IV, 1997)	Parent	Diagnosis
Behavior Checklist	- Achenbach System of Empirically Based Assessment (ASEBA; Achenbach & Rescorla, 2001) - Child Behavior Checklist (CBCL) - Youth Self-Report (YSR) - Teacher Report Form (TRF)	Parent, youth, teacher	Syndrome scale scores and competence scores
Behavior Checklist	Strengths & Difficulties Questionnaire	Parent, youth, teacher	Four problem scales and one "strengths" scale
Behavior Checklist	Behavior Assessment System for Children-2 nd edition (BASC; Reynolds & Kamphaus, 2004)	Parent, youth, teacher	Syndrome scale scores and adaptive scores

Sources: Achenbach & Rescorla, 2001; Reynolds & Kamphaus, 2004.

Comorbidity

Studies of the comorbidity rates for ODD have estimated that 14 percent of youth have comorbid ADHD, 14 percent have a comorbid anxiety disorder, and 9 percent have a comorbid depressive disorder (Angold, Costello & Erkanli, 1999). Opinions are mixed as to whether ODD and CD can be comorbid with each other (AACAP, 2007). Most children with CD begin with ODD-like behaviors (AACAP). Studies indicate that the majority of children with ODD do not develop CD, but ODD is

usually present as a forerunner to childhood-onset CD. Research suggests that early intervention and treatment of ODD may avert the development of CD.

While some characteristics of ODD and CD overlap, there are important distinctions (Searight, Rottnek & Abby, 2001). Youth with ODD do not typically display significant physical aggression and may be less likely to have problems with the law (Searight, Rottnek & Abby). Moreover, because ODD is seen as a disorder of noncompliance and CD involves the violation of another's rights, it is helpful to view these mental health disorders as two points on a continuum, rather than as two separate mental health disorders.

Symptom severity and treatment prognosis are generally influenced by the type of comorbid conditions. For example, youth with comorbid ADHD and ODD typically display more aggressive behaviors, experience greater academic difficulties and are rejected by peers more often than youth with ADHD alone (AACAP, 2007). Further, youth with both ADHD and ODD are more likely to transition to a diagnosis of CD (AACAP). Several studies have documented a strong association between DBDs and adolescent substance use, particularly in the face of treatment failures (AACAP).

Increases in oppositional and antagonistic behaviors are somewhat typical of adolescents, and youth with Autism Spectrum Disorder, anxiety or depression may be more likely to exhibit these symptoms (AACAP, 2007). Clinicians, therefore, should give careful consideration to determining whether oppositional behaviors represent a true comorbid condition or are manifestations of the primary disorder.

Connor (2002) found that language and learning disorders are a common precursor to DBDs. Youth with CD are more likely to show deficiencies in academics and a variety of cognitive processes. There is a strong relationship between CD and academic failure and possible learning disabilities (Tynan, 2010).

Gender and age are also crucial factors in determining and diagnosing comorbid conditions in youth with CD. Loeber, Burke, Lahey, Winters and Zera (2000) conducted a literature review of the co-morbidity of CD. Their review suggested a higher risk for adolescent females with CD and a relatively predictable association between their CD and comorbid conditions. Adolescent females are also more typically at risk for anxiety and depression.

Evidence-based Treatments

Although ODD, CD, and DBD-NOS are considered separate diagnoses, the treatment principles for these disorders are very similar. Individualized treatment plans should be developed to address the particular problems and severity of each child and family situation. For this review, evidence-based treatments are divided into three categories: What Works, What Seems to Work and What Does Not Work. A summary of these treatments is outlined in Table 2 and discussed in the paragraphs which follow.

Psychosocial Treatment

Eyberg, Nelson & Boggs (2008) identified 16 evidence-based treatment programs for DBDs. Nearly all employ parent behavior management training as the primary intervention. According to AACAP (2007), the key strategies of these approaches include the following:

- identification and reduction of positive reinforcement of structured behavior;
- increased reinforcement of prosocial and compliant behavior;
- utilization of appropriate punishments for disruptive behaviors; and
- emphasis on predictability and immediacy of parental contingencies.

Table 2

Evidence-based Treatments for DBDs

What Works	Description
Assertiveness training: Group Assertive Training (Huey & Rank, 1984)	School-based group treatment for middle- school youth
Parent management training programs: <ul style="list-style-type: none"> • Helping the Noncompliant Child (McMahon & Forehand, 1981); • Incredible Years (Webster-Stratton & Reid, 2003); • Parent-Child Interaction Therapy (Brinkmeyer & Eyberg, 2003); • Parent Management Training to Oregon Model (Patterson, Reid, Jones & Conger, 1975); and • Positive Parenting Program (Triple P; Sanders, 1999) 	Parent training programs focus on teaching and practicing parenting skills with parents or caregivers.
Multisystemic Therapy (MST) (Henggler & Lee, 2003)	MST is integrative, family-based treatment for youth with serious antisocial and delinquent behavior. Interventions last 3-5 months and focus on improving psychosocial functioning for youth and families.
Cognitive Behavioral Therapy (CBT) <ul style="list-style-type: none"> • Problem-Solving Skills Training (PSST; Kazdin, 2003) • Anger Control Training (Lochman, Barry & Pardini, 2003) 	CBTs emphasize problem-solving skills and anger control/coping strategies.
CBT & Parent Management Training (PMT) (Kazdin et al., 1987; Kazdin, Siegel & Bass, 1992)	Combines CBT and PMT
What Seems to Work	Description
Multidimensional Treatment Foster Care (Chamberlain & Smith, 2003)	Community-based program alternative to institutional, residential and group care placements for use with severe chronic delinquent behavior. Foster parents receive training and provide intensive supported treatment within the foster home setting.
What Does Not Work	Description
Atypical antipsychotics medications	Risperidone (risperdal), quetiapine (seroquel), olanzapine (zyprexa), and Abilify (aripiprazole); limited evidence for effectiveness in youth with intellectual disability or Autism Spectrum Disorder
Stimulant or atomoxetine	Methylphenidate; d-Amphetamine; atomoxetine; limited evidence when comorbid with primary diagnosis of ADHD
Mood stabilizers	Divalproex sodium; lithium carbonate; limited evidence when comorbid with primary diagnosis of bipolar disorder
Selective serotonin reuptake inhibitors (SSRIs)	Limited evidence when comorbid with primary diagnosis of depressive disorder
Boot camps, shock incarcerations	Ineffective at best; can lead worsening of symptoms
Dramatic, short-term or talk therapy	Little to no effect as currently studied

Sources: Lochman, Barry & Pardini, 2003; Huey & Rank, 1984; McMahon & Forehand, 1981; Webster-Stratton & Reid, 2003; Chamberlain & Smith, 2003; Henggeler & Lee, 2003; Brinkmeyer & Eyberg, 2003; Patterson, Reid, Jones & Conger, 1975; Sanders, 1999; Kazdin, 2003; Kazdin et al., 1989; Kazdin, Siegel & Bass, 1992; Block, 1978; AACAP, 2007; Eyberg, Nelson & Boggs, 2008; Sanders, 1999; Children’s Mental Health Ontario, 2001; Tynan, 2010.

Treatment packages using these strategies for youth and families with DBDs have been tested with positive effects. Many of the treatment programs are available in easy-to-understand therapist manuals, self-help parenting books, and/or video/DVD formats.

In addition to training parents to implement appropriate behavior management strategies, the clinician may need to intervene in the family system to help bring about meaningful change. A myriad of family issues, including parents' substance abuse, may impact treatment success. Findings suggest the importance of helping parents make lasting changes to their own behavior and improved well-being in order to help their children. In these situations, a family-based approach, such as the Triple P Enhanced Treatment (Sanders, 1999), may be appropriate. Families may also benefit when parents engage in individual or couple's therapy to address individual psychopathology or marital discord that may be having an adverse effect on the youth and/or the youth's treatment (Eyberg, Nelson & Boggs, 2008).

Severe and persistent cases of ODD which develop into CD may require an alternative placement when the safety of the youth and and/or those around him or her are in jeopardy (AACAP, 2007). Youth may require out-of-home placement when they require crisis management or when their family is unable or unwilling to collaborate with treatment. When considering day treatment, residential treatment or hospitalization, the least restrictive setting should be selected for the shortest possible time to ensure safety and progress (AACAP). Other placements which may be considered are therapeutic foster care or respite care.

Pharmacological Treatment

Pharmacological treatments for DBDs have not been well-studied (AACAP, 2007). Stanford, Howard and the AACAP Workgroup on Juvenile Impulsivity and Aggression (Connor et al., 2006) recommended that medication only be used to treat youth with ODD or CD when evidence-based psychosocial treatments have failed. Medication should not be the sole treatment for CD or ODD (AACAP).

Medications may help when there are co-occurring disorders, making it more likely that the youth will be able to participate and benefit from intervention strategies. Pharmacological interventions may be helpful, for example, when a child or adolescent has a disorder that is responsive to medication, such as ADHD or bipolar disorder. Medications often prescribed for ADHD, such as stimulants and atomoxetine, may help improve oppositional behaviors as well (AACAP, 2007). There is also limited research suggesting that mood stabilizers or selective serotonin reuptake inhibitors (SSRIs) may be helpful when there is a co-occurring mood disorder, such as bipolar or major depressive disorder (AACAP).

Despite the lack of research, atypical antipsychotics are the most commonly prescribed medication for aggression associated with ODD and CD (AACAP, 2007). It is important to note that aggression and oppositional behaviors can reflect temporary environmental changes. Utilizing medication during these circumstances may result in misattribution of improvement to the medication, rather than environmental stabilization, and thus result in an unnecessary risk of side effects (AACAP). Medications should be started only after an appropriate baseline of symptoms or behaviors has been obtained and only in conjunction with psychosocial treatment (AACAP).

Unproven Treatments

Research indicates that treatment of DBDs should be delivered with enough frequency and duration to produce the desired treatment outcomes (Children's Mental Health Ontario, 2001). There are several treatments for DBDs that have been untested, proven ineffective or proven to be harmful. Scare tactic approaches (e.g., boot camps, shock incarcerations) are ineffective and can even worsen symptomatic behaviors by heightening a fear-aggression reaction and/or modeling of even more deviant behaviors (AACAP, 2007). Boot camps have consistently demonstrated good initial

results, but long-term declines, such as higher arrest rates and more serious crimes committed (Tynan, 2010). Moreover, group treatment may also have possible negative adverse effects. Poor long-term outcomes following this treatment may be due to group reinforcement of negative or criminal activity, accompanied by lack of family or community change (Tynan). Individual psychotherapy as a single treatment has not proven effective for CD, although individual sessions may facilitate treatment compliance (Tynan). Dramatic, one-time, time-limited or short-term interventions are also ineffective treatment approaches (AACAP).

Cultural Considerations

ODD and CD are more prevalent among adolescents from families with low socio-economic status (Loeber et al., 2000). CD is more common in neighborhoods characterized by social disorganization and high crime rates (Loeber et al.). More research is needed to assess the differences of CD and ODD in rural and urban environments, given that results from current research are mixed and the poor prognosis of CD is associated with urban areas (Loeber et al.).

Research has suggested that minority youth with anxiety and/or affective disorders are often diagnosed instead with DBD due, in part, to stereotypes and attributional biases for behavior (Lau, Garland, Yeh, McCabe, Wood & Hough, 2004). Youth with internalizing disorders (e.g., anxiety or depression) may exhibit symptoms of irritability and refuse to engage in situations perceived as fearful. These behaviors may be interpreted as oppositional behaviors without comprehensive assessment (Lau et al.). Careful assessment should be conducted to rule out the presence of other disorders.

Research on treatments for DBDs has adequate representation of African American children, suggesting that treatments are generally as effective with those populations as for Caucasian children (Eyberg, Nelson & Boggs, 2008). Latino children and children from other minority groups, however, have been under-represented in most studies of treatments for DBDs. In the absence of research on cultural-specific practices, clinicians should take care to ensure that treatment goals and strategies are in sync with cultural beliefs and practices for children of minority groups.

Sources

Achenbach, T., & Rescorla, L. (2001). *Manual for the ASEBA school-age forms & profiles*. Burlington, VT: University of Vermont, Research Center for Children, Youth, and Families.

American Academy of Child & Adolescent Psychiatry (AACAP). (2007). Preventive effects of treatment of disruptive behavior disorder in middle childhood on substance use and delinquent behavior. *Journal of the American Academy of Child and Adolescent Psychiatry*, 46 (1), 33-39.

American Psychiatric Association (APA). (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.) (DSM-IV-TR). Washington, DC: Author.

Angold, A., Costello, E., & Erkanli, A. (1999). Comorbidity. *Journal of Child Psychology & Psychiatry*, 40, 57-87.

Block, J. (1978). Effects of a rational-emotive mental health program on poorly achieving, disruptive high school students. *Journal of Counseling Psychology*, 25 (1), 61-65.

Boesky, L. (2002). Juvenile Offenders with Mental Health Disorders: Who Are They and What Do We Do With Them? *Oppositional Defiant Disorder and Conduct Disorder*. Maryland: American Correctional Association, 36-60.

- Braithwaite, K., Duff, J., & Westworth, I. (2001). *Conduct disorder in children and adolescents*. [Online]. Available: <http://www.adhd.com.au/conduct.html>. [June 2010].
- Brinkmeyer, M., & Eyberg, S. (Ed.). (2003). *Evidence-based psychotherapies for children and adolescents*. New York: Guilford Press.
- Center for the Advancement of Children's Mental Health at Columbia University. (2000). *Anxiety Disorders*. [Online]. Available: <http://www.kidsmentalhealth.org>. [October 2002]. November 2010.
- Chamberlain, P., & Smith, D. (Ed.). (2003). *Antisocial behavior in children and adolescents: the Oregon multidimensional treatment foster care model*. New York: Guilford Press.
- Chandler, J. (2002). *Oppositional Defiant Disorder (ODD) and Conduct Disorder (CD) in Children and Adolescents: Diagnosis and Treatment*. [Online]. Available: <http://childparenting.about.com/gi/dynamic/offsite.htm?site=http://www.klis.com/chandler/pamphlet/oddc/oddcdpamphlet.htm>. [June 2010].
- Children's Mental Health Ontario. (2001). *Evidence Based Practices for Children and Adolescents with Conduct Disorder*. Toronto. [Online]. Available: http://www.kidsmentalhealth.ca/documents/EBP_conduct_disorder.pdf. [June 2010].
- Christophersen, E., & Mortweet, S. (2001). *Treatments That Work With Children: Empirically Supported Strategies for Managing Childhood Problems*. American Psychological Association.
- Connor, D. (2002). *Aggression and Antisocial Behavior in Children and Adolescents: Research and Treatment*. New York: Guilford Press.
- Connor, D., Carlson, G., Chang, K., Daniolos, P., Ferziger, R., Findling, R., et al. (2006). Juvenile maladaptive aggression: a review of prevention, treatment, and service configuration and a proposed research agenda. *Journal of Clinical Psychiatry*, 67 (5), 808-820.
- Eyberg, S., Nelson, M., & Boggs, S. (2008). Evidence-based psychological treatments for children and adolescents with disruptive behavior. *Journal of Clinical Child and Adolescent Psychology*, 37 (1), 215-237.
- Eysenck, H. (1997). Personality and the biosocial model of antisocial and criminal behavior. In: A. Raine, P. Brennan, D.P. Farrington and S.A. Mednick, Editors, *Biosocial bases of violence*. Plenum, New York, 21-38.
- Henggeler, S., & Lee, T. (Ed.). (2003). *Evidence based psychotherapies for children and adolescents*. New York: Guilford Press.
- Huey, W., & Rank, R. (1984). Effects of counselor and peer-led group assertive training on black adolescent aggression. *Journal of Counseling Psychology*, 31 (1), 95-98.
- Kazdin, A. (Ed.). (2003). *Evidence-based Psychotherapies for Children and Adolescents*. New York: Guilford Press.
- Kazdin, A., Bass, D., Siegel, T., & Thomas, C. (1989). Cognitive-behavioral therapy and relationship therapy in the treatment of children referred for antisocial behavior. *Journal of Consulting and Clinical Psychology*, 57 (4), 522-535.

- Kazdin, A., Esveltd-Dawson, K., French, N., & Unis, A. (1987). Problem-solving skills training and relationship therapy in the treatment of antisocial child behavior. *Journal of Consulting and Clinical Psychology, 55* (1), 76-85.
- Kazdin, A., Siegel, T., & Bass, D. (1992). Cognitive problem-solving skills training and parent management training in the treatment of antisocial behavior in children. *Journal of Consulting and Clinical Psychology, 60* (5), 733-747.
- Lau, A., Garland, A., Yeh, M., McCabe, K., Wood, P., & Hough, R. (2004). Race/Ethnicity and inter-informant agreement in assessing adolescent psychopathology. *Journal of Emotional and Behavioral Disorders, 12* (3), 145-156.
- Lochman, J., Barry, T., & Pardini, D. (2003). *Anger control training for aggressive youth*. New York: Guilford Press.
- Loeber, R., Burke, J., Lahey, B., Winters, A., & Zera, M. (2000). Oppositional defiant and conduct disorder: A review of the past 10 years, part I. *Journal of the American Association of Child and Adolescent Psychiatry, 39* (12), 1468-1484.
- Mash, E., & Terdal, L. (Ed.). (2001). *Assessment of child and family disturbance: a behavioral-systems approach*. New York: Guilford Press.
- Mawson, A. (2009). On the association between low resting heart rate and chronic aggression: Retinoid toxicity hypothesis. *Progress in Neuro-Psychopharmacology & Biological Psychiatry, 33* (2), 205-213.
- McMahon, R., & Forehand, R. (1981). Suggestions for evaluating self-administered materials in parenting training. *Child Behavior Therapy, 3* (1) 65-68.
- Murphy, M., Cowan, R., & Sederer, L. (2001). Disorders of childhood and adolescence. *Blueprints in psychiatry* (2nd ed.). Malden, Mass: Blackwell Science, Inc., 42.
- Patterson, G., Reid, J., Jones, R., & Conger, R. (1975). A social learning approach to family intervention: Families with aggressive children. (Vol.1). Eugene, OR: Castalia.
- Raine, A. (2002) Annotation: the role of prefrontal deficits, low autonomic arousal and early health factors in the development of antisocial and aggressive behavior in children. *Journal of Child Psychology and Psychiatry, 43* (4), 417-434.
- Reynolds, C., & Kamphaus, R. (2004). Behavior Assessment System for Children - 2. Circle Pines, MN.
- Sanders, M. (1999). Triple p-positive parenting program: Towards an empirically validated multilevel parenting and family support strategy for the prevention of behavior and emotional problems in children. *Clinical Child and Family Psychology Review, 2* (2), 71-90.
- Searight, H., Rottnek, F., & Abby, S. (2001). *Conduct Disorder: Diagnosis and Treatment in Primary Care*. [Online]. Available: <http://www.aafp.org/afp/20010415/1579.html>. [June 2010].
- Tynan, D. (2010). Conduct Disorders. *EMedicine Clinical Reference*. Medscape. [Online]. Available: <http://emedicine.medscape.com/article/918213-overview>. [August 2010].

U.S. Department of Health and Human Services. (1999). *Mental Health: A Report of the Surgeon General*. Rockville, MD.

U.S. Department of Health and Human Services. (1998). Substance Abuse and Mental Health Services Administration. *Conduct Disorder in Children and Adolescents*. Publication No. CA-0010. [Online]. Available: www.mentalhealth.org/publications/allpubs/CA-0010/default.asp. Not available November 2010.

University of British Columbia, Mental Health Evaluation & Community Consultation Unit. (2004). *Preventing and Treating Conduct Disorder*. [Online]. Available: http://www.childhealthpolicy.sfu.ca/research_reports_08/rr_pdf/RR-4-04-summary.pdf. [June 2010].

van Goozen, S., Snoek, H., Matthys, W., Rossum, I., & Engeland, H. (2004). Evidence of fearlessness in behaviourally disordered children: a study on startle reflex modulation. *Journal of Child Psychology and Psychiatry*, 45, 884-892.

Webster-Stratton, C., & Reid, J. (Ed.). (2003). *The incredible years - parents, teachers and children training series: a multifaceted treatment approach for young children with conduct problems*. New York: Guilford Press.

Additional Resources

Bodenhamer, G. (1992). *Back in Control*. Prentice Hall.

Bodenhamer, G. (1995). *Parent in Control*. Fireside.

Greene, R. (1998). *The Explosive Child: A New Approach for Understanding and Parenting Easily Frustrated, 'Chronically Inflexible' Children*. HarperCollins.

Hendren, R. (1999). *Disruptive Behavior Disorders in Children and Adolescents*. (Review of Psychiatry Series, Vol. 18, No. 2). American Psychiatric Press.

Horne, A., & Sayger, T. (1992). *Treating Conduct and Oppositional Defiant Disorder in Children*. Allyn & Bacon.

Koplewicz, H. (1994). *It's Nobody's Fault: New Hope and Help for Difficult Children and Their Parents*. Random House.

Phelan, T. (1996). *1-2-3 Magic*. Child Management.

Riley, D. (1997). *The Defiant Child: A Parent's Guide to ODD*. Taylor Publishing.

Samenow, S. (1999). *Before It's Too Late*. Times Books.

Organizations

American Academy of Child & Adolescent Psychiatry (AACAP)

Facts for Families – Conduct Disorder

http://www.aacap.org/cs/root/facts_for_families/conduct_disorder

Facts for Families – Oppositional Defiant Disorder

http://www.aacap.org/cs/root/facts_for_families/children_with_oppositional_defiant_disorder

Focus Adolescent Services

Teen Behavior Problems and Behavioral Disorders

<http://www.focusas.com/BehaviorProblems.html>

Mayo Clinic

<http://www.mayoclinic.com/health/oppositional-defiant-disorder/DS00630>

Mental Health America (MHA) (formerly National Mental Health Association)

Fact Sheet on Conduct Disorder

<http://www.nmha.org>

U.S. Department of Health and Human Services

Substance Abuse and Mental Health Services Administration

Conduct Disorder in Children and Adolescents

http://pathwayscourses.samhsa.gov/bully/bully_4_pg17.htm

S EXUAL OFFENDING

Introduction

Characteristics of Juvenile Sexual Offenders

Juvenile Female Sexual Offenders

Comorbidity

Assessment

Clinical Assessment

Assessment of the Juvenile's Home

Treatments

Recommended Components

Promising Treatment Approaches

Other Treatment Related Information

Controversial Treatments

Conclusion

Introduction

Juveniles who perpetrate sexual offenses are defined as those who commit any sexual act against the victim's will, without consent, or in an aggressive, exploitive, or threatening manner (Matthews, 1997). These juveniles are usually between 12 and 17 years of age and are mostly male, although some studies have found a number of females and prepubescent perpetrators (Hunter, 2000). Sexually abusive behaviors can vary from non-contact offenses to acts of penetration (Office of Juvenile Justice and Delinquency Prevention [OJJDP], 2001). These sexually abusive juveniles should not be considered to be engaging in normative "teenage experimentation," as their behaviors have the potential to cause significant harm to others (O'Reilly & Dowling, 2008).

Juvenile sexual offending is a serious problem which is increasingly becoming a focus of attention and concern. Each year in the United States, an estimated one-fifth of reported rapes are committed by juveniles and one-half of the child molestations are committed by juveniles (Hunter, 2000). Approximately half of all adult sexual offenders began their criminal careers during adolescence (Saleh & Vincent, 2004). The Federal Bureau of Investigation (FBI) reported in 2001 that approximately 12 percent of all rapes resulted in the arrest of a juvenile (Saleh & Vincent). In Virginia during fiscal year 2009, over seven percent of the admissions to the Department of Juvenile Justice (DJJ) were for a sexual offense (DJJ, 2009).

Juvenile sexual offenders are a diverse population, which makes it difficult to attribute universal causal factors to their offending behaviors. However, research is making strides in understanding this population and the associated risk factors. Research with this population has shown that there are two types of juvenile sexual offenders: those who target children and those who offend against their peers or adults (Hunter, 2000). The type of offense is based on factors such as the age and sex of the victim, the relationship between the victim and the offender, and the amount of force used (OJJDP, 2001).

Characteristics of Juvenile Sexual Offenders

Sexual and physical abuse, child neglect, and exposure to family/domestic violence are associated with juvenile sexual offending (Center for Sex Offender Management, 1999). Juvenile sexual offenders may be characterized as loners with few close friends (Thakur, as cited by Kushner,

2004). Exposure to pornography has also been cited, but studies examining whether pornography leads to juvenile sexual offending have been inconclusive (OJJDP, 2001). Likewise, an association between substance abuse and juvenile sexual offending has not been fully established (Center for Sex Offender Management). Table 1 outlines the characteristics of sexually abusive juveniles.

Table 1

Characteristics of Sexually Abusive Juveniles

Perpetrators are typically adolescents, age 12 to 17. Perpetrators are predominantly male. Perpetrators have difficulties with impulse control and judgment. Up to 80% have a diagnosable psychiatric disorder. 30 to 60% exhibit learning disabilities and academic dysfunction. 20 to 50% have histories of physical abuse. 40 to 80% have histories of sexual abuse.

Sources: Center for Sex Offender Management, 1999; Hunter, 2000.

Research has provided several promising leads to understanding the juvenile sexual offender. A significant proportion have a prior arrest for a nonsexual offense and/or meet the criteria for a diagnosis of conduct disorder. In addition, juvenile sexual offenders may present with a diverse range of disordered behaviors, such as aggressive behavior, bullying, vandalism, fire setting, cruelty to animals, shoplifting and drug/alcohol abuse. Furthermore, while rates of sexual re-offending are generally low-to-moderate for this population overall (8 to 15 percent), evidence suggests that youth who have offended sexually, who are also highly antisocial, have an extremely high risk of re-offending overall when profiles include non-sexual charges (46 to 54 percent) (O'Reilly & Carr, 2006; Worling & Langstrom, 2006).

Juvenile Female Sexual Offenders

There are few studies that address juvenile female sexual offenders. Due to the difficulty in finding adequate samples of female participants, female sexual offending has been under-reported and under-represented in sexual offender literature (National Center on Sexual Behavior of Youth, 2004). For instance, reoffense rates for females and males cannot be compared because sexual and non-sexual reoffense rates for female sexual offenders are not known (National Center on Sexual Behavior of Youth).

While these studies have limitations, they have been helpful in identifying implications for treating juvenile female sexual offenders. Female sexual offenders are usually more likely to have histories of maltreatment, with physical abuse being apparent in 20 percent of studied cases and sexual abuse, in 50 percent of studied cases (Mathews, Hunter & Vuz, 1997). Compared to those of juvenile males, the histories of the studied females reflected even more extensive and pervasive childhood maltreatment because many of these females were exposed to interpersonal aggression by both females and males (Mathews, Hunter & Vuz). Moreover, their histories revealed that they were victimized at younger ages and were more likely to have had multiple perpetrators (Mathews, Hunter & Vuz). In samples of prepubescent female sexual offenders, rates of sexual victimization tend to be extraordinarily high, with rates greater than 90 percent (Hunter, Becker & Lexier, 2006). Preliminary research has revealed that these females had very disruptive and tumultuous childhoods, with high levels of trauma and exposure to dysfunction. Post-traumatic stress disorder (PTSD) has been found to be especially prevalent (Hunter, Becker & Lexier). High levels of impulsive delinquent behaviors, including substance abuse and other high-risk behaviors, were also observed (Mathews, Hunter & Vuz).

Juvenile female sexual offenders may molest youth of both genders, with the victims typically being relatives or acquaintances (Mathews, Hunter & Vuz, 1997). Female juvenile offenders typically do not abuse children unknown to them (Mathews, Hunter & Vuz). Many of the victims of female sexual offenders were molested frequently in the context of babysitting. There is little evidence to suggest that female juveniles, unlike female adults, sexually offend within the context of a relationship with male co-offenders (Hunter, Becker & Lexier, 2006).

Studies are being conducted to ascertain effective assessment and treatment measures for female juvenile sexual offenders. Tools used to assess female juvenile sexual offenders are lacking because they were validated on male offenders and have not yet been empirically validated with a female population. Traditional psychological evaluation (e.g., intellectual and personality assessment) may be of more value with female juveniles until future tools are empirically validated with this population (Hunter, Becker & Lexier, 2006). Preliminary results indicate that treatment approaches should be used to address the early and repetitive developmental traumas experienced by these offenders. Further, female juvenile sexual offenders may benefit from a focus on the unique considerations of gender issues, including sexual and physical development, intimacy and social skills, self-image, self-esteem, impulsivity, comorbid symptoms of PTSD, and the common societal expectation of females as caregivers-nurturers (Roe-Sepowitz & Krysik, 2008).

Comorbidity

Juvenile sexual offenders may share some characteristics other than sexual offending, including:

- high rates of learning disabilities and academic dysfunction;
- the presence of other behavioral problems and conduct disorder; and
- difficulties with impulse control and judgment. (Saleh & Vincent, 2004).

Rates of psychiatric disorders among juvenile sexual offenders have been shown to range from 37 to 87 percent (O'Reilly & Dowling, 2008). As suggested, a significant proportion of this population's sexual offending behaviors may be attributed to a larger pattern of conduct-disordered traits. Furthermore, juvenile sexual offenders may have also demonstrated characteristics of paraphilia, which is an intense, repeated sexual arousal to unconventional stimuli (PsychDirect, 2004). Offenders with paraphilia tendencies were also reported to have high rates of psychiatric disorders (Saleh & Vincent, 2004). Within one study of juvenile sexual offenders, 95 percent had two or more paraphilias, 82 percent had a mood disorder, 55 percent had an anxiety disorder, 55 percent had an impulse control disorder, 71 percent had attention deficit hyperactivity disorder (ADHD), 94 percent had conduct disorder (CD), and 50 percent had a substance abuse disorder (Saleh & Vincent).

Assessment

Careful screening is critical to match a juvenile's needs to the type and level of treatment, which can range from community-based programming to intensive residential treatment. Ideally, assessment reflects careful consideration of the danger that the juvenile presents to the community, the severity of psychiatric and psychosexual problems, and the juvenile's amenability to treatment. Community-based programs should not compromise community safety by admitting juveniles who are aggressive and violent (O'Reilly & Dowling, 2008).

All available participants should be included within the assessment process, including the youth, parents or guardians, and all other professionals involved, such as teachers, case workers, social workers, and mental health treatment providers (O'Reilly & Dowling, 2008). During the assessment process, it should be expected that the young person and his or her family may be at various psychological points, ranging from complete denial to full acknowledgment of the sexual offense(s), and thus it may be more helpful to consider full acknowledgment of offending behavior as a goal of treatment (O'Reilly & Dowling).

Clinical Assessment

The information in this section is taken from research compiled by the Center for Sex Offender Management (1999). Professional evaluation of juveniles and their appropriateness for placement should be conducted post-adjudication and prior to court sentencing. Clinical assessments should be comprehensive and include careful record reviews, clinical interviewing, and screening for co-occurring mental health disorders.

Assessment of the Juvenile's Home

Assessments of the juvenile's appropriateness for community-based programming should include a thorough review of his living arrangements, as well as a determination of whether the parents are capable of providing supervision (Center for Sex Offender Management, 1999). It is essential that the community and other children are protected from potential harm, both physical and psychological.

Treatments

Funding problems and ethical issues have made it difficult to conduct controlled outcome studies on the treatment of juvenile sexual offenders. Accordingly, no evidence-based treatment guidelines have been established for juvenile sex offenders. However, a number of encouraging clinical reports have been published, and guidelines have been suggested per expert opinion and currently accepted clinical practice (Burton, Smith-Darden & Frankel, 2006). Research to date has demonstrated that the overall prognosis for children with sexual behavior problems is good and that sexually abusive juveniles benefit from treatment (Farniff & Becker, 2006).

Juvenile sexual offenders differ from their adult counterparts in that juveniles generally do not present the same kinds or levels of sexual deviancy and psychopathic tendencies that may be observed among adult offenders (Saunders, Berliner & Hanson, 2001). However, there is evidence that juvenile sexual offenders who evade detection and/or treatment may be at higher risk of continued re-offending (Trivits & Reppucci, 2002).

Promising sexual offender treatment programs often combine an intensive, multi-modal approach with early intervention. Comprehensive treatment may focus on taking responsibility for one's sexual behavior, developing victim empathy, and developing skills to prevent future offending. While juveniles are responsible for a significant portion of sexual offending, research on effective therapeutic interventions are unfortunately lacking. Additional information about juvenile sexual offender treatment programs are outlined below.

Recommended Components

Given the lack of empirically supported treatments, a survey of professionals working with juvenile sexual offenders led to the identification of what may be considered recommended treatment components. Nominated components included anger management, cognitive distortions about sexuality and relationships, fostering of prosocial emotional, cognitive, and behavioral skills and development of an understanding of the offense cycle and pathways to sexual offending behavior (O'Reilly & Dowling, 2008). Parents or guardians need to be involved in the assessment and treatment process (Schladale, 2002). The use of family therapy may be most beneficial in instances where incest has occurred, especially when the sexual offender will be rejoining the family after treatment (American Academy of Child & Adolescent Psychiatry, [AACAP], 1999).

A summary of the recommended components of intervention programs for juvenile sex offenders is provided in Table 2. Given the lack of studies, these components are not designated as evidence-based.

Table 2

**Recommended Components of Intervention Programs
for Sexually Offending Youth**
As Endorsed by Mental Health Professionals

Treatment Component	% of Mental Health Professionals Endorsing
Essential	
Development of emotional competence skills, including the management of anger and distress	93
Changing cognitive distortions about sexuality and relationships	90
Development of prosocial emotional, cognitive, and behavioral skills	87
Gaining an understanding of his/her offense cycle and/or pathways into sexually abusive behaviors	85
Sexuality education	85
Life space work (understanding boundaries and social interaction and the development of social skills)	84
Development of relapse prevention skills	84
Working with the family	82
Understanding the consequences of further abusive behavior	81
Development of empathy	81
Desirable	
Dealing with deviant sexual urges	79
Problem solving	71
Additional	
Promoting appropriate positive sexual thoughts, while changing sexually abusive thoughts	63

Source: O'Reilly & Dowling, 2008.

Promising Treatment Approaches

The following paragraphs discuss two promising treatment approaches: Multisystemic Therapy (MST) and residential sexual offender treatment.

Multisystemic Therapy

MST, which has been evaluated in two randomized trials treating highly delinquent juvenile sex offenders, has been shown to be beneficial for the treatment of these youth (Borduin & Schaeffer, as cited by Chaffin & Friedrich, 2004). MST is an intensive family- and community-based treatment which addresses the multiple factors of serious antisocial behavior in juvenile sexual abusers. Treatment can involve any combination of the individual, family and extra familial factors (e.g., peer, school, or neighborhood). MST promotes behavior change in the juvenile's natural environment, using the strengths of the juvenile's family, peers, school, and neighborhood to facilitate change (Center for Sex Offender Management, 1999).

In perhaps the best controlled study to date, MST was compared to individual therapy in the outpatient treatment of 16 juvenile sexual offenders. Using re-arrest records as a measure of recidivism (sexual and non-sexual), the two groups were compared at a three-year follow-up interval. Results revealed that juveniles receiving MST had recidivism rates of 12.5 percent for sexual offenses and 25 percent for non-sexual offenses, while juveniles receiving individual therapy had recidivism rates of 75 percent for sexual offenses and 50 percent for non-sexual offenses (Hunter, 2000).

Residential Sexual Offender Treatment

Juveniles who have significant offending histories and/or are deemed to be at a high risk to sexually re-offend are appropriate for residential sexual offender treatment. Residential treatment ensures public and community safety and simultaneously provides juveniles with intensive treatment which can address both sexual and non-sexual behaviors. Residential programs provide intensive treatment delivered by trained staff in a highly structured treatment setting. The key to a successful residential programming is individualizing the treatment, which allows each juvenile to address the unique and specific issues that are relevant, so they can gain control over their sexual and non-sexual behaviors. As a result, the length of time a juvenile remains in the program will vary, depending on the severity of the juvenile's problematic behaviors and motivation in treatment.

In a recent study of 668 juveniles in residential sexual offender programs within Virginia's juvenile correctional centers, the recidivism rate based on re-arrests for sexual offenses was four percent (with an average time post-release of 4½ years) (Wieckowski, Waite, Pinkerton, McGarvey & Brown, 2005). The projected recidivism rate for sexual offenses was 7.7 percent when based on all juveniles reaching the 10-year post-release mark (Waite et al., 2005). Successful reentry from residential program to community is based on receiving on-going, community-based services. Juveniles who successfully complete residential programs respond best when they are provided a gradual reduction in supervision and treatment services based on their compliance with parole rules and application of material they learned in treatment.

Other Treatments

In treating sexual offenders, selective serotonin reuptake inhibitors (SSRIs) have been shown to have an impact on sexual preoccupations, sexual drive and arousal (AACAP, 1999). Further information about SSRIs is provided in the "Antidepressants and the Risk of Suicidal Behavior" section of the *Collection*.

Treating sexual offenders through the use of antiandrogen drugs should be reserved for the most severe sexual abusers and is discouraged for use for juvenile sexual offenders under age 17 (AACAP, 1999). These drugs should never be used as an exclusive treatment (AACAP).

Other Treatment Related Information

The following paragraphs discuss additional information of interest.

Community-based Programming

Community-based programming for juvenile sexual offenders is gaining more attention. Recent research suggests that community-based programming can offer certain advantages, including shortening residential lengths of stay, reducing the number of juvenile sexual offenders placed in residential care settings, and improving the post-residential transitioning of youth back into community settings (Hunter, Gilbertson, Vedros & Morton, 2004). Economic and clinical considerations have also bolstered the need for effective community-based programming. Key concepts guiding community-based programming are recognition of the heterogeneity of the population, establishment of a seamless continuum of care, emphasis on the myriad of problems this population manifests, and integration of legal and clinical management (Hunter, Gilbertson, Vedros & Morton). Community-based programming is an effective element to the treatment continuum for juvenile sexual offenders.

Virginia's Sexual Offender Treatment Program

The following information about Virginia's Juvenile Sexual Offender programs is from a personal communication with Arthur Mayer, LCSW and certified sexual offender treatment provider (CSOTP) (May 13, 2010). The Department of Juvenile Justice (DJJ) opened its first state-operated juvenile sexual offender treatment unit in January 1990. The program has significantly expanded since that time to meet the growing number of sexual offenders in the system. As of May 2010, the Department

has 11 self-contained sexual offender treatment units across five juvenile correctional centers (JCCs): Beaumont and Culpeper JCCs offer treatment to older juveniles; Hanover and Bon Air JCCs, to younger high school and middle school juveniles; and Oakridge JCC, to developmentally delayed juveniles of all ages. The overall sexual offender program is managed by the Program Supervisor of Sexual Offender Services (Edward Wieckowski, MA, CSOTP).

Currently, there are approximately 250 sex offenders in Virginia's JCCs. Of these, 170 are placed in the self-contained units, while the remaining juveniles have completed treatment and are serving the remainder of their incarceration time, or are on the waiting list to enter treatment. There are also a handful of juveniles with minimal sexual offending behavior whose treatment needs can be met outside a self-contained unit. The length of time a juvenile remains in the self-contained unit is based on severity of offense and motivation in treatment, and averages 14-18 months.

The self-contained units offer intensive milieu-based treatment where juveniles reside in housing units with other sexual offenders. The units offer a range of treatment modalities that include individual and group psychotherapy, psycho-educational groups and family psychotherapy. They are typically staffed by a psychologist senior, clinical social worker, institutional counselor, and juvenile correctional officers (JCOs). The clinical staff at JCCs are either licensed or certified sexual offender treatment providers (CSOTPs).

Juvenile sexual offenders are a heterogeneous population. Treatment is individualized by the therapists "Individualized Treatment Plan" protocol. All juveniles work toward ten general goals by completing a minimum of eight designated core treatment activities. They must also complete any identified individualized treatment activities.

In 2005, DJJ collected data on the effectiveness of this program. This data indicated that sexual recidivism rates for juvenile sexual offenders was lower than that for adult offenders and that youth participating in a self-contained sexual offender treatment program were less likely to participate in criminal activity after release. This is particularly true for the non-sexual assault offenders. The data offered two important findings:

1. rates of recidivism, based on rearrests, for sexual offenses among juvenile sex offenders are low and are not based on the type of treatment during incarceration; and
2. high impulsive/antisocial behaviors significantly increase the probability of recidivism, regardless of type of treatment during incarceration (Wieckowski et al., 2005).

Qualifications of Sex Offender Treatment Providers

The following information is derived from a personal communication with Dennis Waite, Ph.D. (December 18, 2007). Due to the potential risk to the community of ineffective treatment for sex offenders, the Virginia General Assembly passed legislation in 1997 to create a certification process for clinicians who provide service to sex offenders. While licensed practitioners are required to practice only within the scope of their expertise (i.e., one could not provide sex offender treatment unless qualified to do so), a certification as a sex offender treatment provider (CSOTP) offers additional evidence of a specific expertise in this area. When seeking professional services for sex offenders, it is prudent to ensure that the qualifications of the service provider indicate expertise in the treatment of sex offenders. One way to ensure such expertise is to select a professional with this certification (CSOTP). Qualifications include a minimum of a master's degree in selected fields, 50 hours of sex offender treatment-specific training, 2,000 hours of post-degree clinical experience, 200 of which must be face-to-face treatment/assessment of sex offenders, and 100 hours of clinical supervision (Virginia Board of Psychology, *Regulations Governing the Certification of Sex Offender Treatment Providers*, 18 VAC 125-30 et seq.).

Recidivism: Research and Current Trends

The following information is taken from Worling and Lanstrom (2006). Researchers are beginning to illuminate various risk factors associated with juvenile sexual re-offending in order to further propel the establishment of effective means of assessment and treatment with this population. Empirically-supported risk factors include deviant sexual interest (e.g., sexual interest in children and/or sexual violence), prior criminal sanctions for sexual offending, sexual offending against more than one victim, sexual offending with a victim not known to the offender, social isolation, and uncompleted offense-specific treatment.

Identified risk factors that have been linked to re-offending include problematic parent-adolescent relationships and attitudes supportive of sexual offending. These risk factors are still being studied and have not yet been fully confirmed empirically. Possible risk factors, which have also yet to be empirically validated, include high stress family environment, impulsivity, antisocial interpersonal orientation, interpersonal aggression, negative peer associations, sexual preoccupation, sexual offending against a male victim, sexual offending against a child, threats, violence, or weapons in a sexual offense, and an environment supporting re-offending.

Finally, risk factors which should not be used in formulating risk estimates for juvenile sexual offenders include the juvenile's own history of sexual victimization, history of nonsexual offending, sexual offending involving penetration, denial of sexual offending, and low victim empathy.

Controversial Treatments

Some areas of practice are considered ethically and legally controversial and may create special problems for juvenile sexual offending service providers (Center for Sex Offender Management, 1999). These include pre-adjudication evaluations, sexual offense risk assessments, polygraphs and phallometric assessments (e.g., a type of assessment to determine sexual attraction). The issues surrounding these treatments relate both to their lack of overall effectiveness and validity within a juvenile population.

Conclusion

While there appears to be a scarcity of literature regarding evidence-based treatment programs for juvenile sexual offenders, there are promising directions for assessment and treatment implications for this population. It is expected that future research will successfully offer further better understanding of juvenile sexual offenders and their families, further refine essential and supplemental components of effective interventions, and comprehensively assess and identify youth who are at high risk of re-offending sexually. Until then, research showing that current treatment practices can be effective overall with this population is promising and offers hope for reduced rates of recidivism.

Sources

American Academy of Child & Adolescent Psychiatry (AACAP). (1999). *Practice parameters for the assessment and treatment of children and adolescents who are sexually abusive of others*, 38 (12), 55-76.

Burton, D., Smith-Darden, J., & Frankel, S. (2006). Research on adolescent sexual abuser programs. In Barbaree H., Marshall, W. & Hudson, S. (Eds). *The Juvenile Sexual Offender*. (2nd ed.). New York: Guilford Press.

Center for Sex Offender Management. (1999). Understanding juvenile sexual offending behavior: emerging research, treatment approaches and management practices. A project of the cities of justice programs, U.S. Department of Justice. [Online]. Available: <http://www.csom.org/pubs/juvbrf10.pdf>. [May 2010].

- Chaffin, M., & Friedrich, B. (2004). *Children and youth services review*, 26, 1097-1113. [Online]. Available: <http://www.cachildwelfareclearinghouse.org/files/EBP%20in%20child%20abuse%20and%20neglect--Chaffin%20and%20Friedrich.pdf>. [May 2010].
- Farniff, A., & Becker, J. (2006). Specialized assessment and treatment of adolescent sex offenders. *Aggression and Violent Behavior*, 11, 265-282.
- Hunter, J. (2000). Understanding juvenile sex offenders: research findings & guidelines for effective management & treatment. *Juvenile Justice Fact Sheet*. Charlottesville, VA: Institute of Law, Psychiatry, & Public Policy, University of Virginia.
- Hunter, J., Becker, J., & Lexier, L. (2006). "The Female Juvenile Sex Offender," In: *The Juvenile Sex Offender*, New York.
- Hunter, J., Gilbertson, S., Vedros, D., & Morton, M. (2004). Strengthening community-based programming for juvenile sexual offenders: key concepts and paradigm shifts. *Child Maltreatment*, 9 (2), 177-189.
- Kushner, I. (2004). Megan's law: Branding juveniles as sex offenders. *Developments in Mental Health Law*. The Institute of Law, Psychiatry & Public Policy, University of Virginia, 23 (1), 10-23.
- Mathews, F. (1997). Adolescent Sex Offenders. *National Clearinghouse on Family Violence*. [Online]. Available: <http://www.phac-aspc.gc.ca/ncfv-cnivf/publications/nfntsxadolinfractions-eng.php>. Not available November 2010.
- Mathews, R., Hunter, J., & Vuz, J. (1997). Juvenile female sexual offenders: Clinical characteristics and treatment issues. *Sexual Abuse: A Journal of Research and Treatment*, 9 (3), 187-199.
- National Center on Sexual Behavior of Youth. (2004). *NCSBY Fact Sheet*. What Research Shows About Female Adolescent Sex Offenders. [Online]. Available: <http://www.ncsby.org/pages/publications/Female%20ASO.pdf>. [May 2010].
- O'Reilly, G., & Carr, A. (2006). "Assessment and Treatment of Criminogenic Needs," In: *The Juvenile Sex Offender*, New York.
- O'Reilly, G., & Dowling, C. (2008). "Juvenile Sexual Offending: An Evidence-Based Approach to Assessment and Intervention". In: *Treating the Juvenile Offender*, New York.
- PsychDirect. (2004). Evidence Based Mental Health Education & Information: Paraphilias. [Online]. Available: <http://www.psychdirect.com/forensic/Criminology/para/paraphilia.htm>. Not available November 2009.
- Reuters Health Information. (2004). *Naltrexone Useful in Treatment of Adolescent Sex Offenders*. [Online]. Not available November 2009.
- Roe-Sepowitz, D., & Krysiak, J. (2008). Examining the sexual offenses of female juveniles: the relevance of child maltreatment. *American Journal of Orthopsychiatry*, 78 (4), 405-412.

- Saleh, F. & Vincent, G. (2004). Juveniles who commit sex crimes. *Annals of the American Society of Adolescent Psychiatry*, 2004, 28(11):183-200. [Online]. Available: http://www.findarticles.com/p/articles/mi_qa3882/is_200401/ai_n9383794. [May 2010].
- Saunders, B., Berliner, L., & Hanson, R. (2001). *Guidelines for the psychosocial treatment of intrafamilial child physical and sexual abuse* (Final Draft Report: July 30, 2001). Charleston, SC.
- Schladale, J. (2002). *A collaborative approach for engaging families in treatment with sexually aggressive youth*. [Online]. Available: <http://www.resourcesforresolvingviolence.com/articles.html>. [May 2010].
- Trivits, L., & Reppucci, N. (2002). Application of Megan's Law to juveniles. *American Psychologist*, 57, 690-704.
- U.S. Office of Juvenile Justice and Delinquency Prevention (OJJDP). (2001). *Juveniles Who Have Sexually Offended*.
- Virginia Administrative Code. (1997). Virginia Board of Psychology, *Regulations Governing the Certification of Sex Offender Treatment Providers*, 18 VAC 125-30 et seq.
- Virginia Department of Juvenile Justice (DJJ). (2004). *Virginia is a leader in treating juvenile sex offenders*. [Online]. Not available November 2009.
- Virginia Department of Juvenile Justice (DJJ). (2009). *Data resource guide fiscal year 2009*. [Online]. Available: http://www.djj.virginia.gov/About_Us/Administrative_Units/Research_and_Evaluation_Unit/pdf/Commitment_to_the_State_2009.pdf. [June 2010].
- Virginia Department of Juvenile Justice (DJJ). (2007). *Presentation to the Judicial Liaison Committee* dated May 4, 2007. [Online]. Not available November 2009.
- Waite, D., Keller, A., Pinkerton, R., Wieckowski, E., McGarvey, E., & Brown, L. (2005). Juvenile sex offender re-arrest rates for sexual, violent non-sexual & property crimes: a ten-year follow-up. *Sexual Abuse: A Journal of Research and Treatment*, 17 (3), 313-331.
- Westchester Juvenile Sex Offender and Sexually Aggressive Youth Planning Committee. (2000). Position Paper, Reviewed 2/6/2004.
- Wieckowski, E., Waite, D., Pinkerton, R., McGarvey, E., & Brown, L. (2005). Sex offender treatment in a juvenile correctional setting: program description and nine-year outcome study. *Children and Young People Who Sexually Abuse: New Theory, Research and Practice Developments*. UK, Russell House Publishing Co.
- Worling, J., & Langstrom, N. (2006). Risk of sexual recidivism in adolescents who offend sexually. *The Juvenile Sex Offender*, New York.

Additional Resources

- Bateman, P., & Mahoney, B. (1989). *Macho: Is that what I really want?* Scarborough, NY: Youth Education Systems.
- Bays, L., & Freeman-Longo, R. *How Can I Stop? Breaking My Deviant Cycle*. Orwell, VT: Safer Society Press.

Harvey, W., & McGuire, T. (1989). *So, There Are Laws About Sex*. Toronto: Butterworths.

Johnson, S. (1992). *Man to Man: When Your Partner Says No*. Orwell, VT: Safer Society Press.

From the National Clearinghouse on Family Violence

Mathews, F. (1996). *The Invisible Boy: Revisioning the Victimization of Male Children and Teens*. Ottawa: NCFV - Health Canada

Mathews, F. (1995) *Making the Decision to Care: Guys and Sexual Assault*. Ottawa: NCFV - Health Canada

Ryerse, C. (1996). *National Inventory of Treatment Programs for Child Sexual Abuse Offenders*. Ottawa: NCFV - Health Canada

Organizations

American Academy of Child & Adolescent Psychiatry (AACAP)

www.aacap.org

Focus Adolescent Services

Adolescent Sex Offenders

<http://www.focusas.com>

Institute for Family Centered Services (IFCS)

<http://www.ifcsinc.com>

Juvenile Forensic Evaluation Resource Center

Sex Offender Programs

<http://www.ilppp.virginia.edu/training-symposia/sex-offender-programs.html>

Virginia Department of Juvenile Justice (DJJ)

<http://www.djj.virginia.gov>

National Center on Sexual Behavior of Youth

<http://www.ncsby.org>

EATING DISORDERS

Introduction

Categories

Causes and Risk Factors

Psychological Risk Factors

Sociocultural Influences

Biological or Genetic Factors

Comorbidity

Medical

Psychiatric

Assessment

Treatments Considerations

Anorexia Nervosa

Bulimia Nervosa

Binge Eating Disorder

Cultural Considerations

Introduction

Eating disorders are a significant problem in the United States among children and adolescents of all ethnic groups (Nicholls & Viner, 2005). Anorexia nervosa (AN) has the highest death rate of any mental health disorder (Hoek, 2006). Of the millions of Americans who are diagnosed annually with an eating disorder, an estimated 90 percent are adolescent females (Ice, as cited by Eating Disorders Coalition, 2005).

The incidence of eating disorders among adolescent females has grown at an alarming rate over the past several decades (American Dietetic Association [ADA], 2001). The American Psychiatric Association (APA, 2000a) has reported that eating disorders are now the third most common form of chronic illness in the adolescent female population, with prevalence rates as high as five percent. Males also struggle with disordered eating symptoms, as they account for approximately 10 percent and 35 percent of the total population with bulimia nervosa/anorexia nervosa and binge eating disorder, respectively (Anorexia Nervosa and Related Eating Disorders [ANRED], 2004; Spitzer et al., 1993).

Although AN predominantly impacts adolescent and young adult females, there are reports of children as young as six affected by the disorder (ANRED, 2004). Similarly, bulimia nervosa (BN) generally impacts adolescents, although there are cases reported for children much younger (International Eating Disorder Referral Organization, n.d.). A recent assessment of eating disorder trends in London suggests that, among adult females, the number of AN diagnoses has stabilized, while the number of reported BN diagnoses has decreased (Currin, Schmidt, Treasure & Jick, 2005). However, this is not the case for adolescents, as incidence rates for AN continue to rise (Herpertz-Dahlmann, 2008).

Categories

Eating disorders are characterized by abnormal eating habits and cognitive distortions related to food and weight. The primary characteristic of all eating disorders is a preoccupation with weight and excessive self-evaluation (APA, 2000b), which is accompanied by an intense fear of weight gain (ADA, 2001). Three types of eating disorders which may be applied to youth are defined in the

Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR). The features of these disorders, also outlined in Table 1, are as follows:

- *Anorexia Nervosa (AN)* – AN is marked by resistance to maintaining body weight at or above a minimally normal weight for age and height (under 85 percent of that expected). The primary characteristic is intense fear of gaining weight or becoming fat, even when the individual is underweight. Other symptoms include disturbance in perceptions of personal body weight, undue influence of body weight and shape in self-evaluation, or denial of the seriousness of the current low body weight (APA, 2000b). The *DSM-IV-TR* recognizes two subtypes of AN: the restricting subtype in which weight loss is accomplished by dieting, fasting, or excessive exercise and no bingeing or purging occurs; the binge eating/purging subtype is used when the individual has engaged in either binge eating, purging or both.
- *Bulimia Nervosa (BN)* – BN consists of recurrent episodes of binge eating, characterized by consumption of excessive amounts of food within a discrete period of time, and lack of control in overeating during the episode. In order to prevent weight gain, binges are followed by recurrent inappropriate responses, such as self-induced vomiting or misuse of laxatives and other medications (often referred to as purging), fasting, or excessive exercise. The binge eating and compensatory behaviors both occur, on average, at least twice a week for three months. Finally, the individual’s self-evaluation is unduly influenced by body shape and weight (APA, 2000b). There are two subtypes of BN: purging and non-purging (exercise and restrictive food intake). For the most part, individuals with BN are within the normal weight range.
- *Binge Eating Disorder (BED)* – BED includes recurrent episodes of binge eating followed by marked distress. The binge eating occurs, on average, at least two days a week for six months. The binge eating is not associated with regular use of inappropriate compensatory behaviors, such as purging, fasting or excessive exercise (APA, 2000b).

Table 1

Summary of Primary Features of Eating Disorders

Disorder	Description
Anorexia Nervosa (AN)	Distorted body image that causes individuals to severely restrict their food intake, which may lead to significant weight loss and dangerous side-effects (e.g., malnutrition and dehydration).
Bulimia Nervosa (BN)	Pattern of excessive eating followed by purging (e.g., using laxatives, enemas, or diuretics, vomiting, and/or exercising).
Binge Eating Disorder (BED)	Frequent episodes of out-of-control eating. However, unlike those with bulimia, they do not purge their bodies of excess calories.

Source: APA, 2000b.

A individual may meet the criteria for more than one eating disorder over a lifetime, which suggests a continuum of disturbed eating habits and body image (ADA, 2001). Although the *DSM-IV-TR* criteria call for the diagnosis of a specific eating disorder, the symptoms typically occur along a continuum between those of AN and BN, with many individuals demonstrating a mixture of both disorders (APA, 2000b). Consequently, as many as 50 percent of individuals are diagnosed with Eating Disorder Not Otherwise Specified (EDNOS) (ADA, 2001). The diagnosis of EDNOS appears to be particularly prevalent in adolescents. The classification encompasses youth with symptoms of AN and BN who do not meet the threshold for official diagnosis, as well as youth with a binge eating disorder (BED) (ADA).

Other maladaptive eating patterns and behaviors, such as night eating syndrome (NES) and sleep-related eating disorders (SRED), have also started to receive significant clinical and empirical attention (Howell, Schenck & Crow, 2009). Moreover, because eating disorders occur less often in males, and because males with pathological eating patterns are not characteristically thin or frail, health professionals may underdiagnose them (Weltzin, as quoted by ANRED, 2002).

Causes and Risk Factors

Attempts to identify a single cause of eating disorders have been abandoned and replaced by a more multifaceted etiological theory. According to studies, disordered eating typically develops from a complex interaction of psychological risk factors, sociocultural influences, and biological or genetic predispositions (Striegel-Moore & Bulik, 2007; Mazzeo & Bulik, 2008).

Psychological Risk Factors

Psychological factors include negative affect, low self-esteem, and intense dissatisfaction with appearance (Stice, 2002). In fact, body dissatisfaction is “one of the most consistent and robust risk and maintenance factors for eating pathology” (Stice). Perfectionist or impulsive traits and rigid cognitive styles have also been identified as risk factors (Herpertz-Dahlmann et al., 2001; Klump et al., 2004). In addition, factors such as dysfunctional families and relationships (e.g., conflict avoidance, significant parental enmeshment, and/or rigid/overprotective parenting) have been highly correlated with disordered eating (APA HealthCenter, 1998; Gonzalez, Kohn & Clarke, 2007).

Individuals diagnosed with eating disorders are also more likely than the general population to have a history of abuse or trauma (ADA, 2001). Specifically, sexual abuse has been reported in 20 to 50 percent of individuals with AN and BN. Females with eating disorders who have suffered from sexual abuse also demonstrate higher rates of comorbid psychiatric conditions (APA, 2000a). Inadequate coping mechanisms (e.g., poor distress tolerance and emotion regulation difficulties) are also common in those with disordered eating and may explain an individual's adoption of maladaptive eating patterns in response to trauma (Mazzeo & Bulik, 2008).

Sociocultural Influences

The sociocultural model of eating disorders (Striegel-Moore & Bulik, 2007) asserts that exposure to the Western concept of the ideal body type, often via magazines, television, and the Internet, promotes internalization of the thin ideal. Body dissatisfaction ensues when individuals evaluate their own body size negatively because it is thought to vary from the ideal. Subsequently, elevated body mass index (BMI) and increased awareness of body size have been linked to the onset of dieting and body dissatisfaction, both of which are prominent risk factors for eating disorders (Neumark-Sztainer et al., 2007; Stice, 2002; Striegel-Moore & Bulik). Evidence of the power of sociocultural influences can be seen in females as young as age nine, 40 percent of whom report a history of dieting (Maier, 2003). Objectification of the female body further reinforces the importance of achieving the thin ideal, particularly among young women (Moradi, Dirks & Matteson, 2005).

Studies have also noted a high prevalence of eating disorders among athletes, models, dancers, and performers (ADA, 2001). One recent study concluded that females participating in aesthetic sports (those which emphasize appearance versus non-aesthetic sports or no sports) experienced higher weight concerns (Davison, Ernest, Birch, as cited by Natenshon, 1999). Males who are jockeys, wrestlers, and runners are also at increased risk of developing an eating disorder (Andersen, as cited by SFWED, *e-Issues for Men with Eating Disorders*, 2005). Thus, the risk of developing disordered eating symptoms increases when dietary restraint and the thin ideal assume great personal importance. This sociocultural theory may also help explain why adolescent females are more likely to develop AN and BN (Striegel-Moore & Bulik, 2007).

Biological or Genetic Factors

It has been suggested that genetic factors may contribute to the development of maladaptive eating behaviors (APA, 2000a; Mazzeo & Bulik, 2008; Striegel-Moore & Bulik, 2007). Specifically, first-degree female relatives and identical twin siblings of individuals with AN, BN or BED have higher rates of eating disorder diagnoses than the general population, suggesting the existence of a biological predisposition (APA; Striegel-Moore & Bulik). Inheritance patterns, however, remain unclear. Further, little is known about the genetic contribution of eating disorders in racial/ethnic groups other than Europeans (Striegel-Moore & Bulik). Genetic predisposition may interact with sociocultural influences to serve as a catalyst for the development of disordered eating (Mazzeo & Bulik). For example, a young woman with a family history of eating disorder patterns may seek out appearance-related feedback and/or engage in image-focused activities (e.g., swimming, cheerleading, reading weight-loss magazines), thereby interacting in environments in which the importance of her appearance is reinforced. In this way, exposure to image-focused media may serve as an additional factor in the development of weight and shape concerns (Bulik, 2004; Mazzeo & Bulik). Molecular genetic studies found that binge eating and vomiting behaviors are highly heritable, whereas weight and concerns on self-evaluation for BN appears to be a separate environmental factor (Striegel-Moore & Bulik).

Striegel-Moore and Bulik (2007) further propose that various neonatal complications may be implicated in an increased risk for AN. Longitudinal studies have shown that maternal feeding behaviors, such as food restriction and weight control behaviors, may lead to premature births, one predictor which may signal the future onset of AN.

Finally, some researchers have found that abnormal serotonin metabolism may play a greater role in individuals with BN than those with AN, suggesting biological differences in individuals with these two diagnoses (Murphy, Cowan & Sederer, 2001). A London-based study determined that individuals with AN are twice as likely to have variations in serotonin receptors, which in turn impact appetite (BBC News, as cited by SFWED, *Genetics and Biology*, 2005).

Comorbidity

Comorbidities for eating disorders can be medical and/or psychiatric in nature. Both issues are discussed in the paragraphs which follow.

Medical

Adolescents with eating disorders face the risk of potentially irreversible medical complications, including:

- growth retardation when the eating disorder occurs prior to closure of the epiphyses;
- pubertal delay or arrest;
- impaired acquisition of peak bone mass during adolescence; and
- increased risk of osteoporosis in adulthood (ADA, 2001).

Malnutrition and excessive exercise may also contribute to loss of bone mass in those suffering from AN and BN (Herpertz-Dahlmann, 2008).

In chronic eating disordered behaviors, additional physical comorbidities are common. For example, some individuals with eating disorders experience anemia, constipation, skin dryness, hypothermia, dental erosion, liver function abnormalities, metabolic acidosis, permanent dental damage, and/or cardiovascular problems, typically the result of semi-starvation and/or purging (APA, 2000b). Symptoms associated with dehydration, such as the imbalance of electrolytes, require immediate medical attention, including hospitalization, when it is necessary to address the side effects of dehydration and/or to restore weight (APA, 2000b).

While eating disorders are considered to be psychiatric in nature, they are distinct because accompanying nutrition and medical problems may make them life-threatening (ADA, 2001). As noted by the National Institute of Mental Health (NIMH) (2001), of particular concern is the increased mortality rate of individuals with eating disorders, particularly those diagnosed with AN. Recent studies suggest that individuals diagnosed with AN are more likely to suffer premature death (Steinhausen, 2008). The mortality rate attributed to AN in females aged 15 to 24 is approximately 12 times higher than the annual death rate for all causes. According to NIMH, the most common causes of death in those with AN are complications of the disorder, such as starvation, cardiac arrest, electrolyte imbalance, and even suicide. Current mortality rates for individuals with BN are lower (2 percent) (Fichter & Quadflieg, 2004).

Psychiatric

It is common for individuals suffering from eating disorders to experience additional significant distress due to comorbid psychological conditions. Females with AN and BN are at increased risk for depressive symptoms, such as low self-esteem, sadness, irritability, and sleep difficulties (APA, 2000b). In fact, mood disorders are diagnosed in 50 to 75 percent of individuals with AN and BN. Further, anxiety disorders (e.g., obsessive-compulsive disorder) are diagnosed in approximately 25 percent of individuals with AN. Personality disorders occur in 42 to 75 percent of individuals diagnosed with eating disorders (e.g., borderline personality disorder). Substance abuse disorders may be present in 30 to 37 percent of those with BN and 12 to 18 percent of individuals with AN (ADA, 2001), the latter of which may be employed to suppress appetite (APA, 2000b). Moreover, individuals with the binge eating/purging subtype of AN are more likely to have difficulties in impulse control, demonstrated by increased alcohol and drug abuse problems and suicidality (APA, 2000b). Recent research (Herpetz-Dahlmann, 2008) suggests that female youth who present with attention deficit hyperactivity disorder (ADHD) may also be more likely to develop maladaptive eating patterns and distorted body image.

Researchers have yet to determine the order of onset of psychological comorbidities. It is unclear whether conditions develop because of the isolation, stigma, and physiological changes brought on by eating disorders or whether they existed prior to the development of unhealthy eating habits (APA HealthCenter, 1998). Youth who frequently display obsessive behaviors and depression are more frequently diagnosed with AN than BN (APA, 2000a).

One study of adult females with eating disorders suggests that those with recurring suicidal thoughts usually developed their disorders at younger ages (Ham, 2004). According to researchers conducting a Swiss National Science Foundation's two-year study, a majority of participating individuals had co-occurring psychiatric disorders. Individuals with BN report a greater number of suicidal attempts (25 to 35 percent), compared to those with AN (10 to 20 percent) (Herpetz-Dahlmann, 2008). Researchers speculate that the link between purging and suicidal attempts may point to a general lack of impulse control, whereas the higher prevalence of suicidal thoughts among individuals with AN suggests chronic self-harming behavior (Ham).

Assessment

When making eating disorder diagnoses, service providers should ensure that the individual meets the appropriate *DSM-IV-TR* diagnostic criteria (APA, 2000b). Comprehensive symptom assessment requires the utilization of multiple cognitive and behavioral measures, as well as a thorough medical examination. This physical examination typically includes assessments of heart rate, blood pressure, body temperature, blood count, biochemical profile (e.g., electrolytes), electrocardiogram (ECG), electroencephalogram (EEG), magnetic resonance imaging (MRI), and computed tomography (CT) (Herpetz-Dahlmann, 2008).

Often one of the first physical signs of an eating disorder is changes in the mouth, including enlarged salivary glands, changed tooth color, tissue loss or lesions, heightened sensitivity to

temperature, and tooth decay from induced vomiting (NEDA, 2002). Dental practitioners are typically the first to identify signs of BN. According to the NEDA, tooth erosion is evident in approximately 89 percent of individuals with BN. Other frequent indicators of BN are an enlarged parotid/salivary gland, scars on the back of the hand from induced vomiting, and dehydration. For AN, youth may present the following physical symptoms: dry skin that, when pinched and released, stays pinched, dehydration, abdominal pain, constipation, lethargy, dizziness, fatigue, infrequent or absent menstrual periods in females who have reached puberty, intolerance to cold temperatures, emaciation, development of lanugo (fine, downy body hair), and yellowing of the skin (University of Virginia Health System, 2009; NIMH, 2001).

Typically, clinicians use self-report questionnaires and structured/semi-structured clinical interviews to assess cognitive and behavioral eating disorder symptoms, as well as other psychiatric comorbidities. Valid and reliable interview tools are included in Table 2.

Table 2

Suggested Assessment Tools

Measure Type	Name of Measure	Data Generated
Valid & reliable interview tools; completed by clinician	Interview for the Diagnosis of Eating Disorders (4 th Edition) (IDED-IV), (Kutlesic, Williamson, Gleaves, Barbin & Murphy-Eberenz, 1998); and Eating Disorder Examination (12 th Edition) (EDE), (Fairburn & Cooper, 1993).	Diagnoses of AN, BN, BED and EDNOS based on <i>DSM-IV</i> criteria Symptom severity, including concern with eating, weight and shape, and dietary restraint
Empirically supported, self-rating scales; completed by youth	Eating Disorder Diagnostic Scale (EDDS), (Stice, Telch & Rizvi, 2000); Binge Eating Scale (BES), (Gormally, Black, Daston & Rardin, 1982); Eating Disorder Examination Questionnaire (EDED-Q), (Fairburn & Beglin, 1994); Eating Attitudes Test (EAT), (Garner & Garfinkel, 1979); Eating Disorder Inventory-Revised (EDI-3), (Garner, 2004); Bulimia Test-Revised (BULIT-R), (Thelen, Farmer, Wonderlich & Smith, 1991); Multiaxial Assessment of Eating Disorder Symptoms (MAEDS), (Anderson, Williamson, Duchmann, Gleaves & Barbin, 1999); Stirling Eating Disorder Scale (SEDS), (Williams et al., 1994); and Eating Inventory (EI), (Stunkard & Messick, 1985).	Symptom ratings

Sources: Commission on Youth Graphic of references listed in text.

For assessment purposes, it is important to understand that individuals with disordered eating symptoms tend to self-evaluate their symptoms as compatible with their attitudes, behaviors and beliefs (Keel & Haedt, 2008). Therefore, self-report outcomes may be biased and should be considered in conjunction with findings from the physical examination. Family history of disordered eating behaviors and attitudes should also be explored in order to gain a comprehensive understanding of the individual's predisposition to disordered eating behaviors and cognitions (Mazzeo & Bulik, 2008). Mazzeo and Bulik suggest that assessing parental feeding patterns is also important, as the caregivers themselves will likely be integral components of the treatment program and find themselves encountering difficulties initiating and maintaining a healthy relationship with food and weight.

There are several noteworthy limitations to the assessment of disordered eating symptoms, e.g., a BN diagnosis is characterized by periods of fasting and dieting with intermittent episodes of binge eating (APA, 2000b). In order to meet the diagnostic criteria set forth by the *DSM-IV-TR*, youth with BN must report a minimum of two binges per week. Experts, however, suggest that this cutoff may be arbitrary (Latner & Clyne, 2008). The same may be true for the two to five percent of Americans who experience BED (NIMH, 2001). Thus, health professionals should consider formulating treatment plans based on observation and symptom severity, rather than on strict diagnostic satisfaction (Hebebrand, Casper, Treasure & Schweiger, 2004).

Furthermore, the definition of "binge" stipulates that the amount of food consumed must be "more than most people would eat in similar circumstances and similar periods of time" (APA, 2000b). Using this definition makes objective assessment difficult (Keel, Mayer & Harnden-Fischer, 2001), particularly in youth who lack the cognitive skills of adults. Efforts are underway to more accurately assess what may constitute a "binge," as well as to establish a more standardized method for evaluating "loss of control" in youth. Both definitions lack objectivity (Herpertz-Dahlmann, 2008). Moreover, "loss of control" is one component of binge eating that is of particular clinical significance, as it has been associated with decreased affective functioning (Latner & Clyne, 2008).

Clinicians should note that other medical disorders may account for the low body weight observed in adolescents (Murphy, Cowan & Sederer, 2001) and that the established diagnostic criteria for eating disorders in adults may not be entirely applicable to adolescents because of the wide range in the rate, timing, and magnitude of height/weight gain during puberty (ADA, 2001). For example, some healthy youth have been known to meet the weight criteria associated with a diagnosis of AN (Hebebrand, Casper, Treasure & Schweiger, 2004). Furthermore, the absence of menses, one of the diagnostic criteria for females with AN, is difficult to assess during early puberty because menstrual cycles at this age are often unpredictable (ADA). Other factors linked to changes in menstrual cycle are oral contraceptive use (Golden, 2003) and decreased food intake because of other physical conditions (Herpertz-Dahlmann, 2008).

Treatment Considerations

The earlier an eating disorder is identified and treated, the better the chances for recovery (Levine & Maine, 2002; Steinhausen, 2008), although individuals with eating disorders are among the least likely to seek treatment (APA HealthCenter, 1998). A comprehensive treatment plan should include medical care and monitoring, psychosocial interventions, nutritional counseling and, when appropriate, medication management (NIMH, 2001). Treatment providers should also discuss with both the individual and his/her family the role genetics may play in these disorders (Mazzeo & Bulik, 2008); this can minimize the guilt family members may experience and increase their willingness to be active participants in the treatment process.

Treatment locations range from intensive patient settings, in which general medical consultation is readily available, to partial hospital and residential programs with varying levels of outpatient care. The individual's weight, cardiac, and metabolic status are the most important physical parameters for determining treatment setting. Individuals who weigh under 85 percent of their estimated healthy weights are likely to require a highly structured program and possibly 24-hour hospitalization. Hospitalization should occur before the onset of medical instability, as manifested by severely abnormal vital signs. Specifically, once the youth begins to display a rapid decline in food intake and dramatic loss of weight, treatment providers should seriously consider hospitalization. Furthermore, the presence of external stressors or comorbid psychiatric disorders may have a significant impact on this decision. More important than the treatment setting, however, are the expertise and dedication of the members of the treatment team working with adolescents and their families (ADA, 2001).

Many individuals have a limited response to treatment and require long-term monitoring and intervention (U.S. Department of Health and Human Services, 1999). Because AN, in particular, is chronic in nature, those diagnosed with AN may struggle with the disorder for five to ten years or longer (Medscape Internal Medicine, 2006). Individuals with AN may be particularly difficult to treat because they are highly resistant to weight gain and are likely to exhibit a fear of losing control (Murphy, Cowan & Sederer, 2001). Thus, ethical considerations may arise during the course of treatment, and involuntary hospitalization may be the necessary course.

To date, no controlled treatment studies have been performed with children having eating disorders (Keel & Haedt, 2008). The majority of studies have been conducted with adolescents over age 15, although evaluation of adolescent males is limited (Keel & Haedt). The limitations of research of eating disorder interventions for males and young children should be acknowledged when considering the course of treatment.

A variety of treatments for AN, BN, and BED are discussed in the paragraphs which follow.

ANOREXIA NERVOSA (AN)

Evidence-based Treatments

According to the APA (2000a), the treatment methods described in the paragraphs which follow and in Table 3 are the most empirically supported for individuals with AN. For this review, evidence-based treatments are categorized as What Works and What Does Not Work. Treatments classified as What Does Not Work may also be classified as Unproven, as explained in the following paragraphs.

The treatment of AN generally occurs in three primary phases:

1. restoring the weight lost by severe dieting and purging;
2. treating psychological disturbances, such as distorted self-perception, low self-esteem, and interpersonal issues; and
3. achieving long-term, full recovery (NIMH, 2001).

Evidence-based treatments for AN include:

- ***Nutritional rehabilitation*** – Considerable evidence suggests that nutritional monitoring is effective in helping individuals return to a healthy weight, so long as it is conducted in the proper setting to meet the individual's needs. For severely underweight individuals, individual treatment has been found to be most effective. Clinicians have reported that, as weight is restored, other eating disorder and psychiatric comorbid symptoms diminish; however, they often do not disappear completely. Psychoeducational nutrition groups have also been associated with positive outcomes (Herpertz-Dahlmann & Salbach-Andrae, 2008). Although helpful, it is important that nutrition counseling serve as only one component of a multidisciplinary treatment approach.

- Family psychotherapy – The goal of family therapy is to involve family members in symptom reduction and to deal with family relational problems that may contribute to AN. Some studies have found that family therapy is associated with greater long-term benefits and better retention rates compared to individual psychotherapy (Bulik, Berkman, Brownley, Sedway & Lohr, 2007; Keel & Haedt, 2008). This seems to be especially true when the family is treated as part of the treatment team. However, these findings are limited to generalizations due to the fact that the individuals in these studies often were not assigned to receive both family and individual treatment, which commonly occurs in practice.
- Individual behavioral programs – These programs commonly provide a combination of nonpunitive reinforcers, such as privileges linked to weight goals and desired behaviors. They have been shown to produce good short-term therapeutic effects. Adolescents with AN may have the best outcomes after structured in-patient or partial hospitalization treatment. For example, one study found that adolescents who had received systematic in-patient treatment with close cooperation among parents and the pediatric and child and adolescent psychiatry departments had good outcomes even three to 14 years after treatment (APA, 2000a).
- Pharmacological treatments – No medication is currently approved by the Food and Drug Administration (FDA) to treat AN (Powers & Bruty, 2008). Pharmacotherapy is used most frequently after weight has been restored in order to maintain weight and normal eating behaviors and to treat psychiatric symptoms. The most typical medications prescribed are antidepressants; however, they should not be used in the acute phase of treatment for severely malnourished individuals as they are more sensitive to their side effects.

Psychological symptoms, particularly those related to mood disorders, seem to be exacerbated during periods of semi-starvation and significant weight loss (Keys, 1950). Thus, before prescribing psychopharmaceuticals to relieve symptoms associated with these individuals' comorbidities, it is recommended that clinicians first work towards minimizing the occurrence of purging behaviors and prior to beginning the refeeding process (Herpertz-Dahlmann, 2008). Selective serotonin reuptake inhibitors (SSRIs) are frequently used for individuals whose depressive, obsessive, or compulsive symptoms persist in spite of or in the absence of weight gain. However, studies have not shown SSRIs to be effective for purposes of restoring weight or preventing relapse (Kuo, 2006). Finally, preliminary evidence suggests that some atypical antipsychotics, (e.g., olanzapine) may minimize some AN symptoms, especially for those diagnosed with the binge-purge subtype (Powers & Bruty, 2008). However, typical side-effects include metabolic disorders and weight gain, which may prompt poor treatment adherence in resistant clients.

Unproven Treatments

Unproven treatments for AN cited by the APA (2000a) include:

- Individual psychotherapy – The efficacy of this form of treatment remains uncertain. No controlled studies have reported whether specific psychotherapeutic interventions are effective for nutritional recovery. Clinicians generally agree that psychotherapy is almost always beneficial during acute refeeding; however, in starving individuals, who are often negative, obsessive, or mildly cognitively impaired, this form of treatment may often be ineffective. Psychotherapy may, however, be a useful method in treating co-occurring disorders. Keel and Haedt (2008) present a review of various individual treatment programs that, based on preliminary analyses, may prove to be efficacious in the future (e.g., self psychology, Cognitive Behavioral Therapy, virtual reality).
- Group psychotherapy – Practitioners have found that group psychotherapy programs conducted during an acute phase among individuals with AN may be ineffective and can have negative therapeutic effects, as individuals in the group may compete to be the thinnest or exchange countertherapeutic techniques on simulating weight gain or hiding food.

- 12-step programs – No data regarding the short- or long-term effectiveness of this form of treatment is available. However, use of addiction-based programs in isolation is discouraged, as individuals will deprive themselves of the benefits of conventional treatments and may also be exposed to misinformation by well-meaning individuals in these groups.
- Somatic treatments – Vitamin and hormone treatments, electroconvulsive therapy, and other somatic treatments have been tried in uncontrolled studies. Both calcium/vitamin D supplements and hormone replacement therapy have been effective in improving bone mass (Golden, 2003). However, hormone injections also initiate the return of females' menses, thereby falsely representing their return to "biological health". Still, none have been shown to have any significant therapeutic value to individuals with AN.

Table 3

Summary of Treatments for Anorexia Nervosa

What Works	Description
Nutritional Rehabilitation	Entails developing meal plans and monitoring intake of adequate nutrition to promote healthy weight gain.
Family Psychotherapy	Family members are included in the process to assist in reduction of symptoms and modify maladaptive interpersonal patterns.
In-Patient Behavioral Programs	Individuals are rewarded for engaging in healthy eating and weight-related behaviors.
Pharmacological Treatments	Used primarily after weight restoration to minimize symptoms associated with psychiatric comorbidities.
What Does Not Work	Description
Individual Psychotherapy	Controlled trials have not supported this treatment; however, it may be beneficial during the refeeding process and to minimize comorbid symptoms.
Group Psychotherapy	May stimulate the transmission of unhealthy techniques among group members, particularly during acute phase of disorder.
12-Step Programs	Not yet tested for their efficacy; discouraged as a sole treatment.
Somatic Treatments	To date, treatments such as vitamin and hormone treatments and electroconvulsive therapy show no therapeutic value.

Sources: Commission on Youth Graphic of references listed in text.

Contraindicated Medications

Tricyclic antidepressants should be avoided in underweight individuals and in individuals who are at risk for suicide (APA, 2000a).

BULIMIA NERVOSA (BN)

Evidence-based Treatments

The treatments most commonly utilized in individuals with BN are listed in Table 4 and described in the paragraphs which follow. These treatments are designated as What Works and What Does Not Work. Treatments classified as What Does Not Work may also be classified as Unproven.

Evidence-based treatments for BN include:

- Pharmacological treatments – Individuals with BN are typically more responsive to pharmacologic interventions than those with AN (Berkman et al., 2006). Psychotropic medications, primarily antidepressants such as SSRIs, have been found to be helpful in treating BN. In fact, the SSRI fluoxetine is the only medication approved by the FDA for the treatment of BN (Powers & Bruty, 2008). These medications are intended to reduce the frequency of disturbed eating behaviors, as well as to alleviate symptoms of comorbid

disorders. Studies have found the use of antidepressants to be effective in reducing binge/purge behavior by a range of 50 to 75 percent. Most clinicians recommend continuing antidepressant therapy for a minimum of six months, preferably for a year (APA, 2000a). Pharmacological treatments have been found to be especially effective for individuals with symptoms of depression or anxiety and for those who have not responded well to psychotherapy alone. It may also help to prevent relapse. (NIMH, 2001).

- Cognitive Behavioral Therapy (CBT) – This form of psychotherapy, when specifically directed at the eating disorder symptoms and underlying conditions, is the intervention for which there is the most evidence of efficacy. It has been found to lead to significant reductions in binge eating, vomiting, and laxative abuse (Keel & Haedt, 2008).
- Combined treatments – There is generally a better response to CBT than pharmacotherapy; however, the combination of these two methods has been found to be superior to either alone (APA, 2000a).

Table 4

Summary of Treatments for Bulimia Nervosa

What Works	Description
Cognitive Behavioral Therapy (CBT)	The most effective independent treatment option; it is used to change underlying eating disorder cognitions and behaviors.
Pharmacological Treatments	Antidepressants, namely SSRIs, have effectively reduced binge/purging behaviors, as well as comorbid psychiatric symptoms.
Combined Treatments	A combination of CBT and pharmacotherapy seems to maximize treatment outcomes.
What Does Not Work	Description
Individual Psychotherapy	Compared to CBT, few individual therapeutic approaches have been effective in reducing symptoms.
Behavioral Therapy	Behavioral techniques, such as exposure, have been less effective than CBT techniques.
12-Step Programs	These have not yet been tested for their efficacy and are discouraged as a sole form of treatment.

Sources: Commission on Youth Graphic of references listed in text.

Unproven Treatments

Unproven treatments for BN include:

- Individual psychotherapy – While there is support for some individual therapies aside from CBT in case studies and reports, the efficacy of these methods has not been supported by controlled trials. When compared to CBT, most short-term trials have been found it to be less effective (Keel & Haedt, 2008).
- Family therapy – Recently, literature suggests that family therapy may be more beneficial (i.e., lower rates of remission) than individual supportive psychotherapy for young adolescents with BN and eating disorders not otherwise specified (EDNOS) diagnoses (Keel & Haedt, 2008). However, outcomes should be considered preliminary at this time.
- 12-step programs – Addiction-based programs are not recommended as the sole treatment approach for individuals with BN, as they do not attend to nutritional considerations or behavioral deficits (APA).

Contraindicated Medications

Contraindicated medications include:

- Bupropion has been associated with seizures in purging individuals with BN and should not be used in this population (APA, 2000a).
- Monoamine oxidase inhibitors (MAOIs) are also potentially dangerous in individuals with chaotic bingeing and purging; therefore their use should be limited (APA, 2000a).

The primary goal of treatment with individuals with BN is to reduce or eliminate binge eating and purging behavior. According to NIMH (2001), nutritional rehabilitation, psychosocial intervention, and medication management strategies are therefore often used. Specifically, treatment includes establishing regular, non-binge meals, improving attitudes related to the disorder, encouraging healthy but not excessive exercise, and resolving any co-occurring mental health disorders such as anxiety or mood disorders.

BINGE EATING DISORDER (BED)

Evidence-based Treatments

The treatment goals and strategies for BED are similar to those for BN. The primary difference in the two disorders is that individuals with BED present difficulties associated with being overweight, rather than being malnourished. Thus, they suffer from medical ailments similar to those associated with overweight populations, such as high blood pressure, high blood cholesterol levels, diabetes, and heart disease (APA, 2000a). Consequently, the treatment strategies tend to diverge only in the nature of medical interventions.

Little research on effective treatment strategies for BED exists (NIMH, 2001). The creation of a diagnostic classification will allow for additional study from a clinical research perspective (Brewerton, 1997). Research is being conducted to assess treatments that show both decreases in binge eating and in weight for overweight individuals. Some preliminary data shows that SSRIs, tricyclic antidepressants, and anticonvulsants are efficacious in reducing bingeing episodes (Berkman et al., 2006).

CBT, both individual and group setting, and various forms of self-help have also been effective in reducing binge eating, but less effective at controlling weight (Berkman, et al., 2006). Effective treatments that disrupt the binge-eating cycle and establish a structured pattern of eating allow the individual to experience less hunger, deprivation, and negative feelings about food and eating. Additionally, hunger and negative feelings, which most likely prompt binge eating, must also be reduced, decreasing the frequency of binges (NIMH, 2001). Mindfulness techniques and dialectical behavior therapy (DBT) have also been suggested as future areas of treatment research for BED (Mazzeo & Bulik, 2008). Further, compared to youth in the control group, youth who participated in a yoga-based intervention employing mindfulness and dissonance-based exercises experienced reductions in body dissatisfaction and uncontrolled eating (Scime & Cook-Cottone, 2008).

Unproven Treatments

Unproven treatments for BED, as cited by the APA (2000a) include:

- ***Nutritional rehabilitation and counseling*** – Restrictive diets used with group behavioral weight control programs have been associated with substantial initial weight loss, but are often less effective during or following the refeeding stage. Weight is commonly regained during this period.
- ***Psychotherapy*** – Behavior therapy, CBT, and interpersonal therapy have all been associated with binge frequency reduction rates. However, deterioration follows during the follow-up period for each of these types of therapy. It has been suggested that dialectical

behavior therapy may be beneficial for those with BED, as it has been shown to strengthen individuals' distress tolerance skills (Mazzeo & Bulik, 2008). However, the efficacy of this type of psychotherapy with individuals with BED is currently unknown.

- Addiction-based and self-help organization programs – No systematic outcome studies of these programs are available.
- Pharmacological treatments – Antidepressants are typically used in binge eating disorder and related syndromes. However, there is a very high placebo response rate (around 70 percent), and individuals tend to relapse after medication is discontinued.

Cultural Considerations

Eating disorder individuals represent a wide range of demographics (ADA, 2001). Disorders appear to be more prevalent among Native Americans and in Latino and Caucasian populations and less common among Asians and African Americans (APA, 2000a). Researchers have also found that African American females are more likely to develop BN than AN and are more likely to purge with laxatives than by vomiting (APA). Moreover, African American male youth engage in BED behaviors more frequently than their female Caucasian counterparts (Johnson, Rohan & Kirk, 2002). However, methods for assessing disordered eating symptoms in culturally diverse populations are limited (Bardone-Cone & Boyd, 2007), as are evidence-based treatment options (Keel & Haedt, 2008).

Because values concerning weight and shape vary among cultures, clinicians must be mindful of varying standards of beauty, acceptance, and what it means to be “perfect” in the modern world (APA, 2000a). It is also important to note that AN is detectable in all socioeconomic classes. Thus, higher socioeconomic status does not appear to be a major factor in the incidence of these disorders, as once was surmised (ADA, 2001).

A 2003 survey of Internet websites indicated that approximately 500 sites offered pro-anorexia and bulimia forums (Pirisi, 2005). An estimated four out of ten teenagers with eating disorders visit these pro-disorder sites (Peebles, as cited by McCook, 2005). These sites are a recent, but disturbing phenomenon.

Males with an eating disorder often go undiagnosed due to their embarrassment about not living up to the image of the ideal male body. In particular, males who binge or overeat compulsively may go undiagnosed, given society's unwillingness to accept such behavior in a male (Knowlton, 1995). Relatively little is known about males with eating disorders; thus, clinicians should be careful to avoid overlooking eating disorder symptoms in males.

Sources

American Dietetic Association (ADA). (2001). Position of the American Dietetic Association: nutrition intervention in the treatment of anorexia nervosa, bulimia nervosa, and eating disorders not otherwise specified. *Journal of the American Dietetic Association*.

American Psychiatric Association (APA). (2000a). *Practice guidelines for the treatment of individuals with eating disorders* (2nd ed.). Washington, DC: Author.

American Psychiatric Association (APA). (2000b). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.) (*DSM-IV-TR*). Washington, DC: Author.

American Psychological Association HealthCenter. (1998). Eating disorders: psychotherapy's role in effective treatment, in *How Therapy Helps: Get the facts*. [Online]. Available: <http://www.healthyplace.com/eating-disorders/menu-id-58>. [September 2010].

- Anderson, D., Williamson, D., Duchmann, E., Gleaves, D., & Barbin, J. (1999). Development and validation of a multi-axial treatment outcome measure for eating disorders, *Assessment*, 6, 7-20.
- Anorexia Nervosa and Related Eating Disorders, Inc. (ANRED). (2002). *Athletes with eating disorders: an overview* [Online]. Available: http://www.anred.com/ath_intro.html. Not available September 2010.
- Anorexia Nervosa and Related Eating Disorders, Inc. (ANRED). (2005). *Males with eating disorders*. [Online]. Available: <http://www.anred.com/males.html>. Not available September 2010.
- Anorexia Nervosa and Related Eating Disorders, Inc. (ANRED). (2004). *Statistics: how many people have eating disorders?* [Online]. Available: <http://www.anred.com/stats.html>. Not available September 2010.
- Bardone-Cone, A., & Boyd, C. (2007). Psychometric properties of eating disorder instruments in black and white young women: Internal consistency, temporal stability, and validity. *Psychological Assessment*, 19 (3), 356-362.
- Berkman, N., Bulik, C., Brownley, K., Lohr, K., Sedway, J., Rooks, A., et al. (2006). *Management of eating disorders, evidence report/technology assessment No. 135*. RTI International-University of North Carolina Evidence-Based Practice Center. [Online]. Available: <http://www.ahrq.gov/downloads/pub/evidence/pdf/eatingdisorders/eatdis.pdf>. [December 2007].
- Brewerton, T. (1997). Binge eating disorder: recognition, diagnosis, and treatment. *Medscape Psychiatry & Mental Health eJournal*, 2, 3.
- Bulik, C. (2004). Genetic and biological risk factors. In J. K. Thompson (Ed.), *Handbook of Eating Disorders and Obesity* (pp. 3-16). Hoboken, NJ: John Wiley & Sons, Inc.
- Bulik, C., Berkman, N., Brownley, K., Sedway, J., & Lohr, K. (2007). Anorexia nervosa treatment: a systematic review of randomized controlled trials. *International Journal of Eating Disorders*, 40, 310-320.
- Currin, L., Schmidt, U., Treasure, J., & Jick, H. (2005). Time trends in eating disorders incidence. *British Journal of Psychiatry*, 186, 132-135.
- Eating Disorder Coalition. (2005). *Statistics*. [Online]. Available: <http://www.eatingdisorderscoalition.org/reports/statistics.htm>. [January 2008].
- Fairburn, C., & Beglin, S. (1994). Assessment of eating disorders: interview or self-report questionnaire? *International Journal of Eating Disorders*, 16, 363-370.
- Fairburn, C., & Cooper, Z. (1993). The eating disorder examination (12th ed.). In C.G. Fairburn & G.T. Wilson (Eds.), *Binge eating: nature, assessment and treatment* (pp. 317-360). New York: Guilford Press.
- Favaro, A., Tenconi, S., & Santonastaso, P. (2006). Perinatal factors and the risk of developing anorexia nervosa and bulimia nervosa. *Archives of General Psychiatry*, 63, 82-88.
- Fichter, M., & Quadflieg, N. (2004). Twelve-year course and outcome of bulimia nervosa. *Psychological Medicine*, 34, 1395-1406.

- Garner, D. (2004). *Eating disorder inventory—3. Professional manual*. Lutz, FL: Psychological Assessment Resources, Inc.
- Garner, D., & Garfinkel, P. (1979). The eating attitudes test: an index of the symptoms of anorexia nervosa. *Psychological Medicine*, 9, 273-279.
- Golden, N. (2003). Eating disorders in adolescence and their sequelae. *Best Practice & Research Clinical Obstetrics & Gynaecology*, 17, 57-73.
- Gormally, J., Black, S., Daston, S., & Rardin, D. (1982). The assessment of binge eating: eating severity among obese persons. *Addictive Behavior*, 7, 47-55.
- Gonzalez, A., Kohn, M., & Clarke, S. (2007). Eating disorders in adolescents. *Australian Family Physician*, 36 (8), 614-619.
- Ham, B. (2004). Eating disorder behaviors linked to suicide risks. Health Behavior News Service, as reported by Center for the Advancement of Health. [Online]. Available: <http://scienceblog.com/community/older/2004/2/20041606.shtml>. [September 2010].
- Hebebrand, J., Casper, R., Treasure, J., & Schweiger, U. (2004). The need to revise the diagnostic criteria for anorexia nervosa. *Journal of Neural Transmission*, 111 (7), 827-840.
- Herpertz-Dahlmann, B. (2008). Adolescent eating disorders: definitions, symptomatology, epidemiology, and comorbidity. *Child and Adolescent Psychiatric Clinics of North America*, 18, 31-47.
- Herpertz-Dahlmann, B., & Salbach-Andrae, H. (2008). Overview of treatment modalities in adolescent anorexia nervosa. *Child and Adolescent Psychiatric Clinics of North America*, 18, 131-145.
- Herpertz-Dahlmann, B., Müller, B., Herpertz, S., Heussen, N., Hebebrand, J., & Remschmidt, H. (2001). Prospective 10-year follow-up in adolescent anorexia nervosa—course, outcome, psychiatric comorbidity, and psychosocial adaptation. *Journal of Child Psychology and Psychiatry*, 42 (5), 603-612.
- Hoek, H. (2006). Incidence, prevalence and mortality of anorexia nervosa and other eating disorders. *Current Opinion in Psychiatry*, 19 (4), 389-394.
- Hoek, H., & van Hoeken, D. (2003). Review of the prevalence and incidence of eating disorders. *International Journal of Eating Disorders*, 34, 383-396.
- Howell, M., Schenck, C., & Crow, S. (2009). A review of nighttime eating disorders. *Sleep Medicine Reviews*, 13, 23-34.
- International Eating Disorder Referral Organization. (2005). Males and eating disorders: some basic facts and findings. [Online]. Available: http://edreferral.com/males_eating_disorders.htm. [September 2010].
- International Eating Disorder Referral Organization. (n.d.). Treatment – There is hope. [Online]. Available: <http://edreferral.com/treatment.htm>. [September 2010].
- Johnson, W., Rohan, K., & Kirck, A. (2002). Prevalence and correlates of binge eating in White and African American adolescents. *Eating Behaviors*, 3 (2), 179-189.

- Kaye, W., Bulik, C., Thornton, L., Barbarich, N., Masters, K., and the Price Foundation Collaborative Group. (2004). Comorbidity of anxiety disorders with anorexia and bulimia nervosa. *American Journal of Psychiatry*, 161 (12), 2215-2221.
- Keel, P., & Haedt, A. (2008). Evidence-based psychosocial treatments for eating problems and eating disorders. *Journal of Clinical Child and Adolescent Psychology*, 37 (1), 39-61.
- Keel, P., Mayer, S., & Harnden-Fischer, J. (2001). Importance of size in defining binge eating episodes in bulimia nervosa. *International Journal of Eating Disorders*, 29 (3), 294-301.
- Keys, A. (1950). The residues of malnutrition and starvation. *Science*, 112 (2909), 371-373.
- Klump, K., Strober, M., Bulik, C., Thornton, L., Johnson, C., Devlin, B., et al. (2004). Personality characteristics of women before and after recovery from an eating disorder. *Psychological Medicine*, 34 (8), 1407-1418.
- Knowlton, L. (1995). Eating disorders in males. *Psychiatric Times*, Vol. XII.
- Kuo, I. (2006). Fluoxetine for anorexia nervosa following weight restoration: Psychiatry viewpoint. *MedcapeMedscape Psychiatry & Mental Health*, 11 (2).
- Kutlesic, V., Williamson, D., Gleaves, D., Barbin, J., & Murphy-Eberenz, K. (1998). The interview for the diagnosis of eating disorders-IV: Application to *DSM-IV* diagnostic criteria. *Psychological Assessment*, 10, 41-48.
- Latner, J., & Clyne, C. (2008). The diagnostic validity of the criteria for binge eating disorder. *International Journal of Eating Disorders*, 41, 1-14.
- Levine, M., & Maine, M. (2002). *Eating disorders can be prevented*. National Eating Disorders Association. [Online]. Available: <http://www.nationaleatingdisorders.org/nedaDir/files/documents/handouts/EDsPrev.pdf>. [September 2010].
- Maier, A. (2003). *Myths and facts about eating disorders: what we know from research and treatment*. Congressional Briefing, U.S. House of Representatives. [Online]. Available: <http://www.eatingdisorderscoalition.org/congbriefings/EDAW2003/EDAW%202003%20Anita.htm>. [September 2010].
- Mazzeo, S., & Bulik, C. (2008). Environmental and genetic risk factors for eating disorders: what the clinician needs to know. *Child and Adolescent Psychiatric Clinics of North America*, 18, 67-82.
- McCook, A. (2005). Teens with eating disorders visit diet websites. U.S. National *HealthyPlace.com*. [Online]. Available: <http://www.virtualmedicalcentre.com/news/teens-with-eating-disorders-visit-diet-websites/6530>. [September 2010].
- Medscape Internal Medicine. (2006). Eating disorders and the challenge of treatment: an expert interview with Nancy D. Berkman, Ph.D. *Medscape*, 8 (2).
- Mitchell, J., & Peterson, C. (2007). *Assessment of eating disorders*. New York: Guilford Press.
- Moradi, B., Dirks, D., & Matteson, A. (2005). Roles of sexual objectification experiences and internalization of standards of beauty in eating disorder symptomatology: a test and extension of objectification theory. *Journal of Counseling Psychology*, 52 (3), 420-428.

- Murphy, M., Cowan, R., & Sederer, L. (2001). *Blueprints in psychiatry* (2nd ed.). Malden, Mass: Blackwell Science, Inc., (p. 40).
- Natenshon, A. (1999). *When very young kids have eating disorders*. International Eating Disorder Referral Organization. EDReferral.com. [Online]. Available: <http://edreferral.com/children.htm>. [September 2010].
- National Eating Disorders Association (NEDA). (2002). *Dental complications of eating disorders: Information for dental practitioners*. [Online]. Available: <http://www.nationaleatingdisorders.org/nedaDir/files/documents/handouts/DentCmps.pdf>. [September 2010].
- National Institute of Mental Health (NIMH). (2001). *Eating disorders: facts about eating disorders and the search for solutions*, NIH Publication No. 01-4901. [Online]. Available: <http://www.carf.org/WorkArea/DownloadAsset.aspx?id=22448>. [September 2010].
- Neumark-Sztainer, D., Wall, M., Haines, J., Story, M., Sherwood, N., & van den Berg, P. (2007). Shared risk and protective factors for overweight and disordered eating in adolescents. *American Journal of Preventive Medicine*, 33 (5), 359-369.
- Nicholls, D., & Viner, R. (2005). Eating disorders and weight problems. *BMJ*, 330 (7497), 950-953.
- Pirisi, A. (2005). *Some eating disorder web sites discourage recovery study*. HealthDay News. [Online]. Available: <http://www.healthday.com/view.cfm?id=525728>. [June 2005]. *Not available September 2010*.
- Powers, P., & Bruty, H. (2008). Pharmacotherapy for eating disorders and obesity. *Child and Adolescent Psychiatric Clinics of North America*, 18, 175-187.
- Scime, M., & Cook-Cottone, C. (2008). Primary prevention of eating disorders: a constructivist integration of mind and body strategies. *International Journal of Eating Disorders*, 41, 134-142.
- Something Fishy Website on Eating Disorders [SFWED]. (2005). *Genetics and biology*. [Online]. Available: <http://www.something-fishy.org/isf/genetics.php>. [January 2005].
- Something Fishy Website on Eating Disorders [SFWED]. (2005). *e-Issues for men with eating disorders*. [Online]. Available: <http://www.something-fishy.org/cultural/issuesformen.php>. [September 2010].
- Spitzer, R., Yanovski, S., Wadden, T., Wing, R., Marcus, M., et al. (1993) Binge eating disorder: its further validation in a multisite study. *International Journal of Eating Disorders*, 13 (2), 137-153.
- Steinhausen, H. (2008). Outcome of eating disorders. *Child and Adolescent Psychiatric Clinics of North America*, 18, 225-242.
- Stice, E. (2002). Risk and maintenance factors for eating pathology: a meta-analytic review. *Psychological Bulletin*, 128, 825-848.
- Stice, E., Telch, C., & Rizvi, S. (2000). Development and validation of the eating disorder diagnostic scale: a brief self-report measure of anorexia, bulimia, and binge-eating disorder. *Psychological Assessment*, 12, 123-131.

- Striegel-Moore, R., & Bulik, C. (2007). Risk factors for eating disorders. *American Psychologist* 62 (3), 181-198.
- Stunkard, A., & Messick, S. (1985). The three-factor eating questionnaire to measure dietary restraint and hunger. *Journal of Psychosomatic Research*, 29, 71-83.
- Thelen, M., Farmer, J., Wonderlich, S., & Smith, M. (1991). A revision of the bulimia test: the BULIT-R. Psychological assessment: *A Journal of Consulting and Clinical Psychology*, 3, 119-124.
- U.S. Department of Health and Human Services. (1999). Mental Health: A report of the surgeon general. Rockville, MD.
- University of Virginia Health System. (2009). Conditions and treatment: Anorexia nervosa. [Online]. Available: <http://uvahealth.com/services/childrens-hospital/conditions-treatments/atproxiedcontent.2009-12-16.3557926620>. [September 2010].
- Williams, G., Power, K., Miller, H., Freeman, C., Yellowlees, A., et al. (1994). Development and validation of the stirling eating disorders scales. *International Journal of Eating Disorders*, 16 (1), 35-43

Organizations/Resources

Academy for Eating Disorders (AED)

6728 Old McLean Village Drive — McLean, VA 22101

<http://www.aedweb.org>

Eating Disorder.com

<http://www.eating-disorder.com>

Eating Disorders Coalition for Research, Policy & Action (EDC)

<http://www.eatingdisorderscoalition.org>

EDReferral.com (Eating Disorder Referral and Information Center)

<http://edreferral.com>

James Madison University

University Health Center

<http://www.jmu.edu/healthctr/eatingdisorder>

Johns Hopkins Eating and Weight Disorders Program

Johns Hopkins Hospital

101 Meyer Building, 600 N. Wolfe Street — Baltimore, MD 21205

http://www.hopkinsmedicine.org/psychiatry/specialty_areas/eating_disorders/index.html

National Association of Anorexia Nervosa and Associated Eating Disorders

<http://www.anad.org>

National Eating Disorders Association (NEDA)

Information & Referral Helpline: 800-931-2237

<http://www.nationaleatingdisorders.org>

Society for Adolescent Medicine (SAM)

<http://www.adolescenthealth.org/virginia.htm>

U.S. Department of Health and Human Services
National Institutes of Health
National Institute of Mental Health (NIMH)
<http://www.nimh.nih.gov>

Substance Abuse and Mental Health Services Administration (SAMHSA)
National Mental Health Information Center
<https://store.samhsa.gov/facet/Issues%2C+Conditions%2C+%26+Disorders/term/Eating%20Disorders?headerForList=>

University of Virginia
Elson Student Health Center
<http://www.virginia.edu/studenthealth/ailments/eatingdis.html>

Virginia Commonwealth University Health System
<http://www.vcuhealth.org>

Virginia Polytechnic Institute and State University (VA Tech)
Cook Counseling Center
<http://www.ucc.vt.edu/eating.html>

JUVENILE FIRESETTING

Introduction

Causes and Risk Factors

Comorbidity

Assessment

Promising Treatments

Cognitive Behavioral Therapy and Fire Safety Education

Treatment Settings

Residential Facility

Foster Care

Inpatient Hospitalization

Unproven and Ineffective Treatments

Conclusion

Introduction

When juvenile delinquency is mentioned, arson is not usually the first type of offense that comes to mind. However, Federal Bureau of Investigation (FBI) statistics show that juveniles accounted for 52 percent of arson arrests (Office of Juvenile Justice and Delinquency Prevention [OJJDP], 1997). Juveniles are arrested for a greater share of this crime than any other age group, accounting for close to half of all structure fires, hundreds of millions of dollars in damages, thousands of fire fatalities, and severe burn injuries each year (OJJDP). Even more disturbing is that almost 85 percent of the victims of fires started by children are the children themselves (Burn Institute, 2004).

Historically, juvenile firesetting has been viewed as a problem particular to “curious kids” (U.S. Fire Administration [USFA] of the Federal Emergency Management Agency [FEMA], 1997). Fires set by children playing with matches and lighters tend to be categorized as “accidental” or “child’s play.” However, juvenile firesetting includes the deliberate destruction of property by juveniles through fire, which sometimes results in casualties (USFA). Current research trends suggest that juvenile firesetting is an intricate problem, involving a diverse, heterogeneous population of children who display a range of emotional, behavioral, and environmental characteristics (Stadolnik, 2000). The complex nature of juvenile firesetting necessitates an extensive intervention and a multidisciplinary array of services (Stadolnik).

Although legal definitions of arson vary from state to state, the juvenile may be charged with arson when an evaluation of the occurrence event reveals sufficient evidence of malicious and willful firesetting, (OJJDP, 1997). Juveniles with fire involvement pose notable risks to themselves and others, with an annual toll estimated at billions of dollars in property loss, hundreds of deaths, and thousands of burn injuries (McKay et al., 2006).

Causes and Risk Factors

The general lack of consensus in medical, legal, sociological, and psychiatric fields on the topic of juvenile firesetting has contributed to the many myths about the disorder, which are summarized in Table 1. Unfortunately, specific information is not available about the causes and risk factors of juvenile firesetting, as they are not definitively known. Most attention to firesetting has been included within broader categories of delinquency and aggression in children (MacKay et al., 2009). In the past two decades, professionals have attempted to conceptualize and develop theoretical underpinnings of juvenile firesetting behavior. However, firesetting is an elusive and complex

behavioral problem. In order to explain firesetting, both individual and environmental predictors must be assessed simultaneously.

Table 1

Common Myths of Juvenile Firesetting Behavior

- Juveniles who set fires are pyromaniacs or arsonists.
- Firesetting is related to enuresis (bed wetting).
- Firesetting is related to sexual deviancy and/or histories of sexual trauma.
- Firesetters are sexually aroused by their behavior.
- Juveniles who play with fire, or set fires, do so because of some “urge” or “obsession” with fire.
- Firesetting is related to cruelty to animals.
- Firesetting is a rare and isolated behavior that occurs among a small group of juveniles.
- Firesetters share a core set of deviant personality characteristics.
- Older children light more dangerous and deadly fires.
- Juveniles who display firesetting behaviors are likely to become adult firesetters.
- Firesetting is a difficult behavior to treat.
- Firesetting is more common among juveniles with lower intelligence levels.
- Therapy that allows juveniles to talk about their firesetting behavior will reduce their likelihood of firesetting.
- Playing with fire is a part of normal developmental phase for young children.
- Giving youth information about fire will encourage them to want to play with fire.

Source: Stadolnik, 2000.

Researchers are attempting to gather data about the children who are firesetters and their families, the factors driving their behavior and the number of firesetting incidents associated with the child, even if a fire department has never responded to any of the fires (Wilcox, 2000). Motivational typologies, as listed, are often the most popular and simplest method by which practitioners and researchers attempt to understand juvenile firesetting (Stadolnik, 2000):

Curiosity motivated firesetting is “driven by a child’s desire to learn or master fire through actual experimentation or play” (Stadolnik, 2000). Although some curiosity may be considered, to some extent, normative at certain developmental levels, extreme levels of curiosity are linked to later problematic firesetting behaviors. Recent empirical work has supported the importance of curiosity as an important factor (MacKay et al., 2006).

Crisis motivated firesetting describes a juvenile who feels “ineffective, anxious, and seemingly powerless in a world that they often experience as being out of their control” (Stadolnik, 2000); for these children, fire, as a powerful element, may offer a sense of mastery and competence.

Delinquent motivated firesetting conceptualizes the use of fire as one means of acting out against authority. Given that firesetting is one of 15 symptoms for conduct disorder, it makes sense to correlate delinquency and firesetting.

Pathological motivated firesetting is the rarest of the motivations seen by practitioners in this field and describes a severely disturbed juvenile, including those who are actively psychotic, acutely paranoid or delusional, or youth who have lived in chronically disturbed and bizarre environments. A small, rare subtype of this group may meet criteria for pyromania, if the degree of sensory reinforcement is powerful enough.

While motivational typologies can be useful in assessment and treatment interventions, many youth will present with seemingly complex motivations for firesetting behavior, thus limiting a practitioner's ability to assign him or her within the current simplified models. Variables linked to juvenile firesetting include peer pressure, curiosity, mental health and substance abuse problems, and lack of adult supervision (Burn Institute, 2004; MacKay et al., 2009). Research has also found a relationship between involvement in firesetting and parents/caregivers who smoke, due to the availability of matches and cigarette lighters and because the purposive use of fire is familiar to the juvenile (Porth & Hughes, 2000).

Comorbidity

Clinical studies that have examined juvenile firesetters found that many of these youth have conduct and aggression problems. A recent study which researched conduct disorders (CD) and firesetting found that approximately 30 percent of youth participating in firesetting have been diagnosed with CD (Becker, Stuewig, Herrera & McCloskey, 2004). Kolko (2002) found that early childhood firesetters often exhibit multiple behavioral problems and externalizing behaviors, such as rule-breaking, aggression, destruction, and attention deficit hyperactivity disorder (ADHD).

Approximately 10 to 15 percent of firesetting youth are females (MatchBook Journal, 2009). However, a recent study investigating the prevalence of self-reported firesetting determined that female firesetters are more likely to have serious antisocial behaviors, participate in risk-taking activities, and have a substance abuse problem (Martin et al., 2004). Another study, which researched a potential link between juvenile firesetting and delinquency, found that firesetters are more likely than nonfiresetters to be delinquent, while adolescents who continue in the practice of firesetting tend to be chronically criminal (Becker et al., 2004). Another significant finding was that firesetting may be related to extreme antisocial behavior which is not always accounted for by the presence of CD (Becker et al.). Finally, a recent study by MacKay et al. (2009) demonstrated a clear link between firesetting and mental health and substance use, and suggested that a history of firesetting was associated with psychopathology during adolescence.

Assessment

Given the paucity of research on this population, it comes as no surprise that assessment and evaluation lack clarity and uniformity in practice. Overall, individual and family-related factors that may predispose the firesetting youth should be identified in order to effectively treat this behavior. Assessing personality structure and individual characteristics, family and social circumstances, and immediate environmental conditions allow for more effective treatment (Williams & Clements, 2007). Factors to be considered include history or frequency of incidents, method, motive, ignition, target and behavior (Sharp, Blaakman & Cole, 2005). It is important to gather data not only to plan treatment, but also to discover the motivation behind the firesetting behavior (Sharp, Blaakman & Cole).

As outlined by Stadolnik (2000), several domains are crucial to a comprehensive evaluation of firesetting behavior and the development of a risk factor model for assessing this behavior:

- fire incident;
- fire history;
- motives and precipitants;
- consequences/family discipline;
- developmental level/IQ;
- psychiatric disorders and history;
- family environment;
- the child's cognitive behavior repertoire;
- parent functioning and practices;
- social supports;
- service availability; and
- treatment outcome.

Despite a lack of universal acceptance, there are several firesetting assessment models, specific instruments and protocols and that have been developed and are currently utilized by practitioners and researchers in the field. These tools, also summarized in Table 2, include:

- Children’s Firesetting Inventory (CFI)
- Firesetting Risk Inventory (FRI)
- F.I.R.E Protocol: An Assessment Instrument for Firesetting Behaviors
- Fire Incident Analysis for Children (FIA-C)
- Fire Incidence Analysis for Parents (FIA-P)
- Firesetters Analysis Worksheet
- Juvenile Firesetter Needs Assessment Protocol
- Qualitative Analysis Model of Child and Adult Fire Deviant Behavior

Table 2

Suggested Assessment Tools

Measure Type	Name of Measure	Who Completes	Data Generated
Semi-Structured Interview	Children’s Firesetting Inventory (CFI)	Clinician/Youth	Six dimensions related to firesetting behavior
Semi-Structured Interview	Firesetting Risk Inventory (FRI)	Clinician/Parents	Personal, familial, and social dimensions related to firesetting
Semi-Structured Interview	F.I.R.E Protocol	Clinician/Parents and Youth	Assessment of threat; risk of recidivism; specific treatment needs
Semi-structured Interview	Juvenile Firesetter Needs Assessment Protocol (JFNAP)	Clinician/Parents and Youth	Mental health needs; firesetter typology
Structured and Semi-Structured Interview	Firesetting Incident Analysis (Child and Parent forms)	Clinician/Parents	General and fire-specific variables (e.g., firesetting motives, response to fires)
Semi-Structured Interview	Firesetters Analysis Worksheet	Clinician	Risk level/risk of recidivism
Structured Interview	Firesetting History Screen (FHS)	Clinician/Parents and Youth	Evidence of firesetting activities

Sources: Palmer, Caufield & Hollin, 2005; Stadolnik, 2000; & Wilcox & Kolko, 2002.

Promising Treatments

Currently, there are no evidence-based treatment approaches for the juvenile firesetting population. However, seven components common to juvenile firesetting programs have been identified as successful by the Office of Juvenile Justice and Delinquency Prevention (1997):

1. A program management component to make key decisions, coordinate interagency efforts and foster interagency support;
2. A screening and evaluation component to identify and evaluate children who have been involved in firesetting;
3. An intervention services component to provide primary prevention, early intervention, and/or treatment for juveniles, especially those who have already set fires or shown an unusual interest in fire;
4. A referral component to link the program with agencies that might help identify juvenile firesetters or provide services to them and their families;
5. A publicity and outreach component to raise public awareness of the program and encourage early identification of juvenile firesetters;
6. A monitoring component to track the program’s identification and treatment of juvenile firesetters; and
7. A juvenile justice system component to forge relationships with juvenile justice agencies that often handle juvenile firesetters.

Additional treatment components which have been suggested in the literature are fire service collaboration and fire safety education, behavioral interventions, family therapy and hospitalizations, residential placement, and/or medication (Stadolnik, 2000). Unfortunately, there is no single identified treatment that is considered effective for treating this behavior. However, many treatments have proven beneficial in the management of this behavior. Many of these treatments are appropriately applied to firesetters with consideration for their age (Slavkin, 2000). These treatments are outlined in Table 3 as What Works, What Seems to Work, and What Does Not Work.

Table 3

**Summary of Treatments for Juvenile Firesetters
by Level of Support**

What Works	Description
No treatments meet criteria.	N/A
What Seems to Work	Description
Cognitive Behavioral Therapy (CBT) Fire Safety Education	Structured treatments designed to intervene with children who set fires. Education includes information about the nature of fire, how rapidly it spreads, and its potential for destructiveness, as well as information about how to maintain a fire-safe environment, utilizing escape plans and practice, and the appropriate use of fire.
What Does Not Work	Description
Ignoring the problem	Leaving the youth untreated is not beneficial because they typically do not outgrow this behavior and ignoring these behaviors may increase dysfunctional behavior patterns.
Satiation	Satiation, the practice of repetitively lighting and extinguishing fire, may cause the youth to feel more competent around fire and may actually increase the behavior.

Sources: Kolko, 2001; USFA, 1997; OJJDP, 1997; Stadolnik, 2000; Slavkin, 2000.

Cognitive Behavioral Therapy and Fire Safety Education

Cognitive Behavioral Therapy (CBT) and fire safety education were found to significantly curtail firesetting and match play behaviors up to a year after intervention (Kolko, 2001). Structured treatments designed to intervene with children who set fires were also found to have greater effect in the long-term than brief visits with a firefighter (Kolko). Both CBT and fire safety education were also shown to be effective at reducing other activities associated with firesetting, such as playing with matches and being seen with matches or lighters (Kolko).

Regardless of the seriousness of an incident or the child’s motive in starting a fire, education regarding fire should be part of the intervention strategy. Education should include information about the nature of fire, how rapidly it spreads, and its potential for destructiveness (USFA, 1997). Information about how to maintain a fire-safe environment, utilize escape plans and practice, and use fire appropriately has been shown to be an effective component of comprehensive arson intervention programs, at least for younger youth (USFA).

Treatment Settings

Sometimes it is determined that the juvenile should be confined to a secure facility, residential treatment center or hospital, although treatment for firesetting usually occurs in the least restrictive environment, depending on the seriousness of the offense and on the needs of the child (USFA, 1997). Although many juvenile firesetters can be maintained in the community with appropriate supervision, careful assessment is crucial in order to provide the appropriate level of care (USFA). Such an assessment must consider the child, family, environment, facts about the fire and fire

history, as well as the child's reaction to the fire and sense of accountability (USFA). Further, consideration should be given to ensuring that the child does not pose a risk to others and the public safety is protected.

Residential Facility

Many programs will not admit a child with a history of firesetting for fear the child will set fire in the facility (USFA, 1997). However, residential treatment can provide a safe and comprehensive setting for treatment to firesetters, as well as treatment for any other co-occurring or familial issues.

Foster Care

There is a strong link between neglect and abuse and firesetting, so placing a child in a safe, supervised family setting can be very effective in situations where there are unsubstantiated findings of abuse and neglect. When firesetting occurs as a result of neglect or abuse, the removal of the outside stressors can often cause the firesetting behavior to cease (USFA, 1997). Certain foster homes can be classified as "intensive" foster homes to allow for these difficult types of placements (USFA). Considerable attention is placed on fire safety practices and the foster parents receive in-depth training in working with difficult adolescents. Such training includes communication and problem-solving skills, supervision, behavior management, and fire safety education for prevention and intervention (USFA). Children in foster care receive counseling and additional support services, and the firesetter's parents are included as a component in the treatment plan (USFA). It is very important that the risk be acknowledged in this and any other community-based treatment intervention. Emphasis is placed on training and making the firesetter aware of the potential dangers of firesetting (USFA).

Inpatient Hospitalization

Although inpatient facilities may also be reluctant to accept children with a history of firesetting, inpatient treatment may be effective if an effective treatment protocol is in place (USFA, 1997). For example, Kolko (2002) has reported success using CBT to treat firesetting in an inpatient setting.

Unproven and Contraindicated Treatments

It is important to acknowledge that, while simple curiosity about fire is normal, firesetting is not. Leaving the child untreated is not beneficial, as recent studies have shown, because firesetters typically do not outgrow this behavior (Waupaca Area Fire District, 2002). Ignoring firesetting is unwise because it communicates disinterest in the child's well-being and experiences, which is likely to escalate dysfunctional behavior patterns (Sharp et al., 2005). Moreover, the problems must be addressed to prevent future fires.

Satiation, the practice of repetitively lighting and extinguishing fire, was once thought to be a deterrent to firesetting, based on the idea that a child curious about fire will tire of the exposure. However, the more practice a child has with fire, the more competent s/he may feel, which may make the child more likely to increase the behavior (Sharp et al., 2005). Satiation, therefore, should not be used with firesetters.

Conclusion

Current theories suggest that juvenile firesetting behaviors appear to stem from a complex interplay of individual and environmental factors. Given their unique circumstances and characteristics, individual firesetters require extensive evaluation to determine the best course of treatment. An appropriate review of firesetting should include an examination of the firesetter's history, such as prior fire learning experiences, cognitive and behavioral reviews, and parent and family influences and stressors (Slavkin, 2000). Finally, given the lack of evidence-based risk factors, assessment methods, and effective intervention strategies, this population warrants increased attention.

Sources

- Becker, K., Stuewig, J., Herrera, V., & McCloskey, L. (2004). A study of firesetting and animal cruelty in children: Family influences and adolescent outcomes. *Journal of the American Academy of Child and Adolescent Psychiatry, 43* (7).
- Burn Institute. (2004). Fire & Burn Prevention Education, Juvenile Firesetter Program. [Online]. Available: <http://www.burninstitute.org/fbp/programs/juvenile.html>. [May 2010].
- Kolko, D. (2001). Efficacy of cognitive-behavioral treatment and fire safety education for children who set fires: Initial and follow-up outcomes. *Journal of Child Psychology and Psychiatry, 42* (3), 359-369.
- Kolko, D. (2002). Child, parent and family treatment: cognitive-behavioral interventions. In D. Kolko (Ed.). *Handbook on firesetting in children and youth* (pp. 305-336). San Diego, CA: Academic Press.
- McKay, S., Henderson, J., Del Bove, G., Marton, P., Warling, D., & Root, C. (2006). Fire interest and antisociality as risk factors in the severity and persistence of juvenile firesetting. *Journal of the American Academy of Child and Adolescent Psychiatry, 45* (9), 1077-1084.
- McKay, S., Paglia-Boak, A., Henderson, J., Marton, P., & Adlaf, E., (2009). Epidemiology of firesetting in adolescents: Mental health and substance use correlates. *Journal of Child Psychology and Psychiatry, 50* (10), 1282-1290.
- Martin, G., Bergen, H., Richardson, A., Roeger, L., & Allison, S. (2004). Correlates of firesetting in a community sample of young adolescents. *Australian and New Zealand Journal of Psychiatry, 38* (3), 148-154.
- MatchBook Journal. (2009). Research updates. [Online]. Available: <http://matchbookjournal.org/mb-community/mental-health/research-updates.php>. [February 2010]. *Not available November 2010*.
- National Volunteer Fire Council. (2004). *2004 Arson Awareness Week*. [Online]. Available: http://www.nvfc.org/news/hn_2004_arson_awareness.html. [July 2005].
- Office of Juvenile Justice and Delinquency Prevention (OJJDP) of the U.S. Department of Justice (1997). *Juvenile Firesetting and Arson. Fact Sheet 51*.
- Office of Juvenile Justice and Delinquency Prevention (OJJDP) of the U.S. Department of Justice (2005). *Juvenile Firesetting: A Research Overview*. [Online]. Available: <http://www.ncjrs.gov/pdffiles1/ojjdp/207606.pdf>. [May 2010].
- Palmer, E., Caufield, L., & Hollin, C. (2005). Evaluation of interventions with arsonists and young firesetters. *Office of the Deputy Prime Minister*. Available: <http://www.communities.gov.uk/documents/corporate/pdf/145135.pdf>. [September 2009].
- Porth, D., & Hughes, G. (2000). *Juvenile firesetting research project 2000*. Oregon, USA: SOS Fires. [Online]. Available: http://sos.strateja-xl.com/professional-information/Articles/Research_Project_2000_Article.pdf. [March 2010].
- Root, C., MacKay, S., Henderson, J., Del Bove, G., & Warling, D. (2008). The link between maltreatment and juvenile firesetting: Correlates and underlying mechanisms. *Child Abuse & Neglect, 32*, 161-176.

Sharp, D., Blaakman, S., Cole, E., & Cole, R. (2005). Evidence-based multidisciplinary strategies for working with children who set fires. *Journal of American Psychiatric Nurses, Association, 11*, 329-337. [Online]. Available: <http://jap.sagepub.com/cgi/reprint/11/6/329.pdf?ck=nck>. [December 2007].

Slavkin, M. (2000). *Juvenile firesetters: An exploratory analysis*. Universal Publishers.

Stadolnik, R. (2000). Drawn to the flame: assessment and treatment of juvenile firesetting behavior. Sarasota, Norwood, Mass: FirePsych, Inc.

U.S. Fire Administration (USFA) of the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA). (1993). *The National Juvenile Firesetter/Arson Control and Prevention Program Fire Service Guide to a Juvenile Firesetter Early Intervention Program*.

U.S. Fire Administration (USFA) of the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA). (1997). *Arson and Juveniles: Responding to the Violence. A Review of Teen Firesetting and Interventions, Special Report*.

Waupaca Area Fire District. (2002). *Juvenile Fire Setting*. [Online]. Available: <http://www.cityofwaupaca.org/waupacafire/default.htm>. [October 2002]. *Not available December 2009*.

Wilcox, D. (2000). Oregon Office of State Fire Marshal, Juvenile Firesetter Intervention Program. *Hot Stuff. How Do We Know What We Know About Firesetting Behavior?*

Wilcox, D., & Kolko, D. (2002). Assessing recent firesetting behavior and taking a firesetting history. In D. Kolko (Ed.). *Handbook on firesetting in children and youth* (pp. 161-175). San Diego, CA: Academic Press.

Williams, D., & Clements, P. (2007). Intrapsychic dynamics, behavioral manifestations, and related interventions with youthful fire setters. *Journal of Forensic Nursing, 3* (2), 67-72.

Organizations

Focus Adolescent Services

Firesetting and Youth

<http://www.focusas.com/Firesetting.html>

SOS Fires: Youth Intervention Programs

The Youth Firesetting Intervention Resource Site

<http://sosfires.com>

U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA)

U.S. Fire Administration

<http://www.usfa.dhs.gov>

U.S. Department of Justice

Office of Juvenile Justice and Delinquency Prevention (OJJDP)

National Juvenile Firesetter/Arson Control and Prevention Program Clearinghouse

Virginia Department of Fire Programs (VDFP)

<http://www.vafire.com>

N ON-SUICIDAL SELF-INJURIOUS BEHAVIOR

Introduction

Causes and Risk Factors

Associated Psychopathology

Familial and Biological Causes

Assessment

Treatment

Promising Treatment Approaches

Pharmacological Treatment

Hospitalization

Recommended Elements of Treatment

Cultural Considerations

Introduction

Non-suicidal self-injurious behavior (NSIB) is defined as “deliberate, direct destruction or alteration of body tissue, without conscious suicidal intent but resulting in injury severe enough for tissue damage to occur” (Gratz, 2003). NSIB has many names, including self-injury, self-harm, deliberate self-harm, parasuicide, and self-mutilation. NSIB poses a dire risk for adolescents because of its link to suicide, which ranks as the third most common cause of death among adolescents (Miller, Rathus & Linehan, 2007). The information contained in this section addresses self-injurious behavior without suicidal intent. For additional information on self-inflicted injury with suicidal intent, see the “Youth Suicide” section of the *Collection*.

NSIB occurs without regard for age, gender, ethnicity, or socioeconomic status; however, much research is centered on adolescents, as this behavior tends to begin during teen years (Boesky, 2002). The rate of NSIB is reported to be between 12 and 35 percent among older adolescents and college students (Miller, Rathus & Linehan, 2007). The rate of NSIB in a sample of adolescents from the United Kingdom is reported to be 11.2 percent for females and 3.2 percent for males (James, Taylor, Winmill & Alfoadari, 2008). There is also evidence that these rates may be rising (Muehlenkamp, 2006). Self-injurious behavior typically lasts five to ten years, but may persist for longer periods if not properly treated (Conterio & Lader, 1998).

It is not always clear whether an act of self-harm should be categorized as NSIB or as a suicide attempt because the intended outcome is not certain. Suicide attempts are not always lethal and NSIB may be lethal (Miller, Rathus & Linehan, 2007). Furthermore, this distinction may not be important since NSIB is one of the strongest predictors of future suicide attempts (Miller, Rathus & Linehan). As a result, many suicide researchers consider NSIB along with suicidal ideation, suicide attempts, and completed suicide to be occurring along a spectrum and group these behaviors into the category of suicidal behavior (Miller, Rathus & Linehan). This can be misleading and problematic when it comes to treatment, since suicide attempts and NSIB are thought to serve different functions, with suicide being used as a way to escape from pain and NSIB used to regulate emotion (Miller, Rathus & Linehan).

Causes and Risk Factors

Researchers have identified many risk factors associated with NSIB. These risk factors are outlined in Table 1.

Table 1

Risk Factors Associated with NSIB

Childhood Sexual Abuse	Parental Illness or Disability
Childhood Physical Abuse	Emotional Reactivity
Neglect	Emotional Intensity
Family Violence During Childhood	Hopelessness
Family Alcohol Abuse	Loneliness
Childhood Separation and Loss	Anger
Poor Affective Quality and Security with Childhood Attachment Figures	Risk Taking and Reckless Behavior
Single Parent Family	Alcohol Use

Sources: Gratz, 2003; DiFilippo, Esposito, Overholser & Spirito, 2003; Laye-Gindhu & Schonert-Reichl, 2005.

Concerning gender, in a study of adolescents in a community sample, females reported more self-harm ideation than males (53 versus 28 percent) and more NSIB (20 versus 9 percent) than males (Laye-Gindhu & Schonert-Reichl, 2005).

Associated Psychopathology

Adolescents with depressed mood and high anxiety are at higher risk for NSIB (DiFilippo et al., 2003). Adolescents diagnosed with oppositional defiant disorder (ODD), major depressive disorder, and dysthymia are also significantly more likely to engage in NSIB than adolescents without these particular psychiatric diagnoses (DiFilippo et al.).

Research conducted on adults indicates that NSIB also occurs in 80 percent of those diagnosed with Borderline Personality Disorder (BPD) (Miller, Rathus & Linehan, 2007). The characteristics of individuals with BPD and those who engage in repeated acts of NSIB overlap substantially. For example, Linehan (1993) asserts that adults diagnosed with BPD are particularly prone to hopelessness and may see suicidal behavior, with or without intent to die, as the only option for managing their chaotic and distressing lives. For some adolescents who engage in NSIB, development of BPD may carry over into adulthood (American Academy of Child & Adolescent Psychiatry [AACAP], 1999), although some youth will outgrow their self-injurious behavior.

Familial and Biological Causes

In a review of the literature on NSIB and BPD, Crowell, Beauchaine and Lenzenseger (2008) indicate that there is a clear familial component to NSIB, but point out that it is still uncertain whether this is due to genetics, environment, or both. Relatives of individuals who have engaged in NSIB are three times more likely to engage in such behavior themselves (Crowell, Beauchaine & Lenzenseger). Additionally, Linehan (1993) states that patients diagnosed with BPD often grow up in environments where emotional expression goes unrecognized or is punished, the outcome being that emotional regulation skills are underdeveloped. The significant overlap between those who engage in NSIB and those diagnosed with BPD suggests that invalidating childhood environments put youth at risk for NSIB.

There is consistent evidence to support a genetic component for impulsivity, affective instability, and aggression—all risk factors for NSIB (Crowell, Beauchaine & Lenzenseger, 2008). Research conducted on the possible causes of NSIB has focused on the neurotransmitters serotonin and dopamine; however, these studies have largely focused on adult populations (Crowell, Beauchaine & Lenzenseger). One study of self-injuring adolescents found reduced levels of peripheral serotonin and others have found decreased dopamine level in suicide attempters (Crowell, Beauchaine &

Lenzeneger). Additionally, studies have supported the role of the neurotransmitters acetylcholine and norepinephrine in emotional stability (Crowell, Beauchaine & Lenzeneger).

Assessment

There is no diagnosis for NSIB included in the American Psychiatric Association’s *Diagnostic and Statistical Manual for Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR)*. Nevertheless, assessment of NSIB is a critical and important component of any psychological assessment (Lloyd-Richardson, 2008; Nock, Teper & Hollender, 2007). Recent years have seen the development of a number of questionnaires and semi-structured and structured interviews that aid in the assessment of the prevalence, frequency, severity, and function of self-injurious behavior (e.g., Self-Injurious Thoughts and Behaviors Interview, Self-harm Behavior Questionnaire, Lifetime-Suicide Attempt Self-Injury (L-SASI) Interview) (Lloyd-Richardson). While parents are an important source of information, research has shown that parents tend to underreport their child’s suicidal ideation and NSIB, making direct assessment critical (Nock, Holmburg, Photos & Michel, 2007). Mental health professionals should inquire about suicide ideation, suicide attempts, and NSIB with all adolescents in high-risk groups. Individuals who engage in NSIB do so for a wide variety of reasons and understanding these reasons is an important step in effective treatment, particularly since such analysis guides treatment (Lloyd-Richardson). Suggested assessment tools for NSIB are included in Table 2.

Table 2

Suggested Assessment Tools for Non-suicidal Self-Injurious Behavior

Measure Type	Name of Measure	What is Measured
Structured Interview	Self-Injurious Thoughts and Behaviors Interview	The presence and frequency of suicidal behavior, including NSIB
Self-Report	Suicidal Behavior Questionnaire (SBQ-14, a 14-item version for adolescents, and SBQ-C, a 4-item version for children)	Suicidal ideation, behavior and NSIB
Self-Report	Functional Assessment of Self-Harm	Frequency, type, and intent of NSIB

Sources: Nock Holmburg, Photos & Michel, 2007; Goldston & Compton, 2007.

Treatment

NSIB represents a pattern of behavior, rather than a single isolated event, and is perpetuated through both positive and negative reinforcement (Linehan, 1993; Gratz, 2003; Miller, Rathus & Linehan, 2007). For example, NSIB is positively reinforced when the adolescent experiences a sense of control or relaxation following self-harm (Gratz). NSIB is negatively reinforced when the adolescent experiences distressing or unpleasant emotions and or thoughts—for example, sadness, loneliness, emptiness, emotional pain and self-hatred—following self-harm (Gratz, Linehan). Therefore, Miller, Rathus, and Linehan suggest that interventions aimed at reducing NSIB should focus on strengthening emotion regulation skills. This approach varies from interventions aimed at reducing suicidal behavior, which instead helps the adolescent identify reasons for living. Proper assessment is critical to effectively treating NSIB.

Promising Treatment Approaches

Historically, youth who self-harm, chronic suicide attempters, and individuals with BPD have been considered highly resistant to treatment (Muehlenkamp, 2006). In recent years, however, there have been major developments for adolescents diagnosed with these disorders. A review of the literature outlining treatment for suicidal behavior (suicide ideation, suicide attempts, and NSIB) shows that treatments which address the problem behaviors directly consistently outperform treatments that conceptualize suicidal behavior as a symptom and treat the underlying psychopathology (Miller,

Rathus & Linehan, 2007). The treatments outlined in the following paragraphs have shown promise in treating NSIB. Table 3 lists these interventions.

Table 3

Treatments for Non-suicidal Self-Injurious Behavior

What Works	Description
Currently no treatments meet these criteria.	
What Seems to Work	Description
Cognitive Behavioral Therapy (CBT)	CBT involves providing skills designed to assist youth with affect regulation and problem solving.
Dialectical Behavior Therapy (DBT)	DBT is similar to CBT but also involves an emphasis on acceptance strategies.

Sources: Commission on Youth Graphic of references listed in text.

Cognitive Behavioral Therapy (CBT) is one treatment for NSIB that has been tested. Two promising types of CBT have been studied in greater depth: Problem Solving Therapy and Dialectical Behavioral Therapy (DBT) (Muehlenkamp, 2006). Research on the effectiveness of Problem Solving Therapy in treating NSIB shows promise, but the study results are too sparse to support a strong conclusion regarding its effectiveness (Muehlenkamp). DBT has been demonstrated as effective for the treatment of BPD, suicidality, and NSIB among adults and thus has received a lot of attention. When treating adolescents who engage in suicidal behavior, with and without intent to die, practitioners should note that DBT has consistently led to significant reductions in self-injurious behavior, but has not demonstrated significantly better outcomes than those in the comparison group (Nock, Teper & Hollender, 2007). Thus, although DBT is an effective treatment for adults with NSIB and BPD, its effectiveness for children and adolescents is still being tested.

Pharmacological Treatment

Medications such as selective serotonin reuptake inhibitors (SSRIs) and opiate antagonists have been studied, but evidence which supports their effectiveness is inconclusive (Martinson, 1998). To date, it appears that the most promising treatments are high-dose SSRIs and, in some cases, atypical neuroleptics (Martinson). Because evidence is so limited, pharmacological treatment of NSIBs is not considered an evidence-based treatment at this time. A more detailed discussion of the use of antidepressants in treating children and adolescents is included in the “Antidepressants and the Risk of Suicidal Behavior” section of this *Collection*.

Hospitalization

Historically, hospitalization has been the standard treatment for NSIB, but it is the most expensive option, and evidence of its effectiveness has not been consistently demonstrated (Muehlenkamp, 2006). Research focused on suicidal ideation and suicide attempts indicates that the most dangerous time for youth following hospitalization for suicidal behavior is between six months to a year, during which 10 to 18 percent of youth will attempt suicide (Prinstein, Nock, Simon, Aikins, Cheah, & Spirito, 2008). As a result, outpatient mental health providers are the most likely choice for youth, with hospital admissions typically reserved for adolescents with NSIB who express intent to die (Muehlenkamp).

Recommended Elements of Treatment

Clinical researchers have identified treatment components for NSIB that recur in the research. While these treatment elements do not have the clinical trials and studies that classify them as evidence-based, they do represent an emerging clinical consensus. These treatment elements are described in this section.

An important treatment element for youth who have engaged in NSIB is the establishment of a strong therapeutic alliance between the youth and the service provider. Once the alliance is formed, an important treatment goal is to reduce and ultimately eliminate NSIB by replacing them with healthier coping skills (Muehlenkamp, 2006). Another recommended component is the establishment and maintenance of meaningful connections between adolescents and their families (Muehlenkamp). However, the treatment trials of DBT for adolescents have not consistently included a family component and, to this point, there has not been a study comparing DBT for adolescents with and without the family therapy component. Thus, data regarding the importance of family involvement in the treatment of adolescents who engage in NSIB is still being gathered.

Cultural Considerations

In a review of the literature on ethnic differences among self-harming adolescents, researchers in Great Britain found no significant difference between the rate of NSIB among Asian and Caucasian adolescents (Goddard, Subotsky & Fombonne, 1996). A study comparing the ethnic and racial distribution of adolescents who reported NSIB and the ethnic and racial distribution in the population found no significant difference between the rates at which adolescents from various ethnic groups were referred to for psychiatric services following acts of deliberate self-harm (Goddard, Subotsky & Fombonne). In the United States, there are studies which have reported that African American and Latino adolescents have higher rates of suicide attempts than Caucasian adolescents, but it is unclear whether this holds true for NSIB (Spirito, 2003). Overall, the data is too sparse to reach any conclusions regarding differential rates of NSIB among adolescents of different racial and ethnic groups.

Sources

American Academy of Child & Adolescent Psychiatry (AACAP). (1999). *Self-Injury in adolescents*. [Online]. Available: <http://www.aacap.org/publications/factsfam/73.htm>. [December 2010].

American Psychiatric Association (APA). (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.) (*DSM-IV-TR*). Washington, DC: Author.

Boesky, L. (2002). Juvenile offenders with mental health disorders: Who are they and what do we do with them? *Self-Injurious Behavior among Juvenile Offenders*. Lanham, MD: American Correctional Association.

Conterio, K., & Lader, W. (1998). *Self-Injury*. National Mental Health Association. [Online]. Available: <http://www.nmha.org/go/information/get-info-self-injury>. [February 2005]. *Not available January 2010*.

Crowell, S., Beauchaine, T., & Lenzenseger, M. (2008). The development of borderline personality disorder and self-injurious behavior. In T. Beauchaine & S. Hinshaw (Eds.) *Child and Adolescent Psychopathology* (510-539). Hoboken, NJ: John Wiley & Sons.

DiFilippo, J., Esposito, C., Overholser, J., & Spirito, A. (2003). High risk populations. In A. Spirito & J. Overholser (Eds.), *Evaluating and treating adolescent suicide attempters* (pp. 229–259). Oxford, UK: Academic Press.

- Goddard, N., Subotsky, F., & Fombonne, E. (1996). Ethnicity and adolescent deliberate self-harm. *Journal of Adolescents*, *19*, 513-521.
- Goldston, D., & Compton, J. (2007). Adolescent suicide and nonsuicidal self-harm behaviors and risk. In E. Mash & R. Barkley (Eds.), *Assessment of Childhood Disorders*, 305-343.
- Gratz, K. (2003). Risk factors for and functions of deliberate self-harm: An empirical and conceptual review. *Clinical Psychology: Science and Practice*, *10* (2), 192-205.
- Gutierrez, P. (2001). Development and initial validation of the self-harm behavior questionnaire. *Journal of Personality Assessment*, *77* (3), 475-490.
- James, A., Taylor, A., Winmill, L., & Alfoadari, K. (2008). A preliminary community study of dialectical behaviour therapy (DBT) with adolescent females demonstrating persistent, deliberate self-harm (DSH). *Child and Adolescent Mental Health*, *13*, 148-152.
- Laye-Gindhu, A., & Schonert-Reichl, K. (2005). Nonsuicidal self-harm among community adolescents: Understanding the "whats" and "whys" of self-harm. *Journal of Youth and Adolescence*, *34* (5), 447-457.
- Linehan, M. (1993). *Cognitive behavioral therapy of borderline personality disorder*. New York: Guilford Press.
- Lloyd-Richardson, E. (2008). Adolescent nonsuicidal self-injury - Who is doing it and why. *Journal of Developmental and Behavioral Pediatrics*, *29* (3), 216-218.
- Martinson, D. (1998). *Secret Shame* (Self Injury Information and Support). [Online]. Available: <http://www.palace.net/~llama/psych/injury.html>. [August 2002]. (As of April 2010, online reference is to author's webpage; book excerpt not available online.)
- Miller, A., Rathus, J., & Linehan, M. (2007). *Dialectic behavior therapy with suicidal adolescents*. New York: Guilford Press.
- Muehlenkamp, J. (2006). Empirically supported treatments and general therapy guidelines for non-suicidal self-injury. *Journal of Mental Health Counseling*. [Online]. Available: <http://www.thefreelibrary.com/Empirically+supported+treatments+and+general+therapy+guideline+s+for...-a0144666299>. Not available January 2011.
- Nock, M., Holmberg, E., Photos, V., & Michel, B. (2007). Structured and semistructured diagnostic interviews. In M. Hersen (Ed.), *Handbook of clinical interviewing with children* (pp. 30-49). Thousand Oaks, CA: Sage Publications Ltd.
- Nock, M., Teper, R., & Hollender, M. (2007). Psychological treatment of self-injury among adolescents. *Journal of Clinical Psychology: In Session*, *63* (11), 1081-1089.
- Prinstein, M., Nock, M., Simon, V., Aikins, J., Cheah, C., & Spirito, A. (2008). Longitudinal trajectories and predictors of adolescent suicidal ideation and attempts following inpatient hospitalization. *Journal of Consulting and Clinical Psychology*, *76* (1), 92-103.
- Spirito, A. (2003). Understanding attempted suicide in adolescents. In A. Spirito & J. Overholser (Eds.), *Evaluating and treating adolescent suicide attempters* (pp. 1-18). Oxford, UK: Academic Press.

Additional Resources

- Alderman, T. (1997). *The Scarred Soul: Understanding and Ending Self-Inflicted Violence*. Oakland: New Harbinger Publications.
- Favazza, A. (1996). *Bodies under Siege: Self-Mutilation and Body Modification in Culture and Psychiatry*. Baltimore: Johns Hopkins University Press.
- Holmes, A. (1999). *Cutting the Pain Away: Understanding Self-Mutilation*. C. Reinburg & C. Nadleson (Eds.). Broomall, PA: Chelsea House Publishers.
- Strong, M. (1999). *A Bright Red Scream: Self Mutilation and the Language of Pain*. New York: Penguin USA.
- Whitlock, J., Powers, J., & Eckenrode, J. (2006). *The Virtual Cutting Edge: The Internet and Adolescent Self-Injury*. American Psychological Association. [Online]. Available: <http://www.crpsib.com/documents/Dev%20Psych%20Dis.pdf>.

Organizations

American Self-Harm Information Clearinghouse (ASHIC)

<http://www.selfinjury.org/indexnet.html>

American Academy of Child & Adolescent Psychiatry (AACAP)

Self-Injury in Adolescents

http://www.aacap.org/cs/root/facts_for_families/selfinjury_in_adolescents

Cornell Research Program on Self-Injurious Behaviors (CRPSIB)

www.crpsib.com

The Cutting Edge: Non-Suicidal Self-Injury in Adolescence

www.actforyouth.net/documents/NSSI-Dec09.pdf

Focus Adolescent Services

<http://www.focusas.com/SelfInjury.html>

Mental Health America (MHA) (formerly National Mental Health Association)

2000 N. Beauregard Street, 6th Floor - Alexandria, VA 22311

www.mentalhealthamerica.net

S.A.F.E. Alternatives (Self-Abuse Finally Ends)

800-DON'T CUT (366-8288)

<http://www.selfinjury.com/index.html>

Self-Injury Foundation

P.O. Box 952 – South Haven, MI 49090

<http://www.selfinjuryfoundation.org>

HABIT DISORDERS

Introduction

Categories

Causes and Risk Factors

Assessment

Comorbidity

Evidence-based Treatments

Habit Reversal Therapy

Cognitive Behavioral Therapy

Treatments with Inadequate Support

Massed Negative Practice

Pharmacotherapy

Contraindicated Treatments

Plasma Exchange or Intravenous Immunoglobulin Treatment (IVIG)

Cultural Considerations

Introduction

Habit disorder is the term used to describe several related disorders linked by the presence of repetitive, yet relatively stable behaviors that seem to occur beyond the awareness of the person performing the behavior. As with other disorders, these behaviors cause impairment and result in negative physical and/or social consequences (Woods, Flessner & Conelea, 2008).

The first group of habit disorders is tic disorders (TDs). Tics are involuntary movements, sounds, or words that are “sudden, rapid, recurrent, nonrhythmic” (American Psychiatric Association [APA], 2000). Diagnosis varies, depending upon the particular kind of tic-related habit disorder:

1. a vocal tic (e.g., repeated throat clearing);
2. a motor tic (e.g., repeated blinking, arm movements);
3. a simple tic (e.g., a short, brief noise or movement); or
4. a complex tic (e.g., a vocalization or noise that appears to take effort, like a spoken word, complex sound, or raising one’s arm up over one’s head).

Tourette syndrome (TS) is the most well-known habit disorder, largely because of its depictions in movies and television shows, but it is relatively uncommon. Children with TS have both vocal *and* motor tics, as opposed to one or the other.

In addition to TDs, body-focused behaviors, such as recurrent hair pulling (trichotillomania [TTM]) and skin picking (SP), are also included within the habit disorder umbrella (Woods, Flessner & Conelea, 2008). Some studies suggest that there are two subtypes of pulling: automatic pulling, which occurs largely outside of the individual’s awareness, and focused pulling, which is a deliberate response to an urge, unpleasant emotion, or sensation (Woods, Piacentini & Himle, 2007). SP is not included in the APA’s *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)* (2000) but, given its similarities to TTM and its inclusion in research on other habit disorders, it is included here. While tics, TS, TTM, and SP are all different behaviors, there is reason to believe they represent the diverse manifestation of a common underlying mechanism. Because of this, the term “habit disorders” will be used throughout this section to discuss this group of disorders, and the specific disorder names (e.g., “trichotillomania” or “Tourette Syndrome”) will be used when those individual disorders are referenced.

Categories

The *DSM-IV* defines several habit disorders which youth experience; these are outlined in Table 1. It should be noted that all tic disorders require an onset before age 18, TTM excepted. Again, as previously noted, SP is not included in this Table because it is not a *DSM-IV* diagnosis.

Table 1

DSM-IV Habit Disorders Affecting Children & Adolescents

Disorder	Description
Transient Tic Disorder	Single or multiple vocal and/or motor tics occurring multiple times daily or almost daily for more than four weeks and under a year.
Chronic Motor Tic Disorder	Single or multiple motor tics occurring multiple times daily or almost daily for more than one year.
Chronic Vocal Tic Disorder	Single or multiple vocal tics occurring multiple times daily or almost daily for more than one year.
Tourette Syndrome (TS)	Concurrent vocal and motor tics for a period of over one year.
Trichotillomania	Recurrent pulling out of one's own hair, resulting in noticeable hair loss in response to an increase in tension satisfied by pulling.

Source: APA, 2000.

Causes and Risk Factors

Underlying causes for the development of habit disorders are not well understood. However, as with many psychological disorders, the evidence suggests that numerous factors, such as genetic vulnerability, learning and environment, which may contribute to the development and maintenance of these disorders. Studies of families suggest the presence of genetic underpinnings in the development of TTM and TDs. For example, relatives of individuals with TS are 10 to 15 percent more likely to have TS, and 15 to 20 percent more likely to have another TD. These risk levels are significantly higher than in the general population, and studies of the human genome have identified specific genes thought to be related to TS (Woods, Flessner & Conelea, 2008). Further, family studies of individuals with TTM have uncovered elevated levels of psychological problems, including obsessive-compulsive disorder (OCD), sub-clinical obsessive-compulsive symptoms, pathological grooming behaviors (such as SP), and substance, mood, and anxiety disorders (Franklin, Diefenbach, Anderson & Meunier, 2008; Woods, Flessner & Conelea). These findings suggest that genetics may contribute to the development of habit disorders.

There is also reason to believe that learning and environmental factors are significant in the development and maintenance of habit disorders. For example, it is possible that youth develop urges to tic, pull, or pick in certain situations, such as those that elicit certain emotions or stress. These situations may, in turn, elicit an urge to perform the habit. Youth with habit disorders report an uncomfortable urge that is satisfied by the tic, pull, or pick. The satisfaction or reduction of the urge may reinforce the habit and thus increase the likelihood that the behavior will be repeated.

There is also some evidence to suggest that the expression of tics, pulling, and picking is exacerbated by stimulant medication such as that prescribed for the treatment of ADHD; however, this relationship is unclear and has not been consistently observed (Woods et al., 2006).

Assessment

Assessments of habit disorders vary slightly by the type of habit disorder (e.g., tic disorders, TTM). Research on habit disorders in youth is relatively limited; however, assessment for habit disorders is discussed in the following paragraphs.

Assessment of TDs should include a medical examination to rule out conditions that can mimic tic disorders, such as movement disorders, behaviors related to allergies, eye problems that mimic tics, and stereotypic movement disorders (Woods, Piacentini & Himle, 2007). Generally, TDs are distinguished from these other conditions by the waxing and waning course of tic disorders, and the fact that tics typically progress from simple to more complex movements. Also TDs typically begin around the head and progress down the body.

In conjunction with a thorough medical examination, a structured or semi-structured interview can be particularly helpful in gathering information about the expression of the tics, including frequency, location and nature of the tic, complexity, controllability, intensity, level of distress, and temporal stability (Woods, Piacentini & Himle, 2007). One such clinical interview is the Yale Global Tic Severity Scale (YGTSS), which can be administered in 15 to 30 minutes. This assessment helps to gather information about tic topography, symptom severity, and impairment (Woods, Piacentini & Himle). Another assessment is the Premonitory Urge for Tics Scale (PUTS), a brief self-report measure for use with children age ten and older to measure awareness of tic-related premonitory urges (Woods, Flessner & Conelea, 2008).

Assessment of TTM should measure severity, subtypes, level of impairment, and possible comorbid diagnoses (Woods et al., 2006). Assessing TTM may require multiple methods of gathering information, including interviews with youth and a parent. Unfortunately, although some scales do exist, there has been relatively little research on measures of child TTM. The National Institute of Mental Health (NIMH) Trichotillomania Impairment Scale (NIMH-TIS) is a clinician-rated scale that has demonstrated adequate psychometric profiles (Woods et al.). Also, the Trichotillomania Scale for Children (TSC) has shown promise as a self-report measure.

Screening, followed by more in-depth assessment, is critical, due to the comorbidity which occurs frequently in youth with habit disorders. The Schedule for Affective Disorders and Schizophrenia-Children's Version (K-SADS), the Anxiety Disorders Interview for *DSM-IV*, and Child Version (ADIS-C) are semi-structured diagnostic interviews that have demonstrated strong psychometric characteristics (Chorpita & Southam-Gerow, 2006). Suggested assessment tools for habit disorders are listed in Table 2.

Comorbidity

Youth with habit disorders very often experience other kinds of problems (Scahill, Sukhodolsky & King, 2007; Tolin et al., 2007; Woods et al., 2006; Woods, Piacentini & Himle, 2007). Youth with TDs frequently experience co-occurring obsessive-compulsive disorder (OCD) and attention deficit hyperactivity disorder (ADHD). Research indicates that between 7 and 23 percent of patients with TS met criteria for OCD, and that 40 to 60 percent of youth meet criteria for ADHD (Scahill, Sukhodolsky & King, 2007). Similarly, research suggests that 60 to 70 percent of youth with TTM meet the criteria for at least one additional psychiatric disorder, with anxiety and affective disorders being the most frequently diagnosed (Tolin et al., 2007).

Evidence-based Treatments

A wide variety of treatments for habit disorders have been described in the literature. However, habit reversal therapy (HRT) is the only treatment for TDs which has been researched sufficiently to warrant the designation of evidence-based treatment.

Research exploring treatments for childhood TTM have been promising, but the treatments have not been researched sufficiently enough to warrant the designation of evidence-based treatment. These and other treatments are summarized in Table 3 and discussed more fully in the paragraphs which follow.

Table 2

Suggested Assessment Tools

Measure Type	Name of Measure	Who Completes	Data Generated
Clinical Interview	Schedule for Affective Disorders and Schizophrenia-Children's Version (K-SADS)	Clinician with Youth and Parent	Diagnosis
Clinical Interview	Anxiety Disorders Interview Schedule for DSM-IV - Child Version (ADIS-C)	Clinician with Youth and Parent	Diagnosis
Clinician Rating Scale	Psychiatric Institute Trichotillomania Scale (PITS)	Clinician	Symptom Rating
Clinician Rating Scale	Yale Global Tic Severity Scale (YGTSS)	Clinician	Symptom Rating
Clinician Rating Scale	National Institutes of Mental Health Trichotillomania Impairment Scale (NIMH-TIS)	Clinician	Symptom Impairment
Self-Report Rating Scale	Trichotillomania Scale for Children (TSC)	Youth	Symptom Rating

Sources: Chorpita & Southam-Gerow, 2006; Woods et al., 2006; Woods, Piacentini & Himle, 2007; Woods, Flessner & Conelea, 2008.

Table 3

Summary of Treatments for Habit Disorders by Level of Support

What Works	Description
Habit Reversal Therapy (HRT) for Tic Disorder	Treatment increases awareness to the feelings and context associated with the urges and implements a competing and inconspicuous habit in place of the tic.
What Seems to Work	Description
Cognitive Behavioral Therapy (CBT) for TTM	Treatment involves exposing children to the stimuli associated with the urge, while challenging thoughts associated with high-risk situations.
Not Adequately Tested	Description
Massed Negative Practice	Treatment involves children's over-rehearsal of target tic in high-risk ticking situations.
Pharmacotherapy	The safety of prescription medications to treat habit disorders in children has not been established.
What Does Not Work	Description
Plasma Exchange or Intravenous Immunoglobulin (IVIG) Treatment	Blood transfusions alter levels of plasma or immunoglobulin.

Sources: Cook & Blacher, 2007; Himle, Woods, Piacentini & Walkup, 2006; Woods, Flessner & Conelea, 2008; Woods, Piacentini & Himle, 2007; Tolin et al., 2007; NIMH, 2000.

Habit Reversal Therapy

Habit reversal therapy (HRT) is the best studied and most effective treatment for youth with habit disorders (Cook & Blacher, 2007; Himle, Woods, Piacentini & Walkup, 2006). Though treatments may vary slightly, HRT includes three main components, as cited by Woods, Flessner & Conelea (2008):

1. awareness training;
2. competing response training; and
3. social support.

Awareness training involves first teaching youth to become aware of instances of the habit, then teaching the youth awareness of their associated environment and internal sensations, such as muscle tension and urges. Once the youth is able to identify feelings and situations likely to elicit the habit, competing response training begins. A competing response is a behavior that is incompatible with the habit that is performed in the presence of the feelings or situations that elicit the habit or in the presence of the habit itself. A competing response must satisfy the following criteria:

- must be physically incompatible with the habit (e.g., holding the arm close to the body to compete with an arm movement tic);
- must be socially inconspicuous; and
- must be held for one minute or until the urge to engage in the habit dissipates.

Supportive individuals are recruited to provide gentle reminders when the youth is engaging in the habit and praise when the competing response is implemented correctly (Woods, Flessner & Conelea, 2008). The social support component runs concurrently with the other phases of treatment.

Components have also been added to HRT to target additional problems. In the treatment of TTM or SP, therapists may employ either emotion-regulation techniques to help the youth learn more adaptive ways of coping with emotion or cognitive restructuring, which helps him/her recognize and change the thoughts or emotions that occur before or after pulling (Woods, Flessner & Conelea, 2008).

Cognitive Behavioral Therapy

Cognitive Behavioral Therapy (CBT) is emerging as a promising treatment for TTM. CBT for TTM involves many components common to HRT such as awareness training and developing a competing response; however, CBT treatments also incorporate several additional elements like psychoeducation and cognitive skills that are thought to provide additional benefits. Psychoeducation entails teaching youth and parents about hair pulling and how to monitor behavior. Cognitive restructuring helps youth identify and change maladaptive beliefs associated with stressful situations and to distinguish between minor setbacks and full-blown relapses. CBT for TTM also includes a relapse prevention component that encourages the maintenance of learned behaviors after the end of the active treatment phase (Tolin et al., 2007).

Treatment with Inadequate Support

The following paragraphs discuss treatment not supported by research.

Massed Negative Practice

Massed negative practice is based on the premise that over-rehearsal of the tic by youth can lead to its disappearance. Studies, however, have shown that massed negative practice has failed to produce reductions in tics comparable to reductions produced by habit reversal. There are also contradictory studies regarding the effectiveness of contingency management to reduce tic frequency (Cook & Blacher, 2007).

Pharmacotherapy

Evidence to support the safety of pharmacological treatment for habit disorders in youth is extremely limited (Cook & Blacher, 2007). There is evidence to suggest drugs that affect dopamine, one of the brain chemicals thought to be related to the expression of TS, may be effective in reducing TS symptoms in adults; however, these drugs often have serious side effects and their safety and effectiveness have not been established for use with children (Woods, Piacentini & Himle, 2007).

Contraindicated Treatments

Plasma Exchange & Intravenous Immunoglobulin (IVIG) Treatment

Research has shown a lack of evidence to support treatment using either plasma exchange or intravenous immunoglobulin (IVIG). Both the NIMH and the Tourette Syndrome Association (TSA)

have advised that there is no evidence of their efficacy in youth with TS and, in fact, both treatments have the potential for significant adverse reactions (NIMH, 2000).

Cultural Considerations

Research suggests that habit disorders are prevalent across cultures (Woods, Flessner & Conelea, 2008). Research also suggests rates of TTM are similar between Caucasian and African Americans, and German and American samples demonstrate equivalent rates of SP (Woods, Flessner & Conelea). However, the understanding of the disorder varies significantly from culture to culture. For example, in Costa Rica, tic symptoms are not considered a problem and are not usually mentioned to physicians (Mathews, 2001). Many families consider the tics to be a voluntary bad habit and health care professionals, when consulted, may concur (Matthews).

Sources

American Psychiatric Association (APA). (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.) (DSM-IV-TR). Washington, DC: Author.

Chorpita, B., & Southam-Gerow, M. (2006). Treatment of anxiety disorders in youth. In E. Mash & R. Barkley (Eds.), *Treatment of childhood disorders* (3rd ed.). New York: Guilford Press, pp. 271-335.

Cook, C., & Blacher, J. (2007). Evidence-based psychosocial treatments for tic disorders. *Clinical Psychology Scientific Practices*, 14, 252-267.

Franklin, M., Flessner, C., Woods, D., Keuthen, N., Piacentini, J., & Moore, P. Trichotillomania Learning Center-Scientific Advisory Board (2008). The child and adolescent trichotillomania impact project: Descriptive psychopathology, comorbidity, functional impairment, and treatment utilization. *Journal of Developmental & Behavioral Pediatrics*, 29, 493-500.

Himle, M., Woods, D., Piacentini, J., & Walkup, J. (2006). Brief review of habit reversal training for Tourette syndrome. *Journal of Child Neurology*, 21, 719-725.

Mathews, C. (2001). Cultural influences on diagnosis and perception of Tourette syndrome in Costa Rica. *Journal of the American Academy of Child and Adolescent Psychiatry*. April 2001.

National Institute of Mental Health (NIMH). (2000). Warning about two therapies for Tourette's, OCD (Obsessive-compulsive Disorder). [Online]. Available: <http://intramural.nimh.nih.gov/pdn/web.htm>. Not available November 2010.

Scahill, L., Sukhodolsky, D., & King, R. (2007). Assessment of co-occurring psychiatric conditions in tic disorders. In D. Woods, J. Piacentini, J. Walkup. *Treating Tourette Syndrome and Tic Disorders: A Guide For Practitioners*.

Tolin, D., Franklin, M., Diefenbach, G., Anderson, E., & Meunier, S. (2007). Pediatric trichotillomania: Descriptive psychopathology and an open trial of cognitive behavior therapy. *Cognitive Behavior Therapy*, 36, 129-144.

Woods, D., Flessner, C., & Conelea, C. (2008). Habit disorders. In M. Hersen (Series Ed.) & D. Reitman (Vol. Ed.) *Handbook of psychological assessment, case conceptualization, and treatment: Vol 7. Children and adolescents* (pp. 542-570). New York: Wiley.

Woods, D., Flessner, C., Franklin, M., Wetterneck, C., Walther, M., Anderson, E., & Cardona, D. (2006). Understanding and treating trichotillomania: What we know and what we don't know. *Psychiatric Clinics of North America*, 29, 487-501.

Woods, D., Piacentini, J., & Himle, M. (2007). Assessment of tic disorders. In D. Woods, J. Piacentini, & J. Walkup (Eds.) *Treating Tourette syndrome and tic disorders: a guide for practitioners* (pp. 22-37). New York: Guilford Press.

Organizations/Resources

American Academy of Family Physicians

Information from Your Family Doctor
Understanding Tics and Tourette's Syndrome
<http://www.aafp.org/afp/990415ap/990415f.html>

Association for Neurologically Impaired Children (AFNIC)

<http://www.afniconline.org>

Jim Eisenreich Foundation (for children with Tourette Syndrome)

<http://www.tourettes.org>

National Alliance for the Mentally Ill (NAMI)

Tourette's Syndrome
<http://www.nami.org/Content/ContentGroups/Illnesses/Tourette.htm>

Tourette Syndrome Association, Inc.

Greater Washington, DC Chapter (serving MD, VA, WV, and DC)
TSAGW@aol.com
<http://www.tsa-usa.org>

Tourette Syndrome "Plus"

<http://www.tourettesyndrome.net>

ANXIETY DISORDERS

Introduction

Categories

Causes and Risk Factors

Assessment

Comorbidity

Evidence-based Treatments

Psychological Treatments

Behavioral and Cognitive Behavioral Therapy

Other Therapies with Research Support

Pharmacological Treatments

Unproven Treatments

Cultural Considerations

Introduction

Anxiety disorders are those disorders that cause children and adolescents to feel frightened, distressed, and uneasy for no apparent reason. Although most children and adolescents experience fears and worries which can be labeled as anxiety, the fears and worries which are present in anxiety disorders actually impede daily activities or functioning (Christophersen & Mortweet, 2001). When both symptoms of anxiety and impairment are evident, an anxiety disorder may be present.

Problems related to fears and anxiety are relatively common in youth, with the lifetime prevalence rates of clinical problems ranging from 6 to 15 percent (Silverman & Ginsburg, 1998; U.S. Public Health Service, 2000). The prevalence of anxiety disorders in children and adolescents is higher than almost all other mental disorders (U.S. Department of Health and Human Services, 1999). Youth with anxiety problems experience significant and often lasting impairment, such as poor performance at school and work, social problems, and family conflict (Langley, Bergman, McCracken & Paiacentini, 2004). Anxiety often occurs with other disorders, including behavioral problems, depression and even additional anxiety disorders (Albano, Chorpita & Barlow, 2003). Thus, the problems found in youth with anxiety disorders can be substantial (Costello, Angold & Keeler, 1999; Pine, Cohen, Gurley, Brook & Ma, 1998).

Categories

The American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)* (2000) defines the anxiety disorders experienced by both children and adolescents. It should be noted that separation anxiety disorder (SAD) is the only anxiety disorder that applies specifically to children. Other anxiety disorder diagnoses may be applied to both children and adolescents if their behavior is consistent with the criteria set forth in the *DSM-IV*. Table 1 provides a summary of anxiety disorders that affect children and adolescents. Obsessive-Compulsive Disorder (OCD), an anxiety disorder, is described in a separate section of the *Collection*.

Research suggests that there are patterns of gender differences, depending on the disorder. For example, more females are diagnosed with specific phobia than males (Beidel & Turner, 2005). For social anxiety disorder and Generalized Anxiety Disorder (GAD), rates are similar in childhood but, during adolescence, females having these problems outnumber males (Beidel & Turner). Data on gender differences for SAD, PTSD, and panic disorder have been less conclusive (Beidel & Turner).

Table 1

DSM-IV Anxiety Disorders Affecting Children & Adolescents

Disorder	Description
Separation Anxiety Disorder (SAD)	A disabling and irrational fear of separation from caregivers
Social Anxiety Disorder/Social Phobia	A disabling and irrational fear of social encounters with non-family members
Post-traumatic Stress Disorder (PTSD)	Re-experiencing, avoidance, and hyper-arousal symptoms following a traumatic event
Specific Phobias (SP)	A disabling and irrational fear of something that poses little or no actual danger
Generalized Anxiety Disorder (GAD)	Chronic, exaggerated, and overwhelming worries about multiple everyday, routine life events or activities
Panic Disorder	Chronic fears of having panic attacks after having at least one uncued panic attack

Source: American Psychiatric Association (APA), 1994.

Causes and Risk Factors

Much attention has been given to the risk factors for developing an anxiety disorder in childhood (Albano, Chorpita & Barlow, 2003). Some researchers have described a “triple vulnerability” model of anxiety development (Barlow, 2002). This model describes how three separate risk factors work together to increase the child’s chance of having an anxiety problem. First, a child may have some biological predisposition to anxiety; that is, some children are more likely to experience higher amounts of anxiety than others (Eaves et al., 1997; Eley et al., 2003). The second risk factor is a psychological vulnerability related to “feeling” an uncontrollable/ unpredictable threat or danger. Thus, some children may be more likely than others to experience a situation as threatening. There are many reasons a child may experience the world in this way, including family or other social modeling, e.g., peers. Finally, the third risk factor is direct experiences with anxiety-provoking situations. This means that a child is at risk for anxiety problems if that child is more anxious or inhibited by nature, interprets many situations as threatening, and has already experienced anxiety-provoking situations.

It is also important to note that it has not been determined whether biology or environment plays the greater role in the development of these disorders.

Assessment

Any attempt to define problematic anxiety in youth must clearly define what constitutes normal anxiety. The information discussed in the following paragraphs is obtained from a personal communication with Michael Southam-Gerow and Shannon E. Hourigan on May 11, 2009. Anxiety and fear are defined as a complex combination of three types of reactions to a perceived threat:

1. overt behavioral responses, e.g., running away, closing one’s eyes, or trembling voice;
2. physiological responses, e.g., changes in heart or breathing rate, muscle tension, or upset stomach; and
3. subjective responses, e.g., thoughts of being scared or thoughts of bodily harm.

Another important consideration in assessing anxiety disorders in youth is development. For example, separation anxiety is a normal phenomenon for an 18-month old child. Similarly, fear of the dark is normal for children around age four. Thus, assessing anxiety in children requires knowledge of normal child development. Because anxiety is a natural and normal human experience, assessment of anxiety in youth requires attention to the level of impairment that a youth experiences because of anxiety. Accordingly, intense levels of anxiety do not constitute anxiety disorders without the presence of impairment.

Assessment for anxiety disorders should include a medical history and a physical examination within the past 12 months, with special focus on conditions that may mimic anxiety disorders (American Academy of Child & Adolescent Psychiatry [AACAP], 1997). As noted by Huberty (2002), in diagnosing anxiety disorders, the provider should ensure that youth meet the appropriate diagnostic criteria, as set forth in the *DSM-IV* (2000). The provider must also identify those symptoms especially pertinent to children and adolescents. Structured diagnostic interviews can be extremely useful in assessing youth, particularly when administered independently to the youth and the parent.

A thorough assessment is critical since there are numerous anxiety-related problems and because anxiety is often comorbid with other disorders. Two particularly effective diagnostic interviews—the Anxiety Disorders Interview Schedule for Children (ADIS-C) and the Schedule for Affective Disorders and Schizophrenia-Children’s Version (K-SADS)—have demonstrated strong psychometric characteristics for anxiety disorders across many studies (Southam-Gerow & Chorpita, 2007). Assessing anxiety may require using multiple methods to gather information in order to understand a child or adolescent’s behavior across the many settings in which he functions (e.g., school and home). Typically, questionnaires and interviews are used to assess anxiety. Questionnaires that measure anxiety disorders include the Revised Children’s Anxiety and Depression Scale, the Screen for Children’s Anxiety and Related Disorders (SCARED), and the Spence Children’s Anxiety Scale (SCAS). The Multidimensional Anxiety Scale for Children (MASC) does not assess *DSM* disorders. All four measures have strong psychometric profiles (Southam-Gerow & Chorpita).

Comorbidity

Youth diagnosed with an anxiety disorder may also have other mental health disorders. Studies have revealed anxiety disorders to be comorbid with attention deficit hyperactivity disorder (ADHD), conduct disorder (CD), depression, and dysthymia (Southam-Gerow & Chorpita, 2007). In addition, studies show that one-third of youth having one anxiety disorder meet the criteria for two or more anxiety disorders (AACAP, 1997). Further, it has been found that anxiety appears to precede depression; research indicates that between 28 and 69 percent of youth with anxiety disorders have comorbid major depression (AACAP).

Substance use disorder may also co-occur with anxiety disorders (Compton, Burns & Egger, 2002; Grant et al., 2004). Some research has found that older youth may use alcohol and other substances to reduce the symptoms of anxiety (Jellinek, Patel & Froehle, 2002). Use of substances can ultimately worsen symptoms and certain substances may actually generate symptoms of anxiety.

Evidence-based Treatments

The treatment of anxiety disorders in youth is usually multimodal in nature. Wide-ranging treatments have been described in the literature, but only two primary treatments have been designated as evidence-based: Cognitive Behavioral Therapy (CBT) and treatment with selective serotonin reuptake inhibitors (SSRIs). It is worth noting that CBT has been tested and found to be effective for anxiety disorders in youth in over 25 separate randomized trials.

For this review, evidence-based treatments are divided into three groups: What Works, What Seems to Work, Not Adequately Tested. These treatments are outlined in Table 2.

Table 2

Summary of Treatments for Youth with Anxiety Disorders

What Works	Description
Behavioral & Cognitive Behavioral Therapy (CBT)	Treatment that involves exposing youth to the (non-dangerous) feared stimuli with the goal of the youth's learning that anxiety decreases over time
Selective serotonin reuptake inhibitors (SSRI) Treatment	Treatment with certain SSRIs
What Seems to Work	Description
Educational support	Psychoeducational information on anxiety provided to parents, usually in a group setting
Not Adequately Tested	Description
Play Therapy	Therapy using self-guided play to encourage expression of feelings and healing
Non-SSRI Medication	Treatment with antihistamines, neuroleptics, or herbs
Psychodynamic Therapy	Therapy designed to uncover unconscious psychological processes to alleviate the tension thought to cause distress
Biofeedback	Minimal support

Sources: Chorpita & Southam-Gerow, 2006; Silverman, Pina & Viswesvaran, 2008; Bernstein & Kinlan, 1997; Coghill, 2002; Kearney & Silverman, 1998; Velosa & Riddle, 2000; AACAP, 1997; AACAP 2000; Walkup et al., 2008.

Psychological Treatments

The many psychological treatments available to treat youth with anxiety disorders are described in the paragraphs which follow.

Behavioral and Cognitive Behavioral Therapy

Behavioral and Cognitive Behavioral Therapy (CBT) is the most studied and best-supported treatment for helping youth diagnosed with an anxiety disorder (Chorpita & Southam-Gerow, 2006; Silverman, Pina & Viswesvaran, 2008). These approaches, though diverse, typically include what is called exposure therapy. Exposure treatment involves exposing youth to the non-dangerous situations that they fear, with a focus on having them learn that their anxiety will decrease over time. As an example, youth afraid of talking to peers would practice conversations numerous times until they felt less anxious about doing so. Often, exposure therapy involves using a hierarchy, or fear ladder, such that youth may be exposed to moderately stressful situations and work towards more difficult ones. This approach allows these youth to experience mastery and increases their self-confidence.

Other elements common to behavioral and CBT include psychoeducation, relaxation, and cognitive skills. Psychoeducation entails teaching older youth and parents about the effects of anxiety, how to distinguish between problematic and non-problematic anxiety, and how to overcome problematic anxiety. Psychoeducation also teaches youth and parents to monitor levels of anxiety across a variety of situations. Both forms of therapies often use praise and/or rewards to encourage the youth's progress in exposure of tasks. Both also include relationship-building between the parent and child. Relaxation entails teaching youth how to relax through breathing exercises or by alternating muscle tension and release. Cognitive skills involve teaching youth how to observe and change their thinking so they can change how they feel and reduce their feelings of anxiety.

Most versions of behavioral therapy and CBT include parental involvement. Some versions even involve the parents attending all sessions with their child. In these approaches, parents learn the same skills as their children so that they can help them outside the therapy session. In addition, the parent is involved in the exposure situations.

Behavioral therapy and CBT, both of which have been found to be helpful to youth of all ages, can be administered in individual and group settings (Chorpita & Southam-Gerow, 2006; Silverman, Pina & Viswesvaran, 2008). They have also been delivered with good effects in schools, clinics, hospitals, daycare centers, and homes. Evidence supporting CBT has been found across a variety of racial and ethnic groups, including Caucasian, African American, Latino, Asian, and Multiethnic.

Other Therapies with Research Support

There are several other treatments with modest levels of support. For example, educational support treatment, which involves providing support and education about anxiety to parents and youth with anxiety problems, has shown some promise in a several studies. There is also some support in one study for the use of hypnosis in youth having high levels of test-taking anxiety (Chorpita & Southam-Gerow, 2006).

Pharmacological Treatments

Before the mid-1990's, evidence about the effectiveness of the variety of medications (e.g., tricyclic antidepressants, benzodiazepines) used to treat most childhood anxiety disorders was mixed (Bernstein & Kinlan, 1997; Coghill, 2002; Kearney & Silverman, 1998; Velosa & Riddle, 2000). The AACAP has suggested that pharmacotherapy should not be used as the sole intervention when being used to treat anxiety disorders in youth, but used instead in conjunction with behavioral or psychotherapeutic treatments (1997). One recent, large, multi-site controlled study found that, in the treatment of GAD, SAD, and social anxiety disorder, a combination of pharmacotherapy and CBT was superior to either treatment alone or a placebo (Walkup et al., 2008).

Unproven Treatments

There are treatments that either are unproven in treating anxiety disorders or lack research supporting their effectiveness for youth (e.g., research on the use of play therapy or psychodynamic therapy). There is also minimal support for the use of biofeedback. Although there is very little support for these treatments at this time, future research may later demonstrate their positive effects on youth with anxiety.

Regarding psychopharmacological interventions, there are several medications with either little evidence or with high levels of risk. For example, there are no controlled studies evaluating the efficacy of antihistamines for anxiety disorders in youth (AACAP, 1997). Furthermore, due to the risks of impaired cognitive functioning and tardive dyskinesia (an involuntary movement disorder caused by the long-term use of neuroleptic drugs), neuroleptics are not recommended for treating anxiety symptoms in youth who do not have a co-occurring diagnosis of Tourette's syndrome or psychosis (AACAP, 1997; AACAP, 2000). The benefit of herbal remedies is also considered unproven.

Cultural Considerations

The understanding of anxiety disorders may vary significantly from culture to culture. Studies with participants from diverse ethnic backgrounds have become more common in recent years; however, literature in the field is greatly lacking (Austin & Chorpita, 2004; Safren et al., 2000). For instance, some studies have found differing levels of anxiety symptoms between African American and Caucasian youth, although the differences have not been consistent across studies (Compton, Nelson & March, 2000; Last & Perrin, 1993).

Culture and ethnicity are important considerations for the clinician assessing anxiety in youth because of how child behaviors are perceived within a cultural group. For instance, not all cultural groups use the term “anxiety.” Chen, Reich & Chung (2002) noted that, within some Asian populations, the term “anxiety” is rarely used, whereas terminology such as “being nervous” or “being tense” are more commonly used. The cultural and ethnic background of a family will impact emotional development, and not all cultures share the same views on emotional expression and regulation (Matsumoto, 1990; Fredrickson, 1998; Friedlmeier & Trommsdorff, 1999). For example, Asians may describe symptoms of anxiety as physical complaints, since physical ailments are more acceptable. Furthermore, people of a certain culture may understand their symptoms as a defined illness known only to their culture, which can make diagnosis more complex.

Sources

- Albano, A., Chorpita, B., & Barlow, D. (2003). Childhood anxiety disorders. *In* E. Mash & R. Barkley (Eds.), *Child psychopathology* (2nd ed.). New York: Guilford Press, 279-329.
- American Academy of Child & Adolescent Psychiatry (AACAP). (1997). Summary of the practice parameters for the assessment and treatment of children and adolescents with anxiety disorder. *Journal of American Academy of Child and Adolescent Psychiatry*, 36 (10). [Online]. Available: http://www.aacap.org/cs/root/member_information/practice_information/practice_parameters/summaries/summary_of_the_practice_parameters_for_the_assessment_and_treatment_of_children_and_adolescents_with_anxiety_disorder. [January 2010].
- American Academy of Child & Adolescent Psychiatry (AACAP). (2000). *Summary of the practice parameters for the assessment and treatment of children and adolescents with schizophrenia*. [Online]. Available: <http://www.aacap.org/galleries/PracticeParameters/Schiz.pdf>. [January 2010].
- American Psychiatric Association (APA). (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.) (DSM-IV). Washington, DC: Author.
- American Psychiatric Association (APA). (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.) (DSM-IV-TR). Washington, DC: Author.
- Austin, A., & Chorpita, B. (2004). Temperament, anxiety, and depression: comparisons across five ethnic groups of children. *Journal of Clinical Child and Adolescent Psychology*, 33, 216-226.
- Barlow, D. (2002). *Anxiety and its disorders: the nature and treatment of anxiety and panic* (2nd ed.). New York: Guilford Press.
- Beidel, D., & Turner, S. (2005). *Childhood anxiety disorders: A guide to research and treatment*. New York: Routledge.
- Bernstein, G., & Kinlan, J. (1997). Summary of the practice parameters for the assessment and treatment of children and adolescents with anxiety disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36, 1639-1641.
- Chen, Jian-P., Reich, L., & Chung, H. (2002). Anxiety disorders. *Western Journal of Medicine*, 176, 4.
- Chorpita, B., & Southam-Gerow, M. (2006). Treatment of anxiety disorders in youth. *In* E. Mash & R. Barkley (Eds.), *Treatment of childhood disorders* (3rd ed.) New York: Guilford Press, 271-335.
- Christophersen, E., & Mortweet, S. (2001). *Treatments that work with children: Empirically supported strategies for managing childhood problems*. American Psychological Association.

- Coghill, D. (2002). Evidence-based psychopharmacology for children and adolescents. *Current Opinions in Psychiatry*, 15 (4), 361-368.
- Compton, S., Burns, B., & Egger, H. (2002). Review of the evidence base for treatment of childhood psychopathology: internalizing disorders. *Journal of Consulting and Clinical Psychology*, 70 (6), 1240-1266.
- Compton, S., Nelson, A., & March, J. (2000). Social phobia and separation anxiety symptoms in community and clinical samples of children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, 39, 1040-1046.
- Costello, E., Angold, A., & Keeler, G. (1999). Adolescent outcomes of childhood disorders: the consequences of severity and impairment. *Journal of the American Academy of Child and Adolescent Psychiatry*, 38, 121-128.
- Eaves, L., Silberg, J., Maes, H., Simonoff, E., Pickles, A., Rutter, M., et al. (1997). Genetics and developmental psychopathology: the main effects of genes and environment on behavioral problems in the Virginia twin study of adolescent behavioral development. *Journal of Child Psychology & Psychiatry & Allied Disciplines*, 38, 965-980.
- Eley, T., Bolton, D., O'Connor, T., Perrin, S., Smith, P., & Plomin, R. (2003). A twin study of anxiety-related behaviours in young children. *Journal of Child Psychology and Psychiatry*, 44, 945-960.
- Fredrickson, B. (1998). Cultivated emotions: parental socialization of positive emotions and self-conscious emotions. *Psychological Inquiry*, 9, 279-281.
- Friedlmeier, W., & Trommsdorff, G. (1999). Emotion regulation in early childhood: a cross-cultural comparison between German and Japanese toddlers. *Journal of Cross-Cultural Psychology*, 30, 684-711.
- Grant, B., Stinson, F., Dawson, D., Chou, P., Dufour, M., Compton, W., et al. (2004). Prevalence and co-occurrence of substance use disorders and independent mood and anxiety disorders: Results from the national epidemiologic survey on alcohol and related conditions. *Archives of General Psychiatry*, 61, 807-816.
- Huberty, T. (2002). Dealing with anxiety in children professional growth for school psychologists—self study. National Association of School Psychologists. [Online]. Available: <http://www.nasponline.org/certification/anxiety.html>. *Not available November 2009.*
- Jellinek, M., Patel, B., & Froehle, M. (Eds.). (2002). *Bright Futures in Practice: Mental Health—Volume 1, Practice Guide*. Arlington, VA: National Center for Education in Maternal and Child Health.
- Kearney, C., & Silverman, W. (1998). A critical review of pharmacotherapy for youth with anxiety disorders: things are not as they seem. *Journal of Anxiety Disorders*, 12, 83-102.
- Langley, A., Bergman, L., McCracken, J., & Piacentini, J. (2004). Impairment in childhood anxiety disorders: Preliminary examination of the child anxiety impact scale-parent version. *Journal of Child and Adolescent Psychopharmacology*, 14, 105-114.
- Last, C., & Perrin, S. (1993). Anxiety disorders in African-American and white children. *Journal of Abnormal Child Psychology*, 21, 153-164.

- Matsumoto, D. (1990). Cultural similarities and differences in display rules. *Motivation and Emotion*, 14, 195-214.
- Pine, D., Cohen, P., Gurley, D., Brook, J., & Ma, Y. (1998). The risk for early-adulthood anxiety and depressive disorders in adolescents with anxiety and depressive disorders. *Archives of General Psychiatry*, 55, 56-64.
- Safren, S., Gonzalez, R., Horner, K., Leung, A., Heimberg, R., & Juster, H. (2000). Anxiety in ethnic minority youth: methodological and conceptual issues and review of the literature. *Behavior Modification*, 24, 147-183.
- Silverman, W., & Ginsburg, G. (1998). Anxiety Disorders. In T. Ollendick and M. Hersen (Eds.), *Handbook of Child Psychopathology*. New York: Plenum Press, 239-268.
- Silverman, W., Pina, A., & Viswesvaran, C. (2008). Evidence-based psychosocial treatments for phobic and anxiety disorders in children and adolescents. *Journal of Clinical Child & Adolescent Psychology*, 37, 105-130.
- Southam-Gerow, M., & Chorpita, B. (2007). Anxiety in children and adolescents. In E. Mash & R. Barkley (Eds.), *Assessment of childhood disorders* (4th ed.) (pp. 347-397). New York: Guilford Press.
- U.S. Department of Health and Human Services. (1999). *Mental health: A report of the Surgeon General*. Rockville, MD.
- U.S. Public Health Service. (2000). *Report of the Surgeon General's conference on children's mental health: a national action agenda*. Washington, DC: Department of Health and Human Services.
- Velosa, J., & Riddle, M. (2000). Pharmacologic treatment of anxiety disorders in children and adolescents. *Child & Adolescent Psychiatric Clinics of North America*, 9, 119-133.
- Walkup, J., Albano, A., Piacentini, J., Birmaher, B., Compton, S., Sherrill, J., et al. (2008). Cognitive behavioral therapy, sertraline, or a combination in childhood anxiety. *The New England Journal of Medicine*, 359, 2753-2766.

Additional Resources

- Murphy, M., Cowan, R., & Sederer, L. (2001). Anxiety disorders. *Blueprints in psychiatry* (2nd ed.) Malden, Mass: Blackwell Science, Inc., 14-19.

Organizations

American Academy of Child & Adolescent Psychiatry (AACAP)

Anxiety Disorders Resource Center
<http://www.aacap.org/cs/AnxietyDisorders.ResourceCenter>

Anxiety Disorders Association of America (ADAA)

www.adaa.org

Mental Health America (MHA) (formerly National Mental Health Association)

<http://www.nmha.org/go/information/get-info/anxiety-disorders/anxiety-disorders-and-kids/anxiety-disorders-and-kids>

National Anxiety Foundation

<http://www.lexington-on-line.com/naf.html>

National Institute of Mental Health (NIMH)

<http://www.nimh.gov/health/topics/anxiety-disorders.index.html>

Social Phobia/Social Anxiety Association

<http://www.socialphobia.org>

U.S. Department of Health and Human Services

Substance Abuse and Mental Health Services Administration (SAMHSA)

<http://mentalhealth.samhsa.gov/publications/allpubs/ca-0007/default.asp>

Office of the Surgeon General

Mental Health: A Report of the Surgeon General

<http://www.surgeongeneral.gov/library/mentalhealth/chapter3/sec6.html>

Virginia Resources

Family Help in Virginia

Focus Adolescent Services

<http://www.focusas.com/Virginia.html>

University of Virginia Health System

http://www.healthsystem.virginia.edu/uvahealth/peds_mentalhealth/anxhub.cfm

Virginia Commonwealth University (VCU)

Center for Psychological Services and Development

Anxiety Clinic

<http://www.has.vcu.edu/psy/cpsd/anxiety/index.html>

VCU Medical Center

Virginia Treatment Center for Children

<http://www.vcuhealth.org/vtcc>

Virginia Polytechnic Institute and State University (VA Tech)

Psychological Services Center

<http://www.psyc.vt.edu/centers/psc>

Child Study Center

<http://www.psyc.vt.edu/centers/csc>

T RAUMA

Introduction

Definitional Considerations

Prevalence

Psychological Consequences Associated with Trauma

Categories

Comorbidity

Assessment

Evidence-based Practices

Psychological Treatments

Pharmacological Treatments

Unproven Treatments

Cultural Considerations

Introduction

A traumatic event is an event which threatens injury, death, or the physical body of a child or adolescent while also causing shock, terror or helplessness (American Psychological Association, 2008). Trauma refers to both the experience of being harmed by an external agent, as well as the response to that experience (Becker et al., 2003). Youth who experience trauma may also experience emotional harm or psychic trauma which, if left untreated, can have a significant impact (Pruitt, as cited by the American Academy of Child & Adolescent Psychiatry [AACAP], 1998a). According to the American Psychological Association, a community sample revealed more than two-thirds of children report experiencing a traumatic event by age 16. Because a significant number of youth experience some traumatic incident during childhood (Copeland, Keeler, Angold & Costello, 2007), it is critical to clarify definitions of, risk factors for, and outcomes of exposure to trauma.

Trauma typically exists along a spectrum which ranges from global, when an event may affect many individuals (e.g., exposure to the September 11, 2001 attacks, Hurricane Katrina, earthquake in Haiti, exposure to war-related events), to individual, when the trauma impacts only that individual (e.g., rape, abuse, community violence, or being in an automobile accident). Research has also been conducted on simple and complex trauma and the impact on children and adolescents. Complex trauma is “children’s experiences of multiple traumatic events that occur within the caregiving system – the social environment that is supposed to be the source of safety and stability in a child’s life” (National Child Traumatic Stress Network [NCTSN], 2003). Complex trauma involves repeated traumatic events occurring over a period of time, usually beginning in childhood (e.g., repeated sexual abuse). Conversely, simple trauma usually refers to a single event, such as a rape or a shooting. Simple trauma is more likely to lead to posttraumatic stress disorder (PTSD), while complex trauma leads to a deeper and more pervasive set of changes involving emotional dysregulation, distorted thinking, behavioral dyscontrol, and patterns of dysfunctional interpersonal relationships (Personal Communication with Brian Meyer, Ph.D., June 7, 2010).

Early researchers noted that exposure to trauma may lead to feelings of anxiety, helplessness, dissociation (detachment of the mind from emotion), and behaviors, including hypervigilance (watchfulness or awareness of one’s surroundings over and above what is normal), extreme behaviors and efforts to avoid re-experiencing the traumatic event, impulsivity, and even self-inflicted injury (Yates, 2004; Thomas, 2003). These symptoms are now included within the broad diagnostic category of PTSD (Yates; American Psychiatric Association [APA], 2000). While these symptoms may be consequences of trauma, they do not always occur following trauma. Additionally, risk factors can moderate the influence of exposure to trauma on the development of psychopathology.

This section will discuss trauma but focus primarily on the assessment and treatment of PTSD, a potential outcome of exposure to a traumatic event. Information about PTSD, which is discussed in the following paragraphs, is also referenced in the *Collection's* "Anxiety Disorders" section.

Definitional Considerations

Trauma has not been a focus in developmental psychopathology literature until relatively recently. Beginning in the 1970's, psychologists began to examine the experience of individuals who have experienced traumatic events, with research focusing on soldiers returning from war and rape victims (Copeland, Keeler, Angold & Costello, 2007). This work has been enormously influential and has contributed greatly to the understanding of psychopathology (van der Kolk, Roth, Pelcovitz, Sunday & Sinazzola, 2005). However, early research was limited in that it focused almost exclusively on individuals in the military who experienced traumatic events outside of their home community and ignored the experiences of traumatic events in everyday life, including those which impact children (Karam & Ghosn, 2003). Additionally, early definitions of trauma emphasized the individual directly experiencing the violent act, such as military personnel in war or rape victims (Copeland, Keeler, Angold & Costello) and discounted the distress experienced by those who did not directly experience the trauma, e.g., witnessing domestic violence (Evans, Davies & DiLillo, 2008). The definition of trauma was subsequently broadened due to the recognition that indirect experiences were traumatic, that youth also experienced trauma, and that youth responded to trauma differently than adults (Carrion, Weems, Ray & Reiss, 2002).

In newer versions of the American Psychiatric Association's *Diagnostic and Statistical Manual (DSM, DSM-IV, and DSM-IV-TR)*, the definition of trauma has grown more inclusive to account for the distress caused by serious illness, the death of a loved one, natural disasters, or even community violence (Copeland, Keeler, Angold & Costello, 2007; Rodriguez, Steinberg & Pynoos, 1999). In the context of PTSD, the *DSM-IV-TR* (APA, 2000) defines trauma as:

an extreme traumatic stressor involving direct personal experience of an event that involves actual or threatened death or serious injury, or other threat to one's physical integrity; witnessing an event that involves death, injury, or a threat to the physical integrity of another person' or learning about unexpected or violent death, serious harm, or threaten of death or injury experienced by a family member or other close associate.

According to the *DSM-IV*, a youth is exposed to a traumatic event if they experience the event personally, witness another individual's experience of the event, or learn about a close associate's (friend or family) traumatic experience (2000). Examples of trauma mentioned in the *DSM-IV* include directly experiencing, witnessing, or learning about a loved one's experience with war, violent personal assault, kidnapping, terrorist attack, natural disaster, severe accidents, or diagnosis of a life-threatening illness.

In terms of complex trauma (repeated traumatic events), a survey of children receiving intervention and/or comprehensive assessment services for trauma exposure found that initial trauma exposure typically occurs at age five. Additionally, it was found that interpersonal victimization is the most prevalent form of trauma exposure, followed by sexual maltreatment/assault, and neglect. Specifically, psychological maltreatment (e.g., verbal/emotional abuse or emotional neglect), traumatic loss, dependence on an impaired caregiver (i.e., parent with psychopathology or substance abuse), and domestic violence are the most frequently cited forms of interpersonal victimization (NCTSN, 2003).

Prevalence

Due to the shifting definition of trauma, it has been difficult to come to a consensus on the prevalence of trauma among children. Evans, Davies & DiLillo (2008) estimate that each year 4.8 million acts of violence are committed against women, with 2.9 million are committed against men.

Not only do these experiences have a profound effect on these individuals, they may also impact others who are exposed to this violence. As many as 17.8 million children are exposed to domestic violence each year as witnesses to or as targets of violent events (Evans, Davies & DiLillo). Retrospective data suggests that 20 to 40 percent of adults reported witnessing domestic violence as a child or adolescent (Evans, Davies & DiLillo). In a large epidemiological study of trauma and PTSD in youth, 68 percent of 16 year olds in a community sample reported exposure to at least one traumatic event (Copeland, Keeler, Angold & Costello, 2007). Of those, 37 percent reported exposure to multiple traumas and almost 6 percent report exposure to at least one traumatic event in the last three months (Copeland, Keeler, Angold & Costello). While shocking, this rate is consistent with the rate of trauma exposure reported in other studies (Green et al., 2000).

Psychological Consequences Associated with Trauma

Experiencing trauma can lead to a broad range of potential psychological outcomes. Trauma-exposure itself is not a diagnosable disorder, according to the *DSM-IV-TR*. It is important to note that, while the factors discussed in this section may be consequences of trauma, they do not always occur following trauma and, trauma is not a necessary precondition for psychopathology (APA, 2000). Additionally, exposure to trauma does not dictate later psychopathology, and individual differences and risk factors can moderate the influence of exposure to trauma, as well as the development of its symptoms.

According to the NCTSN, there are a number of domains in which a child may experience long-term impairment following exposure to complex trauma (2003). Some children and adolescents exposed to trauma may exhibit physical or physiological differences. These difficulties may include hypersensitivity to physical contact, numbness, problems with coordination and balance, and somatization (a process when mental and emotional stresses becoming physical). Children and adolescents exposed to trauma may have increased medical problems such as asthma, autoimmune disorders, and pseudoseizures (NCTSN).

Potential cognitive outcomes for children and adolescents exposed to trauma include difficulties with attention, executive functioning, planning, and learning (NCTSN, 2003). These youth may also exhibit a lack of sustained curiosity, have problems processing new information, have difficulties with language, and have impairments in auditory, visual, or spatial perception and comprehension (NCTSN). Children exposed to complex trauma may experience difficulties forming attachments and may have distrust of and/or uncertainty of those around them. This can lead to difficulties setting boundaries, as well other interpersonal difficulties (NCTSN).

Children and adolescents exposed to trauma may also experience negative outcomes related to emotion. Children may have difficulties with affect regulation, which may make it difficult for them to identify and describe feelings and internal experiences. They may also experience dissociative symptoms, such as depersonalization and derealization, and may even have amnesia for state-based events. Also, many youth exposed to trauma experience low self-esteem, shame or guilt, disturbances of body image, and/or lack of a predictable sense of self (NCTSN, 2003). Table 1 summarizes the potential difficulties children and adolescents may have after exposure to complex trauma.

Table 1

**Summary of Potential Outcomes
of Complex Trauma in Children and Adolescents**

Domain	Potential Difficulties
Physical/ Physiological	Hypersensitivity to physical contact Numbness Problems with coordination and balance Increased somatization
Medical	Asthma Autoimmune disorders Pseudoseizures Sleep disturbances Disordered eating
Cognitive	Attention Executive functioning Learning Lack of sustained curiosity Problems processing new information. Difficulties with language Impairments in auditory, visual, or spatial perception and comprehension
Attachment/Relationships	Distrust of and/or uncertainty about those around them Difficulties with boundaries Interpersonal difficulties
Behavioral	Behavioral (impulse) control Self-destructive behavior Aggression Difficulty complying with rules Oppositional behavior Excessive compliance
Emotional	Affect regulation Dissociative symptoms (e.g., depersonalization or derealization) Amnesia Low self-esteem Shame or guilt Disturbances of body image Lack of a predictable sense of self

Source: NCTSN, 2003.

Categories

In addition to the many symptoms identified in previous sections, the *DSM-IV-TR* defines two specific disorders specifically related to trauma-exposure; PTSD and acute stress disorder (ASD), both of which are classified as anxiety disorders. These diagnoses may be applied to both youth and adults if their behavior is consistent with the criteria set forth in the *DSM-IV-TR*. Table 2 provides a brief summary of these disorders.

According to the *DSM-IV-TR*, symptoms of ASD are experienced during or immediately after trauma and may last for a maximum of four weeks before the diagnosis must be reassessed. If the symptoms persist past four weeks, the youth may be then diagnosed with PTSD if the criteria are

met. However, a youth may be diagnosed with PTSD without having been previously diagnosed with ASD. Comparing genders, some studies have found that roughly twice the proportion of females meet criteria for PTSD (Kilpatrick, et al., 2003).

Table 2

**DSM-IV-TR Disorders
Affecting Children & Adolescents Exposed to Trauma**

Disorder	Description
Posttraumatic Stress Disorder (PTSD)	Re-experiencing, avoidance and hyper-arousal symptoms following a traumatic event; diagnosed at least four weeks after trauma-exposure
Acute Stress Disorder (ASD)	Dissociative, re-experiencing, avoidance and hyper-arousal symptoms following a traumatic event; diagnosed after lasting two days to four weeks after trauma

Source: APA, 2000.

Finally, there is some controversy over trauma-related diagnoses in the *DSM-IV-TR*. The NCTSN (2003) found that many children exposed to trauma exhibit several forms of posttraumatic symptoms that “are not captured by standard PTSD, depressive, or anxiety disorder diagnoses.” Specifically, 50 percent or more of the children surveyed who had been exposed to trauma exhibit difficulties in the domains of affect regulation, attention and concentration, negative self-image, impulse control, and aggression/risk-taking (NCTSN). One-third of the children exposed to trauma exhibited problems with somatization, attachment, conduct disorder or oppositional defiant disorder, sexual interest/activity/avoidance, and/or dissociation (NCTSN). Childhood psychopathology related to trauma can manifest differently in children/adolescents than in adults. Children exposed to trauma exhibit a wide variety of symptoms and domains of impairment. As such, the current *DSM-IV-TR* may not be sufficiently sensitive to the symptoms exhibited by traumatized children (Karam & Ghosn, 2003; Carrion et al. 2002; van der Kolk, 2005).

Comorbidity

Children and adolescents exposed to trauma very often experience other kinds of problems. Those with ASD or PTSD may have symptoms of despair and hopelessness to the extent that they may meet criteria for a Major Depressive Episode, and thus Major Depressive Disorder may be an appropriate diagnosis. Other youth with ASD or PTSD may experience guilt over their trauma, feeling as though they played a role. Some studies have found that as many as 75 percent of adolescents diagnosed with PTSD have at least one comorbid diagnosis of either Major Depressive Episode or Substance Abuse/Dependence (Kilpatrick et al., 2003). Research has found that alcohol and other substances may be used to cope with symptoms of trauma-related anxiety (Jellinek, Patel & Froehle, 2002). However, the use of substances can ultimately worsen symptoms, and certain substances can actually generate anxiety symptoms. Another study of preschool-aged children with PTSD who had been exposed to Hurricane Katrina found that 89 percent had at least one comorbid disorder, with oppositional defiant disorder (ODD) and separation anxiety disorder (SAD) being the most common (Scheeringa & Zeanah, 2008). Additionally, in children, diagnosis of ASD after an assault or a motor vehicle accident has been found to predict later development of PTSD (Meiser-Stedman, Yule, Smith, Glucksman & Dalgleidish, 2005). As PTSD is assessed and treated, it is important to monitor for other potential comorbid disorders.

Many of the behaviors seen in traumatized children fall in *DSM-IV-TR* diagnoses other than PTSD and ASD. This is related to difficulties associated with the current definitions of these disorders as they apply to children (Karam & Ghosn, 2003; Carrion, Weems, Ray & Reiss, 2002; van der Kolk et

al., 2005). Thus, discussions of comorbidity must be tempered with the knowledge that youth exposed to trauma may exhibit impairment across a broad range of domains, as discussed previously and outlined in Table 1. Current diagnostic categories may not clearly categorize all the potential symptoms of youth exposed to trauma.

Assessment

While previous sections have focused broadly on trauma, the following focus more specifically on the assessment and treatment of PTSD. Any attempt to define problematic posttraumatic stress in youth must clearly define what constitutes a normal response to difficult events, loss and trauma. Assessing the impact of trauma using current definitions of trauma may not properly screen for those children and adolescents who go on to develop psychopathology. The suggested assessment tools for trauma are summarized in Table 3.

Table 3

Suggested Assessment Tools for Trauma

Measure Type	Name of Measure	Who Completes	What is Learned
Clinical Interview	Anxiety Disorders Interview Schedule – Child (ADIS-C) and parent versions (ADIS-P)	Child, Parent	Whether a child meets criteria for PTSD based on <i>DSM-IV</i> criteria
Clinical Interview	Schedule for Affective Disorders and Schizophrenia-Children’s Present and Lifetime Version (K-SADS-PL)	Child, Parent	Whether a child meets criteria for PTSD based on <i>DSM-IV</i> criteria
Clinical Interview	Clinician-Administered PTSD Scale for Children and Adolescents (CAPS-CA)	Child/Adolescent (ages 8-15 years)	Whether child has been exposed to trauma, overall symptom severity, and whether a current or lifetime diagnosis of PTSD/ASD is indicated based on <i>DSM-IV</i> criteria
Rating Scale	UCLA PTSD Reaction Index (Child, Adolescent, and Parent versions)	Child, Adolescent, Parent	Whether a child has trauma exposure, PTSD symptoms (including duration of symptoms) based on <i>DSM-IV</i> criteria
Rating Scale	Child PTSD Symptom Scale (CPSS)	Child/Adolescent (ages 8-18 years)	Frequency of all <i>DSM-IV</i> -defined PTSD symptoms in children and <i>DSM-IV</i> diagnosis
Symptom Checklist	Trauma Symptom Checklist for Children (TSCC)	Child/Adolescent (ages 8-16 years)	Whether a child has acute and chronic posttraumatic symptoms; includes clinical scales and validity scales; measure does not assess <i>DSM-IV</i> criteria specifically
Symptom Checklist	PTSD Checklist – Child and Parent Report versions (PCL-C/PR)	Child, Parent	Whether child has symptoms of PTSD; measure does not assess for traumatic events or child functioning

Sources: Hawkins & Radcliffe, 2006; Southam-Gerow & Chorpita, 2007; NCTSN, 2003.

Not all children who are exposed to trauma are at equal risk for developing PTSD, and children may not meet full criteria for PTSD but may still have distressing and/or impairing symptoms. Accordingly, careful assessment is critical, as is knowledge of normal child development and normative reactions to difficult life events or trauma.

Since PTSD is often comorbid with other disorders, assessment typically involves asking about an array of potential problems. Assessment for PTSD in children should also include a medical history and a physical examination within the past 12 months, with special focus on conditions that may mimic PTSD or other anxiety disorders (AACAP, 1998b). Assessing for PTSD may require using multiple ways to gather information in order to understand the youth's behavior across the many settings, e.g., school, home. Typically, questionnaires and interviews are used to assess for symptoms of PTSD. Some questionnaires that measure PTSD symptoms in children/adolescents are the UCLA PTSD Reaction Index, PTSD Symptom Scale (PSS), and the Trauma Symptom Checklist for Children (TSCC). These measures have moderate to strong psychometric profiles, but further expanded normative and clinical group studies of measures are needed (Hawkins & Radcliffe, 2006). However, these measures may be useful starting points for assessing symptoms. A parent-report measure, the PTSD Checklist/Parent Report has been found to have strong psychometric properties (AACAP, 1998b). However, when a parent or caregiver is the alleged perpetrator of child abuse or domestic violence, it is imperative that the clinician interview other caretakers (AACAP, 1998b).

Structured diagnostic interviews can be particularly helpful in assessing children, particularly when administered independently to the child and parent. When interviewing a child, it is important to use developmentally appropriate language. Two specifically strong diagnostic interviews are the Anxiety Disorders Interview Schedule for Children (ADIS-C) and the Schedule for Affective Disorders and Schizophrenia-Children's Present and Lifetime Version (K-SADS-PL). Both interviews have demonstrated strong psychometric characteristics for anxiety disorders (e.g., PTSD) across many studies (Hawkins & Radcliffe, 2006; Southam-Gerow & Chorpita, 2007). The ADIS-C includes a PTSD section and can be used with child and parent reports. In the K-SADS-PL, the clinician is asked to integrate parent and child reports, and initially asks whether a variety of traumatic events has occurred recently or in the past and then assesses the criteria for a diagnosis of PTSD in relation to the specific event (Hawkins & Radcliffe). Additionally, the Clinician-Administered PTSD Scale for Children and Adolescents (CAPS-CA) is a semi-structured interview to assess PTSD symptoms in youth that was developmentally modified from an adult version (Hawkins & Radcliffe).

There are a number of potential considerations when assessing for PTSD in youth. First, the *DSM-IV-TR* definition of PTSD requires a verbal description of experiences or emotional states and does not include appropriate developmental modifications, which may result in under-diagnosis (Hawkins & Radcliffe, 2006). Second, diagnosis relies on report of symptoms and internal experiences which may be difficult for young children to verbalize, as they may not have developed cognitively to the point that they are able to describe their internal experiences. Often, the diagnosis may rely on parents' reports of symptoms. Additionally, youth who have experienced trauma within close relationships may have distrust and uncertainty about those around them, particularly if a trusted adult was a perpetrator (NCTSN, 2003). As such, these youth may resist disclosing information because they may fear additional family chaos and may also fear that others will perceive them as peculiar. Moreover, youth may have a variety of outcomes after the exposure to the trauma, as well as having comorbid symptoms. Some symptoms may be externalizing, such as behavior problems or aggression, and these overt symptoms may attract more clinical attention than internalizing symptoms (NCTSN). Finally, Hawkins and Radcliffe suggest that children who are exposed to a single traumatic event may be different in some ways than children who have been exposed to multiple traumatic events or prolonged stressors, as in complex trauma (NCTSN). Often, multiple traumas are not assessed, and symptom report relies on recalling the most recent traumas (Hawkins & Radcliffe).

Evidence-based Practices

There are many treatments for PTSD described in the literature, yet not all have been found to be equally effective. Only one family of treatments has been studied enough to declare it an evidence-based treatment: Trauma-Focused Cognitive Behavioral Therapy (TF-CBT). It is worth noting that TF-CBT has been tested and found to be more effective than other active treatments in treating childhood PTSD symptoms across six separate randomized clinical trials.

Table 4 shows treatments divided into four groups: What Works, What Seems to Work, Not Adequately Tested and What Does Not Work.

Table 4

Summary of Evidence-based Practices for Youth with PTSD

What Works	Description
Trauma-Focused Cognitive Behavioral Therapy (TF-CBT)	Treatment that involves reducing negative emotional and behavioral responses related to trauma, by providing psychoeducation on trauma, addressing distorted beliefs and attributes related to trauma, introducing relaxation and stress management techniques, and developing a trauma narrative in a supportive environment
What Seems to Work	Description
School-based Group Cognitive Behavioral Therapy (CBT)	Similar components to TF-CBT, but in a group, school-based format
Not Adequately Tested	Description
Child-centered Play Therapy	Therapy that utilizes child-centered play to encourage expression of feelings and healing
Psychological Debriefing	An approach in which youth talk about the facts of the trauma (and associated thoughts and feelings) and then are encouraged to re-enter into the present
Pharmacological Treatments	Treatment with selective serotonin reuptake inhibitors (SSRIs)
What Does Not Work	Description
Restrictive rebirthing or holding techniques	Restrictive rebirthing or holding techniques that may forcibly bind or restrict, coerce, or withhold food/water from children and have resulted in some cases of death and are not recommended

Sources: Cohen, Deblinger, Mannarino & Steer, 2004; Cohen, Kelleher & Mannarino, 2008; Silverman et al., 2008; AACAP, 1998b.

Psychological Treatments

Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) has been shown to be effective across a number of randomized controlled trials and to be more effective than other treatments (e.g., child-centered play therapy) at improving PTSD, as well as symptoms of depression, shame, and behavioral problems (Cohen, Deblinger, Mannarino & Steer, 2004; Cohen, Kelleher & Mannarino, 2008). Parents who participated in the treatment with their children have also been shown to have decreased trauma-distress and depression and improved parenting skills.

The TF-CBT model is based on cognitive and learning theories about the development of traumatic stress in youth, as well as information on effective interventions for adult PTSD and other child anxiety disorders (Cohen, Deblinger, Mannarino & Steer, 2004). TF-CBT treatment includes core elements (that make up the acronym PRACTICE; Cohen, Kelleher & Mannarino, 2008), with

each practice component building on skills gained in previous sessions (Cohen, Deblinger, Mannarino & Steer, 2004). The elements described by Cohen (2008) are outlined below.

- Children and parents are provided with Psychoeducation about trauma and PTSD symptoms, and parents are provided with parenting skills to aid in the management of the child's symptoms.
- Relaxation skills are provided.
- Affective expression and modulation skills are treatment components.
- Cognitive coping skills are provided.
- A Trauma narrative is developed and processed.
- In-vivo mastery of trauma reminders is introduced to differentiate between reminders and dangerous cues in the environment.
- Conjoint sessions, where the child and parent focus on having the child share his or her narrative and working on family communication, are also included.
- Finally, Enhancing safety focuses on safety planning in the future.

These components take 12 to 16 sessions (Cohen, Deblinger, Mannarino & Steer, 2004). Similar to other cognitive-behavioral treatments, parent involvement and knowledge of skills are considered to be important components of treatment so that parents can help children with the skills outside of the therapy sessions.

Although TF-CBT has the most research support, school-based group Cognitive Behavioral Therapy (CBT) has shown some promise in a few studies (Cohen, Kelleher & Mannarino, 2008; Silverman et al., 2008). School-based group CBT uses PRACTICE components similar to TF-CBT. However, all elements, except for the trauma narrative, which is an individual activity, are provided in a group format, and parents are rarely involved. There is also a teacher educational component and peer support (Cohen, Kelleher & Mannarino).

Pharmacological Treatments

While pharmacological treatments (e.g., selective serotonin reuptake inhibitors [SSRIs]) have been found to be useful in treating other anxiety disorders, there is inadequate support for pharmacological interventions in the treatment of PTSD (AACAP, 1998b). One study examined the effects of adding the SSRI sertraline to a TF-CBT intervention for PTSD and found that there was minimal evidence of a benefit of adding sertraline to TF-CBT (Cohen, Mannarino, Perel & Staron, 2007). Research has shown that employing TF-CBT to treat PTSD, prior to adding medication, is warranted. In general, if a youth with PTSD also is diagnosed with depression, anxiety, panic and/or ADHD symptoms, clinicians are urged to choose medications based on the evidence for treating the comorbid condition (AACAP, 1998b).

Unproven Treatments

There are many treatments for PTSD which have not yet been tested and others which have no research to support their effectiveness. Moreover, some treatments which have been studied have been found to be "less effective, not effective, or harmful" in treating children with PTSD (Cohen, Kelleher & Mannarino, 2008). One intervention, psychological de-briefing, in which children are encouraged to talk about the trauma, as well as their thoughts and feelings, before re-entering into the present, has been studied and found to have no significant effects (Cohen, Kelleher & Mannarino). Nondirective, or child-directed, play and other unstructured treatment approaches are less effective at treating effects of trauma than TF-CBT (Cohen, Kelleher & Mannarino). Other treatments, such as restrictive rebirthing or holding techniques, have been found to be harmful to children and should not be used (Cohen, Kelleher & Mannarino).

Cultural Considerations

The understanding of trauma and its outcomes may vary significantly from culture to culture. For instance, Latino children may experience a symptom known as *susto*, meaning "fright" or "soul loss" (APA, 2000). *Susto* can occur following a frightening event and may impact social relationships, appetite and sleep, enhance feelings of sadness, decrease motivation, and increase feelings of worthlessness (APA).

Research suggests that providers address cultural issues directly with the parents and, if appropriate, the child they are treating (Cohen, Mannarino & Deblinger, 2006). It is important for therapists to recognize that painful and distressing responses to trauma are universal, even if the specific symptoms vary to some extent from culture to culture (Cohen, Mannarino & Deblinger). Further, while therapists are not able to change their own cultural background, they can learn about and be respectful of other cultural reactions to traumatic experiences while providing effective psychological treatment for trauma-related psychopathology (Cohen, Mannarino & Deblinger). As of 2008, TF-CBT treatment materials have been translated into Spanish, Dutch, and German (Cohen, Kelleher & Mannarino, 2008). TF-CBT is also being culturally adapted for use with African children impacted by human immunodeficiency virus (HIV) (Cohen, Kelleher & Mannarino).

Sources

American Psychiatric Association (APA). (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.) (DSM-IV-TR). Washington, DC: Author.

American Psychological Association. (2008). Children and trauma: update for mental health professionals. *2008 Presidential Task Force on Posttraumatic Stress Disorder and Trauma in Children and Adolescents*. [Online]. Available: <http://www.apa.org/pi/families/resources/update.pdf>. [March 2010].

American Academy of Child & Adolescent Psychiatry [AACAP]. (1998a). Your child – childhood trauma and its effects. Excerpt from *Your Child Emotional, Behavioral, and Cognitive Development from Birth through Preadolescence*. [Online]. Available: http://www.aacap.org/cs/root/publication_store/your_child_childhood_trauma_and_its_effects. [March 2010].

American Academy of Child & Adolescent Psychiatry (AACAP). (1998b). Practice parameters for the assessment and treatment of children and adolescents with posttraumatic stress disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, 37 (10), 4S-26S.

Becker, D., et al. (2003) Trauma and adolescence I: The nature and scope of trauma. *Adolescent Psychiatry*. FindArticles.com. [Online]. Available: http://findarticles.com/p/articles/mi_qa3882/is_200301/ai_n9209923. [June 2010].

Carrion, V., Weems, C., Ray, R., & Reiss, A. (2002). Toward an empirical definition of pediatric PTSD: The phenomenology of PTSD symptoms in youth. *Journal of the American Academy of Child Adolescent Psychiatry*, 41 (2), 166-173.

Cohen, J., Kelleher, K., & Mannarino, A. (2008). Identifying, treating, and referring traumatized children: The role of pediatric providers. *Archives of Pediatric Adolescent Medicine*, 162 (5), 447-452.

Cohen, J., Mannarino, A., & Deblinger, E. (2006). *Treating Trauma and Traumatic Grief in Children and Adolescents*. New York: Guilford Press.

- Cohen, J., Deblinger, E., Mannarino, A., & Steer, R. (2004). A multisite, randomized controlled trial for children with sexual abuse-related PTSD symptoms. (Trauma-Focused CBT). *Journal of the American Academy of Child and Adolescent Psychiatry*, 43, 393-402.
- Cohen, J., Mannarino, A., Perel, J., & Staron, V. (2007). A pilot randomized controlled trial of combined Trauma-Focused CBT and Sertraline for childhood PTSD symptoms. *Journal of the American Academy of Child and Adolescent Psychiatry*, 46 (7), 811-819.
- Copeland, W., Keeler, G., Angold, A., & Costello, J. (2007). Traumatic events and posttraumatic stress in childhood. *Archives of General Psychiatry*, 64 (5), 577-584.
- Evans, S., Davies, C., & DiLillo, D. (2008). Exposure to domestic violence: A meta-analysis of child and adolescent outcomes. *Aggression and Violent Behavior*, 13 (2), 131-140.
- Green, B., Goodman, L., Krupnick, J., Corcoran, C., Petty, R., Stockton, P., & Stern, N. (2000). Outcomes of single versus multiple trauma exposure in a screening sample. *Journal of Traumatic Stress*, 13 (2), 271-286.
- Hawkins, S., & Radcliffe, J. (2006). Current measures of PTSD for children and adolescents. *Journal of Pediatric Psychology*, 31 (4), 420-430.
- Jellinek, M., Patel, B., & Froehle, M. (Eds.). (2002). *Bright Futures in Practice: Mental Health—Volume 1, Practice Guide*. Arlington, VA: National Center for Education in Maternal and Child Health.
- Karam, E., & Ghosn, M. (2003). Psychosocial consequences of war among civilian populations. *Current Opinion in Psychiatry*, 16, 413-419.
- Kilpatrick, D., Ruggiero, K., Acierno, R., Saunders, B., Resnick, H., & Best, C. (2003). Violence and risk of PTSD, major depression, substance abuse/dependence, and comorbidity: Results from the national survey of adolescents. *Journal of Consulting and Clinical Psychology*, 71 (4), 692-700.
- Meiser-Stedman, R., Yule, W., Smith, P., Glucksman, E., & Dalgleish, T. (2005). Acute stress disorder and posttraumatic stress disorder in children and adolescents involved in assaults or motor vehicle accidents. *American Journal of Psychiatry*, 162, 1381-1383.
- National Child Traumatic Stress Network. (2003). *Complex trauma in children and adolescents: White paper (Complex Trauma Task Force)*. [Online]. Available: <http://www.ncetsnet.org/nccts/asset.do?id=478>. [February 2010].
- Rodriguez, N., Steinberg, A., & Pynoos, R. (1999). CLA PTSD index for DSM-IV instrument information: Child version, parent version, adolescent version. California: UCLA Trauma Psychiatry Service.
- Scheeringa, M., & Zeanah, C. (2008). Reconsideration of harm's way: onsets and comorbidity patterns of disorders in preschool children and their caregivers following Hurricane Katrina. *Journal of Clinical Child and Adolescent Psychology*, 37 (3), 508-518.
- Silverman, W., Ortiz, C., Viswesvaran, C., Burns, B., Kolko, D., Putnam, F., & Amaya-Jackson, L. (2008). Evidence-based psychosocial treatments for children and adolescents exposed to traumatic events. *Journal of Clinical Child & Adolescent Psychology*, 37 (1), 156-183.
- Southam-Gerow, M., & Chorpita, B. (2007). Anxiety in children and adolescents. In E. Mash & R. Barkley (Eds.), *Assessment of childhood disorders* (4th ed.), 347-397, New York: Guilford Press.

van der Kolk, B., Roth, S., Pelcovitz, D., Sunday, S., & Sinazzola, J. (2005). Disorders of Extreme Stress: The Empirical Foundation of a Complex Adaptation to Trauma. *Journal of Traumatic Stress, 18* (5), 389-399.

Thomas, P. (2003). Protection, dissociation, and internal roles: Modeling and treating the effects of child abuse. *Review of General Psychology, 7* (4), 364-380.

U.S. Department of Health and Human Services. (2004). *Risk and protective factors for child abuse and neglect*. Washington, DC: Child Welfare Information Gateway.

Yates, T. (2004). The developmental psychopathology of self-injurious behavior: Compensatory regulation in posttraumatic adaptation. *Clinical Psychology Review, 24* (1), 35-74.

Organizations

Anxiety Disorders Association of America (ADAA)

8730 Georgia Avenue, Suite 600 – Silver Spring, MD 20910
<http://www.adaa.org>

Child Welfare League of America (CWLA)

440 First Street NW, Third Floor – Washington, DC 20001-2085
<http://www.cwla.org>

International Society for Traumatic Stress Studies (ISTSS)

111 Deer Lake Road, Suite 100 – Deerfield, IL 60015
<http://www.istss.org>

Medical University of South Carolina (MUSC)

Trauma Focused-Cognitive Behavioral Therapy
<http://tfcbt.musc.edu>

National Anxiety Foundation

3135 Custer Drive – Lexington, KY 40517
<http://www.lexington-on-line.com/naf.html>

National Child Traumatic Stress Network

<http://www.NCTSNet.org>

Prevent Child Abuse America

228 S. Wabash Avenue, 10 FL – Chicago, IL 60604
800-CHILDREN (244-5373) or 312-663-3520
www.preventchildabuse.org

Virginia Resources

ChildSavers Guidance Clinic & Trauma Response

200 North 22nd Street – Richmond, VA 23223
804-644-9590 (*Ask for a Trauma Response therapist, if applicable.*)
<http://www.childsavers.org>

Virginia Resources *(continued)*

Focus Adolescent Services

Family Help in Virginia

<http://www.focusas.com/Virginia.html>

Prevent Child Abuse Virginia

4901 Fitzhugh Avenue, Suite 200 – Richmond, VA 23230

E-mail: jschuchert@pcav.org

www.preventchildabuseva.org

University of Virginia Health System

http://www.healthsystem.virginia.edu/uvahealth/peds_mentalhealth/anxhub.cfm

Virginia Commonwealth University (VCU)

Center for Psychological Services and Development

Anxiety Clinic

<http://www.has.vcu.edu/psy/cpsd/anxiety/index.html>

VCU Medical Center

Virginia Treatment Center for Children

<http://www.vcuhealth.org/vtcc>

Virginia Polytechnic Institute and State University (VA Tech)

Psychological Services Center

<http://www.psyc.vt.edu/centers/psc>

Child Study Center

<http://www.psyc.vt.edu/centers/csc>

OBSESSIVE-COMPULSIVE DISORDER

Introduction

Causes and Risk Factors

Biological Factors

Psychological Factors

Social Factors

Assessment

Comorbidity

Evidence-based Treatments

Psychological Treatments

Pharmacological Treatments

Unproven Treatments

Cultural Considerations

Introduction

Obsessive-compulsive disorder is characterized by elevated anxiety caused by uncontrollable and intrusive thoughts called obsessions, and repetitive, ritualistic behaviors called compulsions (March & Mulle, 1998). Children and adolescents with obsessive-compulsive disorder (OCD) cannot stop their worrying and anxiety. Obsession themes may include contamination, harming oneself or others, aggression, sexual misconduct, religiosity, forbidden thoughts, symmetry urges, and the need to tell, ask, or confess (March & Mulle). Compulsions take the form of overt behavioral acts, rituals or covert mental acts (e.g. silently counting). Compulsions may also include washing, repeating, checking, touching, counting, ordering/arranging, hoarding, and praying (March & Mulle). Compulsions function to reduce the anxiety associated with the child's or adolescent's obsessions (American Psychiatric Association [APA], 2000). For example, a child with contamination obsessions may experience intrusive thoughts about catching a disease from touching a surface and then compulsively wash his or her hands for extended periods to lessen fears about being contaminated.

OCD has several developmental differences in children (Swedo, Rapoport, Leonard, Lenane & Cheslow, 1989). The adult with OCD often recognizes that their behavior is abnormal and problematic. However, due to undeveloped cognitive abilities, children with OCD may not understand that their behaviors are unreasonable. Individuals with OCD experience distress when their compulsions cannot be completed. In children, this distress may manifest as tantrums or angry outbursts. Furthermore, children may not be able to specify the consequence of not engaging in their compulsion and may report a vague sense that "something bad might happen" if they are not able to complete the compulsion (Barrett, Farrell, Pina, Peris & Piacentini, 2008).

With an estimated lifetime prevalence of 2.5 percent in adults and 1 to 2 percent in children and adolescents, OCD is a fairly common psychiatric disorder. Onset is most frequently between 6 and 15 years of age in males and between 20 and 29 years of age for females (APA, 2000). The impairment caused by OCD is significant. Because compulsions serve as the primary coping mechanism, children and adolescents with OCD experience increasing levels of distress and will respond by increasing the intensity and/or magnitude of their compulsion. Thus, these youth may spend more and more time engaging in their rituals. The child's dependence on their ineffective coping mechanism, in turn, interferes with school, work, and social functioning. Accordingly, children with OCD may be reluctant to attend school for fear of embarrassment, and they often withdraw from social activities. Children and adolescents with OCD also possess a higher risk for comorbid anxiety disorders (e.g., social anxiety and panic disorder) and depression. While symptoms may fluctuate, the overall trend in symptom severity increases over the lifetime (APA).

Causes and Risk Factors

As with most psychological disorders, there are three primary risk factors for the development of OCD: biological, psychological, and social factors. Biological factors are the genetic and neurological bases of OCD. Psychological factors include emotional and experiential factors that influence whether biological factors are “activated.” Finally, social factors are those influences in the child’s social environment (e.g., family, friends, and school) that help to maintain the disorder. Each of these will be briefly reviewed in the paragraphs which follow.

Biological Factors

Numerous studies have demonstrated abnormal brain functioning in individuals with OCD (Saxena, Brody, Schawtrz & Lewis, 1998). These studies have identified overactivity in the limbic system, including the basal ganglia and cingulate gyrus, which sets the overall emotional tone. The basal ganglia set the body’s baseline arousal, and suppress regulation of motor movement. Overactivity in this area is associated with the physical sensations of anxiety, avoidance tendencies, and tics. The cingulate gyrus is associated with an individual’s cognitive flexibility. Overactivity in this area of the brain is associated with rigid and inflexible thinking (obsessions) and behavior patterns (compulsions). As a result, children and adolescents with abnormal functioning in these areas may be particularly susceptible to feeling intensified fear and developing rigid thought and behavior patterns.

The causes of these biological abnormalities are unclear. Considerable research has demonstrated a genetic predisposition to OCD and tic disorders. (Additional information on tic disorders is provided in the *Collection’s* section “Habit Disorders.”) Research has revealed that families of an individual diagnosed with a tic disorder are also more likely to have other first degree relatives (i.e., parent, sibling and offspring) with a tic disorder and/or OCD (March & Mulle, 1998). There is also evidence that a subset of children with OCD developed symptoms after an infection of Group A beta hemolytic streptococcus (e.g. strep throat) or Sydenham’s chorea, a variant of rheumatic fever (American Academy of Child & Adolescent Psychiatry [AACAP], 1998). This is called Pediatric Autoimmune Neuropsychiatric Disorder Associated with Strep (PANDAS). It is believed that during infection, antigens react with basal ganglia tissue, leading to OCD and/or tic symptoms (AACAP).

Psychological Factors

The specific thought and behavior patterns that children and adolescents with OCD develop are based on learning processes and lifetime experiences. Research has suggested that the types of intrusive thoughts which cause distress in youth with OCD are experienced by most individuals. These thoughts may originate from a traumatic experience, illness or information from others (e.g. family, friends, news reports, etc.). However, children and adolescents with OCD may experience shame, guilt or fear in response to these thoughts and have difficulty dismissing them (March & Mulle, 1998). As a result of these unpleasant and/or fearful feelings, the youth attempts to escape or avoid the fear (Mowrer, 1939). Any behaviors that are associated with the reduction in fear are then reinforced, even if these behaviors do not cause the reduction in fear. While some compulsions, such as excessive washing, are related to the obsession (e.g., fear of contracting a disease), other compulsions are not rationally related (e.g., counting in response to fears about harming others). Furthermore, because the situations that trigger obsessions are not easily avoided, the child or adolescent with OCD attempts to actively avoid feelings of fear by repeatedly engaging in the behaviors associated with fear reduction. The reduction in fear negatively reinforces this ritualized behavior (Mowrer). Behavior patterns maintained through this type of conditioning are difficult to extinguish. This avoidance/escape pattern prevents the youth from fully experiencing the fearful situation. Therefore, the child’s or adolescent’s fear cannot naturally depart. This process is called “extinction” (Pierce & Cheney, 2004).

Social Factors

OCD is not caused by parenting or other family problems, however, the way a family reacts to a child with OCD can affect the disorder (March & Mulle, 1998). It has been suggested that the parents' reaction to their child's behavior can either increase or decrease the child's anxiety. Barrett, Shortt, and Healy (2002) found that parents of children having OCD, compared to parents of non-OCD children, did not as frequently use problem-solving, did not encourage their children's independence, and did not have as much confidence in their children's abilities. Similarly, children with OCD were less confident in themselves, used problem-solving less, and showed less warmth with their parents than children without OCD.

Assessment

Assessment of OCD should follow general diagnostic practices, including obtaining complete developmental, medical and family histories, evaluation of psychosocial functioning across multiple domains (e.g., family, friends, school, and home), and history of current and past symptoms (AACAP, 1998). Both the parents and the child should complete diagnostic interviews to determine mental rituals and/or obsessions that the parent might not be aware of, and behavior problems that the youth may be reluctant to report.

Structured diagnostic interviews can help identify the presence of OCD, as well as other potential comorbid conditions. A thorough assessment will also determine the presence, age of onset, duration, and severity of each symptom. This also aids in the conceptualization and formation of a treatment plan. Evidence-based assessment tools for youth with OCD are discussed in Table 1.

Table 1

Evidence-based Assessment Tools for Youth with OCD

Broad Structured Diagnostic Interviews:

- National Institute for Mental Health (NIMH) Diagnostic Interview Schedule for Children-IV (DISC-IV; NIMH, 1997)
- Schedule of Affective Disorders and Schizophrenia for School Aged Children, Present and Lifetime Version (K-SADS-PL; Kaufman et al., 1996)

Anxiety-specific Structured Diagnostic Interviews:

- Anxiety Disorders Interview Schedule for *DSM-IV*: Parent and Child Versions (ADIS-IV:C/P; Silverman & Albano, 1996)
- Children's Yale-Brown Obsessive Compulsive Scale (CY-BOCS; Scahill, et al., 1997)
- Children's Version of the Leyton Obsessional Inventory (Berg et al., 1988)

Sources: Commission on Youth Graphic of references listed in table.

The first challenge in diagnosing a child with OCD is distinguishing developmentally appropriate beliefs and behaviors from those symptomatic of OCD. For example, children and adolescents with OCD may fear that, by merely thinking a thought (e.g., hurting a loved one), they will cause it to happen (i.e., thought-action fusion). In children, it is important to differentiate developmentally normal "magical thinking" from pathological beliefs that drive compulsions and cause distress (Shafran, 2001). Young children may insist on sameness and order or adhere to rigid routines, such as elaborate bedtime rituals, as part of normal development in early childhood, reflecting the need for mastery and control (March & Mulle, 1998). Research suggests that compulsive-like behaviors are particularly common among children between the ages of two and four (Evans, Leckman, Carter & Reznick, 1997). Normal obsessive-compulsive behaviors can be differentiated from OCD based on timing, content, and severity of the symptoms. Children with OCD will show symptoms into middle childhood and later years, have symptoms that seem bizarre, and have symptoms that impair daily life (March & Mulle).

The role of the family and school in maintaining the OCD symptoms must also be assessed. Parents and family often become entangled in the youth's symptoms by making accommodations for, or even participating in, obsessive-compulsive behaviors (AACAP, 1998; Barrett et al, 2004). The degree to which this occurs influences the degree of intervention in these settings.

Comorbidity

Comorbid conditions that often occur in youth with OCD include other anxiety disorders, depression, learning disorders, ADHD, tic disorders, and trichotillomania. Approximately one-half to one-third of youth with ADHD also meet diagnostic criteria for another anxiety disorder, most commonly generalized or separation anxiety (AACAP, 1998). It is estimated that 20 to 70 percent of youth with OCD meet the criteria for mood disorders, potentially due to the impairment and isolation associated with OCD (AACAP; March & Mulle, 1998). As many as 33 to 50 percent of youth with OCD also meet diagnosis criteria for ADHD or oppositional defiant disorder (ODD). However, it must be determined whether oppositional behaviors are a function of ODD or of the rigid compulsions associated with OCD (AACAP). Nearly 60 percent of children with OCD report a lifetime history of tic disorder. Some researchers believe that OCD and tic disorder may be alternative expressions of the same gene (AACAP). Children with prepubertal onset of OCD are also more likely to have a comorbid diagnosis of tic disorder. Trichotillomania, compulsive hair pulling to the point of significant hair loss, is found at increased rates in youth with OCD and their first degree relatives. However, youth with primary trichotillomania do not usually have OCD (AACAP). Additional information about the comorbid disorders discussed in this paragraph can be found in the corresponding sections of the *Collection*.

Obsessive-compulsive symptoms are also common features of Autism Spectrum Disorder (ASD). Because rigidity and repetitive behaviors are central features of ASD, it can be difficult to determine whether comorbid OCD is present. However, research suggests that obsessive-compulsive symptoms are frequently present in first degree relatives of youth with an ASD diagnosis and may respond similarly to medication (AACAP).

Evidence-based Treatments

Effectively treating OCD in children and adolescents is crucial to aiding in their lifelong functioning. The process of assessment and treatment planning can also be beneficial. The opportunity to review the child's difficulties and to distinguish the OCD symptoms as a disorder, rather than as a behavior issue, can be very helpful to both the child and family (AACAP, 1998).

Individual features of OCD may have important implications for treatment planning in terms of compliance, response to treatment, and factors that exacerbate or lessen symptoms (AACAP, 1998). Mild obsessions or compulsions that are not the source of substantial distress or impairment may warrant monitoring over time without the initiation of specific treatment (AACAP). If such obsessions or compulsions are related to external or developmental stressors, psychotherapy or other psychosocial interventions targeted to these stressors may be useful.

For this review, evidence-based treatments are divided into three categories: What Works, Not Adequately Tested, and What Does Not Work. These treatments are discussed in the following paragraphs and outlined in Table 2.

Table 2

Summary of Treatments for OCD

What Works – Psychosocial	Description
Exposure and Response Prevention (ERP)	Individual child (probably efficacious); family-focused individual and family-focused group treatments (possibly efficacious). ERP meets well-established criteria for adult OCD.
What Works – Pharmacological	Description
SRIs	Clomipramine: Approved for children age ten years and older. Recommend periodic electrocardiographic (ECG) monitoring.
SSRIs	Fluoxetine (Prozac): Approved for children eight years of age and over. Sertraline (Zoloft): Approved for children six years of age and over. Fluvoxamine (Luvox): Approved for children eight years of age and over.
Not Adequately Tested	Description
Cognitive Therapy alone Psychodynamic Therapy Client-centered Therapy	Systematic controlled studies have not been conducted using these approaches.
What Does Not Work	Description
Antibiotic Treatments	Antibiotic treatments are only indicated when the presence of an autoimmune or strep-infection has been confirmed and coincided with onset or increased severity of OCD symptoms.
Herbal Therapies	Herbs, such as St. John’s Wort, have not been rigorously tested and are not FDA approved. In some instances, herbal remedies may make symptoms worse or interfere with pharmacological treatment.

Sources: AACAP, 1998; Barrett, Farrell, Pina, Peris & Piacentini, 2008; March & Mulle, 1998.

Psychosocial Treatments

Behavioral and pharmacological treatments have both demonstrated efficacy in the treatment of OCD in youth, though behavioral approaches appear to be the most effective in the few studies comparing treatments (AACAP, 1998; Barrett et al., 2008). One particular behavioral treatment, exposure and response prevention (ERP) was developed as a bi-modal treatment that addresses both the obsessive and compulsive features of OCD. Although ERP is considered a well-established treatment for adult OCD (Task Force on the Promotion and Dissemination of Psychological Procedures, 1995), studies are only recently emerging that examine ERP as a treatment for childhood OCD. As a result, ERP is considered a probably efficacious treatment for childhood OCD (AACAP; Barrett et al.). The overall results of these studies suggest that ERP-based Cognitive Behavioral Therapy (CBT) is effective in significantly reducing OCD symptoms in children and adolescents. Emerging research suggests that ERP-based CBT may be more effective than pharmacological treatments (Barrett et al.). All studies found statistically and/or clinically significant reductions in OCD symptoms using ERP-based CBT. Most studies directly used or modified the manual by March and Mulle (1998) (Benazon, Ager & Rosenberg, 2002; DeHaan, Hoogduin, Buitelaar & Keijsers, 1998; March, Mulle & Herbel, 1994; POTS, 2004; Simons, Schneider & Herpertz-Dahlmann, 2006; Thienemann, Martin, Cregger, Thompson & Dyer-Friedman, 2001; Valderhaug, Larsson, Gotestam & Piacentini, 2007). As a result, most studies evaluated the effectiveness of ERP imbedded within other CBT techniques (e.g., relaxation training, cognitive

restructuring). The exposures were the active ingredients in the treatment protocol, while the other components were also necessary to increase the likelihood of successful exposure (March, Mulle & Herbel, 1994).

While only a few relatively-controlled studies have been conducted, family-based ERP is considered possibly efficacious since the existing studies were promising. Barrett, Healy-Ferrell, and March (2004) conducted a controlled trial of cognitive behavioral family therapy (CBFT) with children with OCD and found significant improvements in OCD diagnostic status and symptom severity. The treatment protocol includes a psychoeducational/cognitive phase and ERP phase followed by relapse prevention. The family portion of the treatment protocol includes psychoeducation, problem-solving, reduction of parental involvement in the child's symptoms and home-based exposure-response prevention strategies. Moreover, some form of parent involvement is included in most individual ERP treatment protocols. The seven studies that followed the March and Mulle or Piacentini manuals, or combination of the two, included four parent sessions and also invited the parent at the end of each session for 15 to 30 minutes (Benazon et al., 2002; DeHaan et al., 1998; March et al., 1994; POTS, 2004; Simons et al., 2006; Thienemann et al., 2001; Valderhaug et al., 2007). In the multiple-baseline study by Knox et al., (1996), client progress was tracked across a baseline phase, ERP phase, ERP plus parent involvement phase, and treatment maintenance phase. Decreases in the OCD symptoms were witnessed only after the involvement of the parents, suggesting that parental involvement was an important component.

Pharmacological Treatment

Although traditionally used to treat depression, serotonin reuptake inhibitors (SRIs), including selective serotonin reuptake inhibitor (SSRIs), are approved by the FDA for treatment of pediatric OCD (AACAP, 1998). There are currently four medications approved by the FDA for treatment of pediatric OCD: clomipramine, fluoxetine, sertraline, and fluvoxamine (AACAP). Concurrent pharmacological treatment and CBT is recommended by AACAP for children with severe symptoms or for those who do not respond favorably to CBT alone (AACAP). These medications have been shown to be superior to placebo treatments. Although all of these treatments act on availability of serotonin in the brain, evidence suggests that children may respond differently to different medications (AACAP). Therefore, youth who do not respond to one SSRI may respond differently to another.

While these medications may be helpful, they are not without risks and side-effects. The SRI clomipramine, in high doses (5mg/kg per day or 250mg/day), has been associated with seizures and electrocardiographic (ECG) changes. Youth taking clomipramine should receive periodic ECG monitoring. Other side effects of clomipramine are similar to those of SSRIs. Common side effects of SSRIs (e.g. fluoxetine, sertraline, and fluvoxamine) include nausea, headache, tremor, gastrointestinal complaints, drowsiness, akathisia (restlessness), insomnia, disinhibition, agitation or hypomania (a period of persistently elevated, expansive or irritable mood) (AACAP, 1998). There has also been greater awareness in the last few years of an increased risk of suicidal ideation in youth taking antidepressants, including SSRIs. These risks must be weighed against the potential benefit from the medication when making treatment decisions. Youth taking these medications should be monitored for potential medical or psychological side-effects throughout treatment, particularly if other medications are also prescribed. The interaction of medications is poorly researched, particularly in children and adolescents, therefore combination of medications should be carefully considered (AACAP). For additional information on this topic, please refer to the *Collection's* section "Antidepressants and the Risk of Suicidal Behavior."

Unproven Treatments

Several treatments are classified as unproven, based on either the absence of conclusive research or research suggesting that there is no benefit. Cognitive therapy, in the absence of ERP, has not demonstrated significant benefits for youth with OCD. The addition of cognitive therapeutic

techniques to ERP treatment has suggested that these techniques may increase treatment participation in ERP, but perform no specific action on reducing symptoms (Barrett et al., 2008). Likewise, insight-oriented therapies have not been shown to be effective in treating youth with OCD. As discussed in the causes/risk factors section of this review, there is a subset of children who develop OCD following a strep-infection (e.g., PANDAS). For these children, treatments with antibiotics have been shown to reduce symptoms. However, antibiotic treatment has not been shown to be effective without the presence of a strep infection. Therefore, antibiotic treatment should only be prescribed for children with a confirmed medical diagnosis that leads to the sudden onset or increase of OCD symptoms (AACAP, 1998). Herbal remedies have not been sufficiently tested as a treatment for OCD. St. John's Wort, frequently used by some to treat mild depression, has been popular as an alternative treatment for anxiety, including OCD. However, a blind placebo-controlled study found no difference between St. John's Wort and placebo (Kobak et al., 2005).

Cultural Considerations

Research is extremely limited on the role of culture and ethnicity in OCD. Although anxiety and its physiological symptoms are universal, the way in which the experience is interpreted and expressed varies as a function of culture (Washington, Norton & Temple, 2008). Culture also influences help-seeking behaviors and treatment preferences (Sue, Zane & Young, 1994). Clinicians should consider, but not assume, cultural influences to ensure proper identification and treatment.

Clinicians should be familiar with the ways in which youth and families conceptualize symptoms. Cultural practices and norms shape the way in which emotions are understood and expressed. This can lead to differences in attributions of emotions and behaviors, expressions of symptoms, and the language used to describe the symptoms. Clinicians and researchers who are unaware of culture-specific idioms of distress may fail to notice important symptoms, dismiss symptoms as irrelevant or misattribute the symptoms to a different diagnosis. Normative cultural practices should also be considered to avoid characterizing certain behaviors as psychologically abnormal. For example, research on standardized measures has demonstrated that African American individuals report higher levels of cleaning and checking symptoms but do not report anxiety and/or impairment. Thus, they do not always meet diagnostic criteria for OCD during structured interviews (Thomas, Turkheimer & Oltmanns, 2000; Williams, Turkheimer, Schmidt & Oltmanns, 2005). Similarly, South Asian/East Indian and Southeast Asian individuals are more likely to report obsessive-compulsive symptoms compared to Caucasian, African American, and Latino individuals (Washington, Norton & Temple, 2008). However, these elevated reports of obsessive-compulsive symptoms were only associated with OCD distress and impairment in South Asian/East Indian individuals. Elevated reports of obsessive-compulsive symptoms in Southeast Asian individuals were not associated with increased incidence of OCD (Washington, Norton & Temple).

Ethnicity may also play a role in attribution biases of African American youth's behaviors. Lau and colleagues (2004) found that, while African American youth reported slightly higher levels of their own internalizing symptoms compared to Caucasian youth, teachers rated Caucasian students as having higher anxiety and African American students as higher on externalizing symptoms. Children with OCD may exhibit refusal to approach feared situations or tantrums when compulsions are interrupted or prevented, which may lead observers to interpret this behavior as oppositional behavior (Klein, 2009). Teachers may interpret anxious refusal as oppositional-defiance based on racial stereotypes (Lau et al.).

Another limit to the pediatric ERP literature is the inclusion of racial/ethnic minorities and/or participants of various socioeconomic statuses. Only seven studies reported racial/ethnic demographics; four of these were entirely Caucasian, while the others still underrepresented minorities. No studies reported socioeconomic status of the participants. Factors such as cultural or social stigma and availability of social and economic resources may impact a family's ability to access treatment and/or conduct ERP at home. This limits the ability to generalize results of these

studies for use in community-based clinics that serve minority and economically disadvantage patients. General recommendations for adapting treatments to be culturally sensitive apply to the treatment of OCD in the absence of specific research on OCD treatment and individual racial/ethnic/cultural groups. In a recent review of evidence-based treatments and modifications for ethnic minority youth, treatments discussed were the selective use of culturally responsive adaptations based on actual client need and avoidance of overgeneralizations based on race/ethnicity/culture (Huey & Polo, 2008).

Sources

- American Academy of Child & Adolescent Psychiatry (AACAP). (1998). Practice parameters for the assessment and treatment of children and adolescents with obsessive-compulsive disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, 37 (10: Suppl), 27-45.
- American Psychiatric Association (APA). (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.) (DSM-IV-TR). Washington, DC: Author.
- Barrett, P., Farrell, L., Pina, A., Peris, T., & Piacentini, J. (2008). Evidence-based psychosocial treatments for child and adolescent obsessive-compulsive disorder. *Journal of Clinical Child and Adolescent Psychology*, 37 (1), 131-155.
- Barrett, P., Healy-Farrell, L., & March, J. (2004). Treatment of OCD in children and adolescents. In P. Barrett & T. Ollendick (Eds.), *Handbook of interventions that work with children and adolescents: prevention and treatment* (pp. 187-216). West Sussex, England: Wiley.
- Barrett, P., Shortt, A., & Healy, L. (2002). Do parent and child behaviours differentiate families whose children have obsessive-compulsive disorder from other clinic and non-clinic families? *Journal of Child Psychology and Psychiatry*, 43, 597-607.
- Benazon, N., Ager, J., & Rosenberg, D. (2002). Cognitive behavior therapy in treatment-naïve children and adolescents with obsessive-compulsive disorder: An open trial. *Behaviour Research and Therapy*, 40, 529-539.
- Berg, C., Whitaker, A., Davies, M., Flament, M., & Rapport, J. (1988). The survey form of the Leyton Obsessional Inventory-Child Version: norms from an epidemiology study. *Journal of the American Academy of Child and Adolescent Psychiatry*, 27, 759-763.
- DeHaan, E., Hoogduin, K., Buitelaar, J., & Keijsers, G. (1998). Behavior therapy versus clomipramine for the treatment of obsessive-compulsive disorder in children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, 37 (10), 1022-1029.
- Evans, D., Leckman, J., Carter, A., & Reznick, J. (1997). Ritual, habit, and perfectionism: The prevalence and development of compulsive-like behavior in normal young children. *Child Development*, 68 (1), 58-68.
- Huey, S., & Polo, A. (2008). Evidence-based psychosocial treatments for ethnic minority youth. *Journal of Clinical Child and Adolescent Psychology*, 37 (1), 262-301.
- Kaufman, J., Birmaher, B., Brent, D., Rao, U., & Ryan, N. (1996). Schedule of Affective Disorders and Schizophrenia for School Aged Children, Present and Lifetime Version (K-SADS-PL). University of Pittsburgh: Pittsburgh, PA. [Online]. Available: <http://www.wpic.pitt.edu/ksads/default.htm>. [May 2009].
- Klein, R. (2009). Anxiety disorders. *Journal of Child Psychology and Psychiatry*, 50, 153-162.

- Knox, L., Albano, A., & Barlow, D. (1996). Parental involvement in the treatment of childhood obsessive-compulsive disorder: A multiple-baseline examination incorporating parents. *Behavior Therapy, 27*, 93-115.
- Kobak, K., Taylor, L., Bystritsky, A., Kohlenberg, C., Greist, J., Tucker, P., et al. (2005). St John's wort versus placebo in obsessive-compulsive disorder: Results from a double-blind study. *International Clinical Psychopharmacology, 20* (6), 299-304.
- Lau, A., Garland, A., Yeh, M., McCabe, K., Wood, P., & Hough, R. (2004). Race/Ethnicity and informant agreement in assessing adolescent psychopathology. *Journal of Emotional and Behavioral Disorders, 12* (3), 145-156.
- March, J., & Mulle, K. (1998). *OCD in children and adolescents: A cognitive-behavioral treatment manual*. New York: Guilford Press.
- March, J., Mulle, K., & Herbel, B. (1994). Behavioral psychotherapy for children and adolescents with obsessive-compulsive disorder: An open trial of a new protocol-driven treatment package. *Journal of the American Academy of Child and Adolescent Psychiatry, 35* (3), 333-342.
- Mowrer, O. (1939). A stimulus-response analysis of anxiety and its role as a reinforcing agent. *Psychological Review, 46*, 553-565.
- National Institute of Mental Health Diagnostic Interview Schedule for Children-IV (NIMH DISC-IV; 1997). Columbia DISC Development Group, Division of Child and Adolescent Psychiatry, New York, NY.
- Pierce, W., & Cheney, C. (2004). *Behavior analysis and learning* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.
- Saxena, S., Brody, A., Schwartz, J., & Baxter, L. (1998). Neuroimaging and frontal-subcortical circuitry in obsessive-compulsive disorder. *British Journal of Psychiatry, 173* (Suppl. 35), 26-37.
- Scahill, L., Riddle, M., King, R., et al., (1997). The Children's Yale-Brown Obsessive-Compulsive Scale: Preliminary report of reliability and validity. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 844-853.
- Shafran, R. (2001). Obsessive-compulsive disorder in children and adolescents. *Child Psychology & Psychiatry Review, 6*, 50-58.
- Silverman, W., & Albano, A. (1996). *Anxiety disorders interview schedule for children for DSM-IV, child and parent versions* (ADIS-IV: C/P; 1997). San Antonio: Psychological Corporation.
- Simons, M., Schneider, S., & Herpertz-Dahlmann, B. (2006). Metacognitive therapy versus exposure and response prevention for pediatric obsessive-compulsive disorder. *Psychotherapy and psychosomatics, 75*, 257-264.
- Sue, S., Zane, N., & Young, K. (1994). Research on psychotherapy with culturally diverse populations. In A. E. Bergin, S. L. Garfield, A. E. Bergin & S. L. Garfield (Eds.), *Handbook of psychotherapy and behavior change* (4th ed.). (pp. 783-817). Oxford England: John Wiley & Sons.
- Swedo, S., Rapoport, J., Leonard, H., Lenane, M., & Cheslow, D. (1989). Obsessive-compulsive disorder in children and adolescents: Clinical phenomenology of 70 consecutive cases. *Archives of General Psychiatry, 46*, 335-341.

- Task Force on Promotion and Dissemination of Psychological Procedures. (1995). Training and dissemination of empirically-validated psychological treatments: Report and recommendations, *Clinical Psychologist*, 48, 3-24.
- The Pediatric OCD Treatment Study (POTS) Team (2004). Cognitive-behavior therapy, sertraline, and their combination for children and adolescents with obsessive-compulsive disorder. *Journal of the American Medical Association*, 292 (16), 1969-1976.
- Thienemann, M., Martin, J., Cregger, B., Thompson, H., & Dyer-Friedman, J. (2001). Manual-driven group cognitive-behavioral therapy for adolescents with obsessive-compulsive disorder: A pilot study. *Journal of the American Academy of Child and Adolescent Psychiatry*, 40 (11), 1254-1260.
- Thomas, J., Turkheimer E., & Oltmanns, T. (2000). Psychometric analysis of racial differences on the Maudsley Obsessional Compulsive Inventory, *Assessment*, 7 (3), 247-258.
- Valderhaug, R., Larsson, B., Gotestam, G., & Piacentini, J. (2007). An open clinical trial of cognitive-behaviour therapy in children and adolescents with obsessive-compulsive disorder administered in regular outpatient clinics. *Behaviour Research and Therapy*, 45, 577-589.
- Washington, C., Norton, P., & Temple, S. (2008). Obsessive-compulsive symptoms and obsessive-compulsive disorder: A multiracial/ethnic analysis of a student population. *Journal of Nervous and Mental Disease*, 196 (6), 456-461.
- Williams, M., Turkheimer, E., Schmidt, K., & Oltmanns, T. (2005). Ethnic identification biases responses to the Padua Inventory for obsessive-compulsive disorder, *Assessment*, 12 (2), 174-185.

CBT Treatment Manuals

Individual

Piacentini, J., Langley, A., Robleck, T. (2007). *Cognitive-behavioral treatment of childhood OCD, it's only a false alarm: Therapist Guide (Programs that work)*. New York: Oxford. (*Child/adolescent workbook is also available from same authors and publisher.*)

March, J., & Mulle, K. (1998). *OCD in children and adolescents: A cognitive-behavioral treatment manual*. New York: Guilford Press.

Family

Barrett, P., Healy-Farrell, L., & March, J. (2004). Treatment of OCD in children and adolescents. In P. Barrett & T. Ollendick (Eds.), *Handbook of interventions that work with children and adolescents: prevention and treatment* (pp. 187-216). West Sussex, England: Wiley.

Freeman, J., & Garcia, A. (2009). *Family based treatment for young children with OCD: Therapist guide (Treatments that work)*. New York: Oxford. (*Parent workbook is also available from same authors and publisher.*)

Organizations

American Academy of Family Physicians

<http://familydoctor.org/online/famdocen/home/common/mentalhealth/anxiety/133.printerview.html>

American Academy of Child & Adolescent Psychiatry (AACAP)

Obsessive-Compulsive Disorder in Children and Adolescents

http://www.aacap.org/cs/root/facts_for_families/obsessivecompulsive_disorder_in_children_and_adolescents

Anxiety Disorders Association of America (ADAA)

<http://www.adaa.org>

International OCD Foundation

<http://www.ocfoundation.org/whatisocd.aspx?gclid=CNLBhpTluKECFRBx5Qod8EKDAQ>

Mayo Clinic

<http://www.mayoclinic.com/health/obsessive-compulsive-disorder/DS00189>

Mental Health America (MHA) (*formerly National Mental Health Association*)

<http://www.nmha.org/go/ocd>

<http://www.nmha.org/go/information/get-info/trichotillomania>

National Alliance on Mental Illness (NAMI)

http://www.nami.org/Template.cfm?Section=About_Treatments_and_Supports&template=/ContentManagement/ContentDisplay.cfm&ContentID=7952

National Anxiety Foundation

<http://www.lexington-on-line.com/naf.ocd1.html>

Obsessive-Compulsive Foundation

<http://www.ocfoundation.org>

Parent Support Groups for Children with OCD

<http://www.childrengdisabilities.info/OCD/groups-OCD-child.htm>

U.S. Department of Health and Human Services

Substance Abuse and Mental Health Services Administration (SAMHSA)

National Mental Health Information Center

<http://mentalhealth.samhsa.gov>

U.S. Department of Health and Human Services (*continued*)

National Institutes of Health

National Institute of Mental Health (NIMH)

<http://www.nimh.nih.gov/health/topics/obsessive-compulsive-disorder-ocd/index.shtml>

<http://www.nimh.nih.gov/health/publications/when-unwanted-thoughts-take-over-obsessive-compulsive-disorder/index.shtml>

U.S. Public Health Service/Office of the Surgeon General

Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda. Washington, DC. (2001): Department of Health and Human Services.

<http://www.surgeongeneral.gov/topics/cmh>

Virginia Resources

Family Help in Virginia

Focus Adolescent Services

<http://www.focusas.com/Virginia.html>

Focus Adolescent Services

Family Help in Virginia

<http://www.focusas.com/Virginia.html>

University of Virginia Health System

http://www.healthsystem.virginia.edu/uvahealth/peds_mentalhealth/gad.cfm

http://www.healthsystem.virginia.edu/uvahealth/peds_mentalhealth/anxhub.cfm

Virginia Commonwealth University (VCU)

Center for Psychological Services and Development

Anxiety Clinic

<http://www.has.vcu.edu/psy/cpsd/anxiety/index.html>

VCU Medical Center

Virginia Treatment Center for Children

<http://www.vcuhealth.org/vtcc>

Virginia Polytechnic Institute and State University (VA Tech)

Psychological Services Center

<http://www.psyc.vt.edu/centers/psc>

Child Study Center

<http://www.psyc.vt.edu/centers/csc>

Virginia Department of Behavioral Health and Developmental Services (DBHDS)

<http://www.dbhds.virginia.gov>

Virginia Federation of Families (*formerly Parents and Children Coping Together [PACCT]*)

<http://www.mhav.org/virginia-federation-of-families.php>

Virginia Polytechnic Institute and State University (VA Tech)

Child Study Center, Intensive Pediatric OCD Program

460 Turner Street, Suite 207 – Blacksburg, VA 24061

Psychological Services Center

3110 Prices Fork Road – Blacksburg, VA 24061

D EPRESSION AND D YSTHYMIA

Introduction

Categories

Major Depressive Disorder (MDD)

Dysthymia

Causes and Risk Factors

Assessment

Comorbidity

Evidence-based Treatments

Psychosocial Interventions

Pharmacological Treatments

Risk of Suicidal Behavior

Unproven Treatments

Cultural Considerations

Introduction

Children and adolescents, like adults, experience depression with the accompanying feelings of hopelessness, guilt, or sadness. By the age of 18, it is estimated that between 15 to 20 percent of all youth experience depression (Klein, Torpey & Bufferd, 2008). Common symptoms include: sadness or dejected mood; decreased energy and interest in activities; changes in sleep and appetite; difficulty in thinking clearly, making decisions, and concentrating; lethargy and/or fidgetiness; and thoughts of death or suicide. Less frequently, children and adolescents suffering from depression experience psychosis, mania and/or catatonia (American Psychiatric Association [APA], 2000).

The *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR)* classifies both Depressive Disorders and Bipolar Disorder as categories of Mood Disorders (APA, 2000). “Mood Disorder” also is used in this section’s discussion of depression and dysthymia. The second category of Mood Disorders—Pediatric Bipolar Disorder—is discussed in a separate section of the *Collection*.

The following paragraphs provide age-specific descriptions of Mood Disorders in youth.

Preschool Children – In recent years, researchers have found evidence that depression occurs in children as young as three years of age (Luby, Belden, Pautsch, Si & Spitznagel, 2009; Luby, Heffelfinger, Mrakotsky, Brown, Hessler, Wallis & Spitznagel, 2003). Preschoolers with depression, compared to preschoolers who are disruptive, have significantly more sleep problems, feelings of guilt, changes in weight, diminished interest in activities which they previously enjoyed, and difficulty concentrating or thinking clearly (Luby et al., 2009).

School-aged Children and Adolescents – It is not uncommon for school-aged children and adolescents to experience depression (Klein, Torpey & Bufferd, 2008). As a result, these youth frequently have impaired functioning at home, at school and with friends (Klein, Torpey & Bufferd). Depression, along with anxiety or behavioral disorders, more commonly affects prepubescent children than adolescents and adults, even though these children may lack the skills to articulate their sadness and other symptoms (APA, 2000). It

is interesting to note, however, that school-aged children experience less hopelessness, fewer incidents of sleep disturbance, fluctuations in appetite, and problems with motivation than adolescents and adults (Klein, Torpey & Bufferd).

Categories

The following are descriptions of major depressive disorder (MDD) and dysthymia disorder (APA, 2000).

Major Depressive Disorder (MDD) – MDD is characterized by one or more major depressive episodes without a history of mania (i.e., persistent elevated, expansive or irritable mood). MDD is characterized by a period of at least two weeks during which the youth experiences sadness, hopelessness, guilt, loss of interest in activities that are usually enjoyable, and/or irritability most of the time. Along with either a depressed mood or loss of interest in previously pleasurable activities, youth diagnosed with MDD must experience at least four of the following:

- significant change in weight;
- sleep disturbance;
- changes in amount of physical activity;
- fatigue or loss of energy most of the time;
- excessive feelings of worthlessness or guilt;
- difficulty thinking or concentrating; and/or
- recurrent thoughts of death or suicide.

Finally, it is important to note that the youth's mood differs from their usual mood and cannot be attributable to bereavement, a general medical condition, and/or substance abuse.

Dysthymia – Dysthymia is a Mood Disorder in which the symptoms are less severe than MDD, but more chronic and persistent (APA & American Academy of Child & Adolescent Psychiatry [AACAP], n.d.). The disorder occurs when youth experience a persistent depressed mood for most of the day, for more days than not, for at least one year (compared to two years for adults), when symptom-free intervals last no longer than two consecutive months. The youth must experience a depressed mood and have at least two of the following symptoms:

- altered appetite (eating too much or too little);
- sleep disturbance (sleeping too much or too little);
- fatigue or loss of energy;
- low self esteem;
- difficult thinking or concentrating; and/or
- sense of hopelessness.

Because dysthymia is a chronic disorder, youth often consider symptoms a part of who they are and do not report them unless asked directly. Dysthymia should not be diagnosed if the child or adolescent has ever experienced mania or if the onset of depressed mood met criteria for MDD.

Causes and Risk Factors

According to the U.S. Department of Health and Human Services (1999), the exact causes of Mood Disorders are not known. There is evidence, however, that genetics (specific genes passed from one generation to the next), contributes to the child's vulnerability to a Mood Disorder. School-aged children and adolescents having family members who are depressed are more likely to experience depression themselves, although this does not appear to be the case for preschoolers (Klein, Torpey & Bufferd, 2008).

Other contributing factors are environment (the conditions in which the child is growing up) and biology (neurotransmitters, hormones, and brain structure) (Klein, Torpey & Bufferd, 2008). There is no research which shows whether family history and childhood onset of depression stems from genetic factors or whether depressed parents create an environment that increases the likelihood of a child's developing a depressive disorder (U.S. Department of Health and Human Services; Klein, Torpey & Bufferd).

More research has been conducted on adult depression than on depression in children. Research on adults has pointed to a link between depression and serotonin and norepinephrine neurotransmitters, but this research has not been fully supported in children and adolescents (Klein, Torpey & Bufferd, 2008). Research with adults with and without depression has also revealed differences in production levels of the hormone cortisol, which is often associated with stress. This finding has been only partially supported in children and adolescents (Klein, Torpey & Bufferd). Depressed children and adolescents, however, are similar to depressed adults in that, like adults, they have an abnormal production of growth hormone (Klein, Torpey & Bufferd). According to research compiled by the National Institute of Mental Health (NIMH), during childhood (pre-puberty), both males and females are equally at risk for mood disorders (2000). During adolescence and continuing through adulthood, however, females are twice as likely as males to experience depression (NIMH).

Assessment

Proper assessment of mood disorders in children and adolescents is essential for accurate diagnosis, effective treatment formulation, and treatment monitoring (Rudolph & Lambert, 2007). According to the AACAP, clinicians may employ various approaches in making a diagnosis (1998). Assessment of depression in children and adolescents should include information obtained directly from the child, as well as from the child's parents and teachers. Information about symptom severity, frequency, and resulting impairment can be gathered through the use of structured or semi-structured clinical interviews, self-report questionnaires, observer questionnaires, and behavioral observation (Klein, Torpey & Bufferd, 2008). Regardless of the method of assessment, clinicians should make the diagnosis only after other causes of the child's condition are ruled out (e.g., general medical conditions, substance use, and other psychiatric disorders) (APA, 2000). The child must then meet the diagnostic criteria set forth in the *DSM-IV-TR* (APA).

Rudolph and Lambert (2007) have identified the Schedule for Affective Disorders and Schizophrenia (K-SADS) (Kaufman, Birmaher, Brent, Rao & Ryan, 1996) as an excellent measure-based diagnostic interview for youth ages six to 18. The Children's Depression Inventory (CDI) is a 27-item self report measure that is appropriate for children as young as seven years of age (Kovacs, 1992). Overall, the reliability, validity, and clinical utility of the CDI is strong, but should not be used as the sole source of information for diagnostic purposes (Rudolph & Lambert, 2007). The Preschool Feelings Checklist (Luby, Hefflinger, Koenig-McNaught, Brown & Spitznagel, 2004) and the McArthur Health Behavior Questionnaire (HBQ) (Essex et al., 2002) are two questionnaires designed specifically for use with preschool children. Research indicates that both are good measures of depressive disorders in very young children (Rudolph & Lambert).

Comorbidity

Research from various sources indicated that 40 to 90 percent of youth with MDD have at least one other psychiatric disorder (AACAP, 1998). The most commonly co-occurring disorders are dysthymia, anxiety disorders, disruptive disorders, and substance abuse disorders (AACAP). Depression is more likely to begin after the onset of the comorbid disorder, with the exception of substance abuse, which tends to occur after the onset of depression (AACAP).

Evidence-based Treatments

Analysis conducted by Burns, Hoagwood & Mrazek (1999) indicates that evidence-based treatments for MDD and dysthymia are well-established for both psychosocial and pharmacological interventions. Research has shown a combination of the two offers maximum therapeutic benefits. Because youth who experience the onset of mood disorders at a younger age typically have a worse prognosis, early intervention is crucial in treatment (Brown, 1996). Early clinical intervention is critical in order to prevent additional functional breakdown, relapse, and suicidal behavior (Burns, Hoagwood & Mrazek).

Psychosocial Interventions

The NIMH (2000) asserts that treating depressive disorders in children and adolescents often involves short-term psychotherapy and/or medication and targeted interventions addressing the home or school environment.

The evidence-based psychological treatments for depressive disorders are Cognitive Behavioral Therapy (CBT) and interpersonal therapy (IPT) (David-Ferdon & Kaslow, 2008). In their review of treatments for youth with depression, David-Ferdon and Kaslow reported that standardized treatments which adhered to a treatment manual and were standardized led to greater gains than treatments that were not standardized. The research also has indicated that treatment gains were realized, regardless where the treatment was provided (school, community clinics, primary care clinics, hospitals, or research settings). It should be noted that the youth reported greater treatment gains than did their parents and clinicians.

While each of the studies reviewed by David-Ferdon and Kaslow (2008) used different criteria for including and excluding participants, the vast majority required that the youth have elevated depressive symptoms. Therefore, based on the research to date, the treatments listed are appropriate for youth with elevated depressive symptoms, whether they meet the diagnostic criteria for MDD or dysthymia.

For this review, treatments are divided into two groups: What Works and What Seems to Work. Table 1 outlines psychosocial interventions for children; Table 2, those for adolescents.

Table 1

Psychosocial Treatments for Children with Depression

What Works	Description
Stark's Cognitive Behavioral Therapy (CBT) - child-only group or child group plus parent component	Stark's CBT includes mood monitoring, mood education, increasing positive activities and positive self statements, and problem solving.
What Seems to Work	Description
Penn Prevention Program (PPP)	PPP is a CBT-based program that targets pre-adolescents and early adolescents who are at-risk for depression.
Self-Control Therapy	Self-Control Therapy is a school-based CBT that focuses on self-monitoring, self-evaluating and causal attributions.
Behavioral Therapy	Behavioral therapy includes pleasant activity monitoring, social skills training and relaxation.

Sources: Adapted from David-Ferdon & Kaslow, 2008 and Weisz, 2004.

Table 2

Psychosocial Interventions for Adolescents with Depression

What Works	Description
Cognitive Behavioral Therapy (CBT) provided in a group setting	CBT for depression focuses on identifying thought and behavioral patterns that lead to or maintain the problematic symptoms.
Interpersonal Therapy (IPT) provided individually	In IPT, the therapist and patient address the adolescent's interpersonal communication skills, interpersonal conflicts, and family relationship problems.
What Seems to Work	Description
CBT in a group or individual setting with a parent/family component	CBT for depression focuses on identifying thought and behavioral patterns that lead to or maintain the problematic symptoms.
Adolescent Coping with Depression (CWD-A)	CWD-A includes practicing relaxation and addressing maladaptive patterns in thinking, as well as scheduling pleasant activities, and learning communication and conflict resolution skills.
Interpersonal Psychotherapy for Depressed Adolescents (IPT-A)	IPT-A addresses the adolescent's specific interpersonal relationships and conflicts, and helps the adolescent be more effective in their relationships with others.

Source: David-Ferdon & Kaslow, 2008.

Pharmacological Treatments

Currently, only one pharmacological treatment for depression has been approved for use with youth by the Food and Drug Administration (FDA) (Treatment for Adolescents with Depression Study [TADS], 2004). This medication, fluoxetine (a selective serotonin reuptake inhibitor [SSRI]), has been approved by the FDA for treating children eight years of age or older (APA & AACAP, n.d.).

A large, multisite study with important implications, TADS examined the effectiveness of fluoxetine alone, CBT alone, a combined treatment of fluoxetine and CBT, and a placebo. Study results indicated that a combined SSRI and CBT treatment approach is superior to SSRI or CBT treatment alone and better than the placebo (TADS). Additionally, the SSRI treatment and the CBT treatment were equally effective in reducing depressive symptoms and both were better than the placebo (TADS). This study further indicated that the use of tricyclic antidepressants for the treatment of youth with MDD is not supported (TADS).

Risk of Suicidal Behavior

The U.S. Department of Health and Human Services (1999) asserts that mood disorders dramatically increase the risk of suicide. Accordingly, the potential for suicidal behavior is a grave matter and must be taken into account by clinicians providing treatment. In a 10- to 15-year study of 73 adolescents diagnosed with MDD, it was reported that seven percent committed suicide sometime later. Depressed adolescents were five times more likely than adolescents without depression to have attempted suicide (U.S. Department of Health and Human Services).

There has been considerable debate about the use of antidepressants to treat youth with depression, specifically whether their use increases the risk of suicidal behaviors. U.S. manufacturers are now required by the FDA to place a "black box" warning label on antidepressant medications prescribed for youth. A more detailed discussion of the use of antidepressants to treat

children and adolescents is provided in the “Antidepressants and the Risk of Suicidal Behavior” section of the *Collection*.

Unproven Treatments

Several treatments have been found to be ineffective in treating depression. Evidence indicates that cyclic antidepressants are not efficacious (Klein, Dougherty & Olino, 2005). The National Depressive and Manic-Depressive Association (2001) recognizes that various alternative treatments may have a positive effect on mood disorders, but asserts that such treatments ought not to be endorsed. The Association asserts there is no scientific data supporting the use of dietary supplements such as Omega-3, St. John’s Wort, or SAM-e; in fact, they may have harmful side effects. Accordingly, parents should discuss their use with the clinician.

Cultural Considerations

As indicated by Yaylayan (2002), culture can influence how children communicate symptoms of mood disorders. Complaints of nervousness and headaches are more common among Latino and Mediterranean cultures. Complaints of weakness or weariness are more prevalent among the Asian culture. It is important that clinicians be aware of the youth’s cultural background, as well as the norms of their culture.

More research is being conducted on the impact of culture on the assessment and treatment of mood disorders but, as noted by Kaslow & Thompson (1998), there is a noticeable deficit of cultural information about treating mood disorders in children and adolescents. Most of the existing studies were conducted using children who were middle-class and Caucasian. Moreover, little attention has been paid to the relevance of the materials and interventions employed in treatment or to the clinician’s education about cultural differences.

Sources

American Academy of Child & Adolescent Psychiatry. (AACAP). (1998). Practice parameters for the assessment and treatment of children and adolescents with depressive disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 37.

American Psychiatric Association (APA). (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.) (*DSM-IV-TR*). Washington, DC: Author.

American Psychiatric Association (APA), & the American Academy of Child and Adolescent Psychiatry (AACAP). (n.d.). *The use of medication in treating childhood and adolescent depression: Information for physicians*. [Online]. Available: <http://www.physiciansmedguide.org/parentsmedguide.html>. [January 2011].

Brown, A. (1996). Mood Disorders in Children and Adolescents. *NARSAD Research Newsletter*.

Burns, B., Hoagwood, K., & Mrazek, P. (1999). Effective treatment of mental disorders in children and adolescents. *Clinical Child and Family Psychology Review*, 2 (4), 199-254.

David-Ferdon, C., & Kaslow, N. (2008). Evidence-based psychosocial treatments for child and adolescent depression. *Journal of Clinical Child and Adolescent Psychology*, 37, 62-104.

Essex, M., Boyce, W., Goldstein, L., Armstrong, J., Kraemer, H., Kupfer, D., et al. (2002). The confluence of mental, physical, social, and academic difficulties in middle childhood. II: developing the macarthur health and behavior questionnaire. *Journal of the American Academy of Child and Adolescent Psychiatry*, 41, 588-603.

- Kaslow, N., & Thompson, M. (1998). Applying the criteria for empirically supported treatments to studies of psychosocial interventions for child and adolescent depression. *Journal of Clinical Child Psychology, 27* (2), 156-165.
- Kaufman, J., Birmaher, B., Brent, D., Rao, U., & Ryan, N. (1996). Schedule for affective disorders and schizophrenia for school-age children-present and lifetime version (K-SADS-PL): initial reliability and validity data. *Journal of Clinical Child and Adolescent Psychology, 36*, 980-988.
- Klein, D., Dougherty, L., & Olino, T. (2005). Toward guidelines for evidence-based assessment of depression in children and adolescents. *Journal of Clinical Child & Adolescent Psychology, 34* (3), 412-432.
- Klein, D., Torpey, D., & Bufferd, S. (2008). Depressive disorders. *Child and adolescent psychopathology* (pp. 477-509). Hoboken, NJ: John Wiley & Sons, Inc.
- Kovacs, M. (1992). *Children's Depression Inventory Manual*. North Tonawanda, NY: Multi-Health Systems.
- Luby, J., Belden, A., Pautsch, J., Si, X., & Spitznagel, E. (2009). The clinical significance of preschool depression - Impairment in functioning and clinical markers of the disorder. *Journal of Affective Disorders, 112*, 111-119.
- Luby, J., Heffelfinger, A., Koenig-McNaught, A., Brown, K., & Spitznagel, E. (2004). The preschool feelings checklist: a brief and sensitive screening measure for depression in young children. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*, 708-717.
- Luby, J., Heffelfinger, A., Mrakotsky, C., Brown, K., Hessler, M., Wallis, J., & Spitznagel, E. (2003). The clinical picture of depression in preschool children. *Journal of the American Academy of Child and Adolescent Psychiatry, 42* (3), 340-348.
- National Depressive and Manic-Depressive Association. (2001). Guide to depression and manic-depression. GB 1000.
- National Institute of Mental Health (NIMH). (2000). *Depression in children and adolescents*. NIH Publication No. 00-4744.
- Rudolph, K., & Lambert, S. (2007). Child and adolescent depression. *Assessment of childhood disorders* (4th ed.). (pp. 213-252). New York: Guilford Press.
- Treatment for Adolescents with Depression Study (TADS) Team. (2004). Fluoxetine, cognitive-behavioral therapy and their combination for adolescents with depression: treatment for adolescents with depression study (TADS) randomized controlled trial. *Journal of the American Medical Association, 292*, 807-820.
- U.S. Department of Health and Human Services. (1999). *Mental Health: A Report of the Surgeon General*. Rockville, MD.
- Weisz, J. (2004). *Psychotherapy for children and adolescents: Evidence-based treatments and case examples*. New York, NY, US: Cambridge University Press.

Yaylayan, S. (2002). Saint Margaret Mercy Hospital. *Depressive disorders in children and adolescents*. [Online]. Available:
<http://www.smmhc.com/goingon/newsletters/healthyliving/archives/arc-depressive.html>. Not available July 2005.

Additional Resource

Gleason, M., Egger, H., Graham, E., Greenhill, L., Kowatch, R., Lieberman, A., et al. (2007). Psychopharmacological treatment for very young children: contexts and guidelines. Special Communication. *Journal of the American Academy of Child and Adolescent Psychiatry*, 46 (12), 1532-1572.

Organizations

American Academy of Child & Adolescent Psychiatry (AACAP)

<http://www.aacap.org>

American Foundation for Suicide Prevention (AFSP)

120 Wall Street, 22nd Floor - New York, NY 10005

888-333-AFSP (2377)

<http://www.afsp.org>

Center for Effective Collaboration and Practice (CECP)

1000 Thomas Jefferson St., NW, Suite 400 – Washington, DC 20007

888-457-1551

<http://cecp.air.org>

National Federation of Families for Children's Mental Health

240-403-1901

<http://www.ffcmh.org>

Georgetown University Center for Child and Human Development

<http://gucchd.georgetown.edu>

PEDIATRIC BIPOLAR DISORDER

- Introduction
- Diagnostic Issues and Categories
- Causes and Risk Factors
- Assessment
- Comorbidity
- Evidence-based Treatments
 - Pharmacological Treatments*
 - Psychosocial Treatments*
- Unproven Treatments
- Cultural Considerations

Introduction

In recent years, there has been an explosion of interest among researchers and clinicians in the assessment, definition, diagnosis, and treatment of pediatric bipolar disorder (PBD). According to the Center for Advancement of Children's Mental Health at Columbia University (2000), PBD is characterized by shifts of mood with severe highs (mania) and extreme lows (depression). Frequently the mood switches are rapid, but more typically are gradual. In a depressed episode, the child may have any or all of the symptoms of a depressive disorder. When in a manic episode, the child may be overactive, over talkative, and have a great deal of energy (Center for Advancement of Children's Mental Health at Columbia University).

PBD is currently one of the most debated disorders in youth mental health literature (Healy, 2006; McClellan, 2005). The more controversial issues are the core criteria for diagnosis, the need for discrete mood episodes, and the definition of cycling (mood changes that occur during an episode) (Brown, Antonuccio, DuPaul, Fristad, King, Leslie et al., 2008, McClellan, Kowatch & Findling & the Workgroup on Quality Issues et al., 2007). Once considered a disorder occurring only in adults, the rate of PBD diagnosis has doubled in outpatient clinical settings, and quadrupled in community hospitals in the United States (Leibenluft & Rich, 2008). While the age of onset for PBD is unclear, studies have shown evidence of PBD as early as preschool age (Tumuluru, Weller, Fristad & Weller, 2003), and retrospective studies have identified PBD symptoms occurring in children aged four and under (Dilsaver & Akiskal, 2004).

The *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR)* classifies bipolar disorder as a mood disorder (American Psychiatric Association [APA], 2000). This section, therefore, will occasionally use "Mood Disorder" in its discussion of PBD because the term is employed in the literature. A detailed review of the second category of Mood Disorders is available in the "Depression and Dysthymia" section of the *Collection*.

Depressive symptoms are common to all mood disorders as classified in the *DSM-IV-TR*, but symptoms of mania— inflated self-esteem, decreased need for sleep, and excessive engagement in risky pleasurable activities—help distinguish PBD from depressive disorders. The lifetime prevalence for mania is approximately one to two percent by late adolescence (Kessler, Avenevoli & Merikangas, 2001). Evidence indicates that PBD may also have a more severe course and poorer prognosis than bipolar disorder associated with older adolescent and adult-onset (Roberts, Bishop & Rooney, 2008).

Diagnostic Issues and Categories

There are four primary diagnostic categories on the bipolar spectrum (American Psychiatric Association [APA], 2000; Youngstrom, 2007):

- Bipolar I Disorder;
- Bipolar II Disorder;
- Cyclothymic Disorder; and
- Bipolar Disorder Not Otherwise Specified (NOS).

Unlike that for other, more common mental health disorders in youth, the exact diagnostic definition of PBD is still under debate. The latest American Academy of Child & Adolescent Psychiatry (AACAP) Practice Parameters on PBD present two major diagnostic issues: whether these problems being seen in youth are best described as bipolar disorder; and whether juvenile mania is the same illness as mania seen in adults (Leibenluft et al., 2003; McClellan et al., 2007; McClellan, 2005). As stated previously, bipolar I disorder is rare in youth, whereas disorders classified as bipolar spectrum disorders and bipolar disorder not otherwise specified (BPD-NOS) are more common (Brown et al., 2008).

Characteristics of mania include extreme euphoria, grandiosity, and irritability, with associated racing thoughts, increased psychomotor activity, and mood lability (Cassidy & Carroll, 2001). A diagnostic difficulty in PBD is that irritability, poor concentration, and increased motor activity are present in many different childhood disorders (Brown et al., 2008). Many researchers have proposed certain hallmark criteria or “handle” symptoms to help diagnosis of bipolar disorder in youth (Youngstrom, 2007). These criteria are grandiosity; decreased need for sleep; expansive or elated mood, which has been shown to be present in more than 80 percent of PBD cases (Kowatch, Youngstrom, Danielyan & Findling, 2005); and, although less common, hypersexuality. Youngstrom (2007) states, “...the case for PBD is most compelling when the symptoms occur together in episodes that are a distinct shift from the person’s typical functioning.”

In adolescents, mania is commonly associated with psychotic symptoms, rapidly changing moods, and mixed manic and depressive features (Pavuluri, Birmaher & Naylor, 2005). Mania in younger children is usually defined by erratic changes in mood, energy levels, and behavior. Irritability, and mixed manic/depressive episodes are usually more common than euphoria (McClellan, Kowatch & Findling, 2007). Due to sparse evidence of the diagnostic validity of PBD in young children, the AACAP recommends extreme caution when diagnosing PBD in preschool age children (McClellan, Kowatch & Findling, 2007). Misdiagnosis can lead to unnecessary aggressive pharmacotherapy that has not been studied in young children.

According to McClellan et al. (2007), the *DSM-IV-TR* (APA, 2000) criteria and definitions as set out in the AACAP Practice Parameters are:

Bipolar I disorder: Requires the occurrence of a manic (or mixed) episode lasting at least one week, unless hospitalization is necessary. Depressive episodes are not required, but most youth experience major or minor episodes during their lifetime.

Bipolar II disorder: Requires the occurrence of major depression and hypomania (episodes lasting at least four days but does not meet the time criteria for mania) but no full manic or mixed manic episodes.

Cyclothymic disorder: Requires at least two years of numerous periods of hypomanic symptoms that do not meet criteria for a manic episode and numerous periods of depressive symptoms that do not meet criteria for a major depressive episode.

BPD-NOS: Used for cases that do not meet full criteria for other bipolar diagnoses.

The *DSM-IV-TR* also includes two additional specifiers:

Mixed episode: Period lasting a week or more in which symptoms for both a manic and depressive episode are met; and

Rapid cycling: Occurrence of at least four mood episodes in one year. Episodes must still meet the required duration criteria.

Research has suggested two additional specifiers not in the *DSM-IV-TR*:

Ultrarapid cycling: Brief, frequent manic episodes lasting hours to days, but less than the four-day duration criteria for hypomania; and

Ultradian cycling: Repeated, brief (minutes to hours) cycles that occur daily.

Adopting these criteria to assess, diagnose, and treat child-onset bipolar disorder is recommended in the AACAP Practice Parameters (McClellan et al., 2007). However, researchers recognize that the criteria need refinement for children and adolescents. The AACAP has issued guidelines stating that a diagnosis of BPD-NOS should be used when manic symptoms last for hours to fewer than four days and for chronic and impairing “manic-like symptoms” (Kowatch et al., 2005). Another diagnostic issue that clinicians should consider is that cyclothymia is rarely diagnosed in youth due to the prolonged duration criteria needed to make a diagnosis (Youngstrom et al., 2005). Youth who present clinically with a cyclothymic presentation are more often diagnosed with BPD-NOS.

Causes and Risk Factors

Research has revealed that a family history of bipolar disorder is the strongest and most consistent risk factor for PBD. Heritability estimates have been shown to be as high as 85 percent (Roberts, Bishop & Rooney, 2008). According to Youngstrom (2007), out of 100 articles reviewed discussing more than 30 risk factors associated with PBD, family history was the only factor significant enough to warrant clinical interpretation. The child of a bipolar parent is at four times more likely to develop PBD than a child of a non-bipolar parent (Miklowitz & Johnson, 2006).

The development of PBD has been found to be influenced by neurobiological factors: 1) enlarged ventricles; 2) an increase in white matter hyperintensities, specifically in the frontal cortex; 3) differences in central nervous system (CNS); and 4) autonomic system activation and arousal (Roberts, Bishop & Rooney, 2008). Research has also revealed that increased levels of CNS activation, together with decreased autonomic arousal, can lead to difficulty regulating biological rhythms, affect and behavior, and can lead to decreased adaptation to contextual demands (Bar Haim, 2002, as cited in Roberts, Bishop & Rooney). The risk of developing PBD increases with the onset of puberty (Roberts, Bishop & Rooney).

Research has revealed a relationship between early age of onset with a greater likelihood of increased rapid cycling and higher rates of comorbidity, suicidality, violent behavior, and substance abuse (Perlis et al., 2004 as cited in Youngstrom, 2007). Other risk factors associated with the development of PBD are:

- Psychosocial stressors, which interact with biological and/or genetic predisposition in eliciting episodes (Roberts, Bishop & Rooney, 2008);
- Poor peer relationships (Geller et al., 2000); and
- Early traumatic life events, which can lead to a more pernicious course (Leverich & Post, 2006).

Risk factors posed at home include poor family cohesion and high levels of conflict within the family (Chang, Blaser, Ketter & Steiner, 2001). Youth from families with a negative affective style are 5.9 times more likely to relapse than youth from families with a benign affective style (Miklowitz, Goldstein, Neuchterlein, Snyder & Mintz, 1988).

Factors found in the research to protect youth from PBD include positive response to stressors, academic achievement; family cohesion, a warm and supportive caregiver, and social competence (Roberts, Bishop & Rooney, 2008). Most studies have shown a lack of gender differences in the prevalence of PBD, but research has shown that males tend to exhibit mania more often, whereas females are more likely to present with depression (Duax, Youngstrom, Calabrese & Findling, 2007).

Assessment

Proper assessment of PBD in children is essential in early diagnosis, intervention and treatment. Evidence has shown that although symptoms may appear very early in a child, there is an average delay of diagnosis, which is estimated to be approximately seven years (Faedda, Baldessarini, Glovinsky & Austin, 2004). Early intervention could lead to a better prognosis. Although no information on early intervention is available in the PBD literature, adult studies have found that a longer delay from the first appearance of symptoms to treatment was associated with an increase in hospitalizations, decreases in social adjustment, and a greater risk of suicidal behaviors (Goldberg & Ernst, 2002).

Youngstrom (2007) listed a set of “red flags” that should trigger assessment for possible PBD. These are summarized in Table 1.

Table 1

Red Flags which Trigger Assessment for Pediatric Bipolar Disorder

Red Flag	Description
Early-onset depression	Depressive disorder during adolescence
Psychotic features	True delusions or hallucinations related to mood
Episodic aggressive behavior	Though not a symptom of PBD, such episodes are common to youth with PBD
Family history of bipolar disorder	Family studies show highly increased risk
Atypical depression	Unusual symptom presentation, such as hypersomnia, increased appetite, and interpersonal rejection sensitivity

Source: Youngstrom, 2007.

The AACAP Practice Parameters for PBD recommend a comprehensive, multi-informant assessment procedure. Clinicians should attempt to acquire assessment information from youth, parents, and teachers (McClellan et al., 2007). During the initial assessment period, clinicians should obtain a thorough family medical and psychological history, and choose both broadband (general screening tools) and narrowband measures (specific to disorder) in order to rule in/out other possible diagnoses or comorbid disorders. Most youth with PBD have at least one other co-occurring disorder. Misdiagnosis of major depressive disorder (MDD) or attention deficit hyperactivity disorder (ADHD), and subsequent treatment with antidepressants or psychostimulants can cause a manic episode for youth with PBD (DeBello et al., 2001). Unnecessary exposure to medications that have not been well-studied in youth can also lead to serious side effects (Findling et al., 2004). Youngstrom states that assessment should also include measures of hypomanic/manic and depressed symptoms (2007).

One of the first steps in assessment should include an examination by a primary care provider to rule out any medical reason for the youth’s change from normal behavior. Many medical conditions, such as hyperthyroidism, epilepsy and head trauma, can induce mania or look like symptoms of mania (Fields & Fristad, 2008). Once medical conditions have been ruled out, a clinician should attempt to gain a longitudinal perspective to document the course of the disorder. Obtaining a

baseline for normal behavior is important to determine a meaningful change in this behavior. Having a parent fill out a mood log, where they track their child's mood and energy for a certain number of weeks, is an effective way for a clinician to determine specific mood episodes and whether or not a child meets time-length criteria for specific PBD symptoms (Youngstrom, 2007). On-going assessment and reevaluation after the initial diagnosis is critical in PBD diagnosis (Youngstrom, Findling, Youngstrom & Calabrese, 2005).

Some of the broadband and narrowband assessment tools available for clinicians to use in the assessment of PBD are:

- Behavior checklists, such as Achenbach's Child Behavior Checklist (CBCL) (Achenbach, 1991);
- Clinical rating scales like the K-SADS-Mania Rating Scale (K-MRS) (Axelson et al., 2003) or the Young Mania Rating Scale (Young, Biggs, Ziegler & Meyer, 1978);
- Mood rating scales; and
- WASH-U-KSADS (Geller et al., 2001), a semi-structured interview with an expanded mania symptoms section.

The Externalizing scale score on the CBCL is a useful screening tool, evidenced across multiple studies, in that it allows clinicians to screen for PBD quickly (Kahana, Youngstrom, Findling & Calabrese, 2003; Youngstrom et al., 2004; Youngstrom, Youngstrom & Starr, 2005). According to Youngstrom (2007), "if concerned about potential PBD, then the Externalizing score is the main CBCL score to consider in terms of changing diagnostic impression." Although the scale score is sensitive to PBD, it is not specific due to a lack of a mania scale. Because of this, low Externalizing scale scores usually help clinicians to rule out PBD as a diagnosis (Youngstrom, 2007). A high score, however, does not "rule in" a child, instead suggesting the need for further PBD diagnostic assessment. The measure is a screening tool and, due to its lack of specificity, should not be the sole basis for a PBD diagnosis. Table 2 lists the suggested assessment tools for PBD.

Knowledge of how developmental and cultural factors impact assessment and diagnosis is crucial to proper assessment. In youth, developmental issues must be considered in order for the clinician to interpret clinical data, as well as age-appropriate behavior. It is also imperative that the clinician assesses not only symptoms, but also functional impairment. The U.S. Department of Health and Human Services (1999) asserts that mood disorders dramatically increase the risk of suicide. On-going assessment of suicide risk is important due to the high risk of suicide attempts among youth with PBD; estimates show that 25 to 50 percent of youth with PBD will attempt suicide, and 20 percent will succeed (Faust, Walker & Sands, 2006). A review of suicide assessment tools is provided in the "Youth Suicide" section of the *Collection*.

Comorbidity

Similar to the adult bipolar disorder literature, various research studies have shown that children and adolescents suffering from PBD have very high rates of comorbidity with other psychological disorders (Kessler, 1999; Kowatch et al., 2005), the most common being attention deficit hyperactivity disorder (ADHD) (e.g., Biederman et al., 2004; Masi et al., 2006; Youngstrom et al., 2005), oppositional defiant disorder (ODD) (Youngstrom et al., 2005), conduct disorder (Lewinsohn et al., 2002), and anxiety disorders (Harpold et al., 2005). Psychosis has also been shown to be comorbid with PBD (Biederman et al., 2004).

Evidence has shown that as many as 60 to 90 percent of youth with PBD have comorbid ADHD (Axelson et al., 2006), and as many as 78 percent of youth have comorbid anxiety disorders (Harpold et al., 2005). Some researchers attribute these high rates to an overlap in diagnostic criteria for the two disorders (Youngstrom, 2007). Despite the overlap in criteria, PBD youth with comorbid ADHD and/or anxiety disorders often show greater functional impairment and a worse prognosis (Youngstrom).

Table 2

Suggested Assessment Tools

Measure Type	Name of Measure	Who Completes	Data Generated
Clinical Interview	Washington University version of the Kiddie-Schedule for Affective Disorders and Schizophrenia	Clinician with Youth & Parent	Diagnosis
Clinical Interview	The Children’s Interview for Psychiatric Syndromes (ChIPS)	Clinician with Youth & Parent	Diagnosis
Clinical Interview	Mini-International Neuropsychiatric Interview (MINI)	Parent	Diagnosis
Rating Scale	Mood Disorder Questionnaire (MDQ)	Parent or Youth	Symptom ratings
Behavior Checklist	Child Behavior Checklist (CBCL)	Parent	Syndrome scale scores; Competence scores
Behavior Checklist	Youth Self-Report (YSR)	Youth	Syndrome scale scores; Competence scores
Rating Scale	General Behavior Inventory (GBI)	Parent or Youth	Symptom ratings
Rating Scale	Young Mania Rating Scale	Clinician or Parent	Symptom ratings
Rating Scale	Pediatric Quality of Life Inventory (PedsQL)	Parent or Youth	Child functioning ratings

Source: Youngstrom, 2007.

Evidence-based Treatments

The AACAP Practice Parameters for treatment of early-onset bipolar disorder provide a comprehensive, multimodal combination of both psychopharmacology and psychosocial therapies (McClellan et al., 2007). The AACAP also advises that treatment should be tailored and based on several different factors, including treatment setting, the chronic nature of the disorder, the age of the child, and the family environment. The goals of therapy, as set out by the AACAP, are to reduce symptoms, educate about the illness, and promote adherence to treatment, which works towards preventing relapse, and promotes normal growth and development in youth with PBD (McClellan et al.). Currently, there are no pharmacological or psychosocial therapies with enough evidence in youth samples to meet the standards for evidence-based treatments (Chambless & Hollon, 1998, as cited by Youngstrom, 2007).

Pharmacological Treatments

Practice guidelines indicate medication as the central component of first-line intervention for bipolar disorder (Youngstrom & Kendall, 2008). The goal is to immediately reduce the severity of symptoms (Leibenluft & Rich, 2008).

Pharmacological treatment of children diagnosed with bipolar disorder is modeled after treatment experiences with adults since there are few controlled trials or studies of the efficacy and safety of psychopharmacological medications for youth with PBD (National Institute for Mental Health [NIMH], 2000; Roberts, Bishop & Rooney, 2008). The AACAP Practice Parameters suggest that treatment for PBD begin with lithium, another anticonvulsant/mood stabilizer or an atypical antipsychotic which has been approved by the FDA for bipolar disorder in adults (McClellan et al., 2007). Although the number of studies including children and adolescents remains quite small, preliminary evidence

suggests that a combination of mood stabilizers/anticonvulsants and second generation antipsychotics has been shown effective in placebo controlled trials for treating acute symptoms of PBD and for stabilization of symptoms up to six months after the studies were complete (Miklowitz & Johnson, 2006; Pavuluri, Birmaher & Naylor, 2005).

Lithium is currently the most extensively studied medication for use with PBD (Findling & Pavuluri, 2008; Kowatch et al., 2005; Kafantaris, Coletti, Dicker, Padula & Kane, 2001, 2003; Pavuluri, Birmaher & Naylor 2005). Lithium is the only PBD treatment medication approved by the FDA for use in youth (Pavuluri Birmaher & Naylor). However, youth experience the same safety problems with lithium that adults may experience, such as toxicity and impairment of renal and thyroid functioning (Geller & Luby, 1997). Lithium is not recommended for families unable to keep regular appointments, which are necessary to ensure monitoring of serum lithium levels in the blood and of conflicting side effects. Relapse is also high for those youth who discontinue the medication. Divalproex sodium (Kowatch et al., 2000; Wagner et al., 2002), Clozapine (Kowatch et al., 1995; Kafantaris, Coletti, Dicker, Padula & Kaffne, 2001), Risperidone (Kafantaris et al., 2001), combined with lithium (Pavuluri, Birmaher & Naylor), Olanzapine (Frazier et al., 2001; Pavuluri, Birmaher & Naylor), and Quetiapine (Delbello et al., 2006) have also been shown to improve symptoms in youth with PBD. Table 3 divides the psychopharmacological treatments for PBD into two categories: What Works and What Seems to Work.

Table 3

Psychopharmacological Treatments for PBD

What Works
Currently no medications meet the criteria for a drug that works.
What Seems to Work
Mood stabilizers/ Anticonvulsants
Second-generation antipsychotics

Sources: Roberts, Bishop & Rooney, 2008; Brown et al., 2008.

The NIMH (2000) emphasizes that using antidepressants to treat depression in a child with bipolar disorder may induce manic symptoms if it is taken without a mood stabilizer, such as lithium or valproate. Also, psychostimulant medications used in treating co-occurring ADHD in a child with bipolar disorder may exacerbate manic symptoms as well (Focus Adolescent Services, 2000). The child’s psychiatrist should be consulted if this occurs and treatment for bipolar disorder may need to be reevaluated.

Psychosocial Treatments

Although no psychosocial treatments for PBD are considered evidence-based (Chambless & Hollon, 1998), recent evidence has shown that family-focused psychoeducational therapy (FFT) (Miklowitz et al., 2004), child- and family-focused Cognitive Behavioral Therapy (CFF-CBT) (Pavuluri et al., 2004), and multifamily psychoeducation groups (MFPG); Fristad, Goldberg-Arnold & Gavazzi, 2002; Fristad, Gavazzi & Mackinaw-Koons, 2003) show promise as adjunctive treatments to pharmacological treatment (Youngstrom, 2007). These three treatments have demonstrated symptom improvement and increased functioning in youth with PBD. Table 4 lists the psychosocial treatments for PBD into two categories: What Works and What Seems to Work.

Table 4

Psychosocial Treatments for PBD

What Works	Description
Currently no psychological treatments meet criteria.	Not applicable.
What Seems to Work	Description
Family-focused Psychoeducational Therapy (FFT; Miklowitz et al., 2004)	Helps youth make sense of their illness and accept it and also to better understand use of medication. Also helps to manage stress, reduce negative life events, and promote a positive family environment.
Child- and Family-Focused Cognitive Behavioral Therapy (CFF-CBT; Pavuluri et al., 2004)	Emphasizes individual psychotherapy with youth and parents, parent training and support, and family therapy
Multifamily Psychoeducation Groups (MFPG; Fristad, Goldberg-Arnold & Gavazzi, 2002; Fristad, Gavazzi & Mackinaw-Koons, 2003)	Youth and parent group therapy have been shown to increase parental knowledge, promote greater access to services, and increase parental social support for youth.

Sources: Roberts, Bishop & Rooney, 2008; Leibenluft & Rich, 2008.

Unproven Treatments

Interpersonal social rhythm therapy (IPSRT) (Frank, Swartz & Kupfer, 2000) has shown some evidence of support in adult studies. IPSRT works to minimize the effects of life stressors by helping youth establish regular patterns of sleep, exercise, and social interactions (Leibenluft & Rich, 2008). There is no current evidence of its usefulness in PBD, but current research is studying a version of IPSRT for PBD youth ages 12 to 18 (Hlastala & Frank, 2006). The use of Omega-3 fatty acids, as well as complementary and alternative medicines as treatments, will need additional rigorous study before their benefit for PBD is determined (Scheffer, 2008).

Cultural Considerations

When assessing, diagnosing and treating youth with mental health disorders, it is imperative that a clinician take into consideration the youth’s cultural background. Different cultures may have different beliefs about psychological issues, which should inform clinical judgment and decision-making. Due to these differences, when assessing minority youth, clinicians should gather family history data at the symptom level, if possible, and be cautious about face value interpretation due to the potential for cultural bias (Garb, 1998).

Unfortunately, little is available in the PBD literature about cultural differences in the prevalence or presentation of the disorder. Small sample sizes in treatment studies to date have not allowed for comparisons based on racial or ethnic groups (Brown et al., 2008). Mood disorder research has shown, however, that minority youth have a higher chance of being misdiagnosed with a behavior disorder or schizophrenia (DeBello, Lopez-Larson, Soutullo & Strakowski, 2001). Due to this risk of misdiagnosis, a clinician should carefully assess for a mood disorder in minority youth, especially when the presenting complaint includes symptoms of a behavior disorder or psychosis (Youngstrom, 2007).

Sources

Achenbach, T. (1991). *Manual for the Child Behavior Checklist/4-18 and 1991 profile*. Burlington: University of Vermont, Department of Psychiatry.

- American Psychiatric Association (APA). (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.) (DSM-IV-TR). Washington, DC: Author.
- Axelson, D., Birmaher, B., Brent, D., Wassick, S., Hoover, C., Bridge, J., & Ryan, N. (2003). A preliminary study of the Kiddie Schedule for Affective Disorders and Schizophrenia for School-Age Children mania rating scale for children and adolescents. *Journal of Child and Adolescent Psychopharmacology*, *13*, 463-470.
- Axelson, D., Birmaher, B., Strober, M., Gill, M., Valeri, S., et al. (2006). Phenomenology of children and adolescents with bipolar spectrum disorders. *Archives of General Psychiatry*, *63*, 1139-1148.
- Biederman, J., Faraone, S., Wozniak, J., Mick, E., Kwon, A., & Aleardi, M. (2004). Further evidence of unique developmental phenotypic correlates of pediatric bipolar disorder: Findings from a large sample of clinically referred pre-adolescent children assessed over the last 7 years. *Journal of Affective Disorders*, *82* (Suppl.1), S45-S58.
- Brown, R., Antonuccio, D., DuPaul, G., Fristad, M., King, C., Leslie, L., et al. (2008). Bipolar disorder. *Childhood mental health disorders: Evidence base and contextual factors for psychosocial, psychopharmacological, and combined interventions* (pp. 87-96). Washington, DC: American Psychological Association.
- Cassidy, F., & Carroll, B. (2001). Frequencies of signs and symptoms in mixed and pure episodes of mania: Implications for the study of manic episodes. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, *25*, 659-665.
- Center for the Advancement of Children's Mental Health at Columbia University. (2000). *Depression*. [Online]. Available: <http://www.kidsmentalhealth.org>. *Not available January 2008*.
- Chambless, D., & Hollon, S. (1998). Defining empirically supported therapies. *Journal of Consulting and Clinical Psychology*, *66*, 7-18.
- Chang, K., Blaser, C., Ketter, T., & Steiner, H. (2001). Family environment of children and adolescents with bipolar disorder parents, *Bipolar Disorders*, *3*, 73-78.
- DelBello, M., Kowatch, R., Adler, C., Stanford, K., Welge, et al. (2006). A double-blind randomized pilot study comparing quetiapine and divalproex for adolescent mania. *Journal of the American Academy of Child and Adolescent Psychiatry*, *45*, 305-313.
- DelBello, M., Lopez-Larson, M., Soutullo, C., & Strakowski, S. (2001). Effects of race on psychiatric diagnosis of hospitalized adolescents: A retrospective chart review. *Journal of Child and Adolescent Psychopharmacology*, *11*, 95-103.
- DelBello, M., Soutullo, C., Hendricks, W., Niemeier, R., McElroy, S., & Strakowski, S. (2001). Prior stimulant treatment in adolescents with bipolar disorder: association with age at onset. *Bipolar Disorders* *3*, 53-57.
- Dilsaver, S., & Akiskal, H. (2004). Preschool-onset mania: incidence, phenomenology, and family history. *Journal of Affective Disorders* *82* (Suppl.), S35-S43.
- Duax, J., Youngstrom, E., Calabrese, J., & Findling, R. (2007). Sex differences in pediatric bipolar disorder. *Journal of Clinical Psychiatry*, *68*, 1565-1573.

- Faedda, G., Baldessarini, R., Glovinsky, I., & Austin, N. (2004). Treatment-emergent mania in pediatric bipolar disorder: a retrospective case review. *Journal of Affective Disorders, 82*, 149-158.
- Faust, D., Walker, D., & Sands, M. (2006). Diagnosis and management of childhood bipolar disorder in the primary care setting. *Clinical Pediatrics, 45*, 801-808.
- Fields, B., & Fristad, M. (2008). Assessment of childhood bipolar disorder. *Clinical Psychology Science and Practice, 16*, 166-181.
- Findling, R., Aman, M., Eerdeken, M., Derivan, A., Lyons, B., & Risperidone Disruptive Behavior Study Group. (2004). Long-term, open-label study of risperidone in children with severe disruptive behaviors and below-average IQ. *American Journal of Psychiatry, 161*, 677-684.
- Findling, R., & Pavuluri, M. (2008). Lithium. In B. Geller & M. DelBello (Eds.), *Treatment of bipolar disorder in children and adolescents* (pp. 43-68). New York: Guilford Press.
- Focus Adolescent Services. (2000). *What is Bipolar Disorder?* [Online]. Available: <http://www.focusas.com/BipolarDisorder.html>. [January 2011].
- Frank, E., Swartz, H., & Kupfer, D. (2000). Interpersonal and social rhythm therapy: managing the chaos of bipolar disorder. *Biological Psychiatry, 48*, 593-604.
- Frazier, J., Biederman, J., Tohen, M., Feldman, P., Jacobs, T., Toma, V., et al. (2001). A prospective open-label treatment trial of olanzapine monotherapy in children and adolescents with bipolar disorder. *Journal of Child and Adolescent Psychopharmacology, 11*, 239-250.
- Frazier, T., Demeter, C., Youngstrom, E., Calabrese, J., Stansbrey, R., McNamara, N., & Findling, R. (2007). Evaluation and comparison of psychometric instruments for pediatric bipolar spectrum disorders in four age groups. *Journal of Child and Adolescent Psychopharmacology, 17*, 853-866.
- Fristad, M., Gavazzi, S., & Mackinaw-Koons, B. (2003). Family psychoeducation: an adjunctive intervention for children with bipolar disorder. *Biological Psychiatry, 53*, 1000-1008.
- Fristad, M., Goldberg-Arnold, J., & Gavazzi, S. (2002). Multifamily psychoeducation groups (MFPG) for families of children with bipolar disorder. *Bipolar Disorders, 4*, 254-262.
- Garb, H. (1998). *Studying the clinician: Judgment research and psychological assessment*. Washington, DC: American Psychological Association.
- Geller, B., & Luby, J. (1997). Child and adolescent bipolar disorder: a review of the past 10 years. *Journal of the American Academy of Child and Adolescent Psychiatry, 33*, 461-468.
- Geller, B., Zimmerman, B., Williams, M., Bolhofner, K., Craney, J., Delbello, M., & Soutullo, C. (2000). Diagnostic characteristics of 93 cases of prepubertal and early adolescent bipolar disorder phenotype by gender, puberty and comorbid attention deficit hyperactivity disorder. *Journal of Child and Adolescent Psychopharmacology, 10*, 157-164.
- Geller, B., Zimmerman, B., Williams, M., Bolhofner, K., Craney, J., Delbello, M., et al. (2001). Reliability of the Washington University in St. Louis Kiddie Schedule for Affective Disorders and Schizophrenia (WASH-U-KSADS) mania and rapid cycling sections. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 450-455.

- Goldberg, J., & Ernst, C. (2002). Features associated with the delayed initiation of mood stabilizers at illness onset in bipolar disorder. *Journal of Clinical Psychiatry, 63*, 985-991.
- Harpold, T. Wozniak, J., Kwon, A., Gilbert, J., Wood, J., et al. (2005). Examining the association between pediatric bipolar disorder and anxiety disorders in psychiatrically referred children and adolescents. *Journal of Affective Disorders, 88* (1), 19-26.
- Healy, D. (2006). The latest mania: Selling bipolar disorder. *PLoS Medicine, 3*, e185.
- Hlastala, S., & Frank, E. (2006). Adapting interpersonal and social rhythm therapy to the developmental needs of adolescents with bipolar disorder. *Developmental Psychopathology, 18*, 1267-1288.
- Kafantaris, V., Coletti, D., Dicker, R., Padula, G., & Kane, J. (2001). Adjunctive antipsychotic treatment of adolescents with bipolar psychosis. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 1448-1456.
- Kafantaris, V., Coletti, D., Dicker, R., Padula, G., & Kane, J. (2003). Lithium treatment of acute mania in adolescents: A large open trial. *Journal of the American Academy of Child and Adolescent Psychiatry, 42*, 1038-1045.
- Kahana, S., Youngstrom, E. Findling, R., & Calabrese, J. (2003). Employing parent, teacher, and youth self-report checklists in indentifying pediatric bipolar spectrum disorders: An examination of diagnostic accuracy and clinical utility. *Journal of Child and Adolescent Psychopharmacology, 13*, 471-488.
- Kessler, R. (1999). Comorbidity of unipolar and bipolar depression with other psychiatric disorders in a general population survey. In M. Tohen (Ed.), *Comorbidity in affective disorders* (pp. 1-25). New York: Marcel Dekker.
- Kessler, R., Avenevoli, S., & Merikangas, K. (2001). Mood disorders in children and adolescents: An epidemiological perspective. *Biological Psychiatry, 49*, 1002-1014.
- Kowatch, R., Fristad, M., Birmaher, B., Wagner, K., Findling, R., & Hellander, M. (2005). Treatment guidelines for children and adolescents with bipolar disorder. *Journal of the American Academy of Child and Adolescent Psychiatry, 44*, 213-235.
- Kowatch, R., Suppes, T., Carmody, T., Bucci, J., Hume, J., Kromelis, M., Emslie, G., Weinberg, W., & Rush, A. (2000). Effect size of lithium, divalproex sodium, and carbamazepine in children and adolescents with bipolar disorder. *Journal of the American Academy of Child and Adolescent Psychiatry, 39*, 713-720.
- Kowatch, R., Suppes, T., Gilfillan, S., Fuentes, R., Granneman, B., & Emslie, G. (1995). Clozapine treatment of children and adolescents with bipolar disorder and schizophrenia: A clinical case series. *Journal of Child and Adolescent Psychopharmacology, 5*, 241-253.
- Kowatch, R., Youngstrom, E., Danielyan, A., & Findling, R. (2005). Review and meta-analysis of the phenomenology and clinical characteristics of mania in children and adolescents. *Bipolar Disorders, 7*, 483-496.
- Leibenluft, E., Charney, D., Towbin, K., Bhangoo, R., & Pine, D. (2003). Defining clinical phenotypes of juvenile mania. *American Journal of Psychiatry, 160*, 430-437.

- Leibenluft, E., & Rich, B. (2008). Pediatric bipolar disorder. *Annual Review of Clinical Psychology, 4*, 163-187.
- Leverich, G., & Post, R. (2006). Courses of bipolar illness after a history of childhood trauma. *The Lancet, 367*, 1040-1042.
- Lewinsohn, P., Seeley, J., Buckley, M., & Klein, D. (2002). Bipolar disorder in adolescence and young adulthood. *Child and Adolescent Psychiatry Clinics of North America, 11* (3), 461-475.
- McClellan, J. (2005). Commentary: Treatment guidelines for child and adolescent bipolar disorder. *Journal of the American Academy of Child and Adolescent Psychiatry, 44*, 236-239.
- McClellan, J., Kowatch, R., & Findling, R., & the Workgroup on Quality Issues et al. (2007). Practice parameter for the assessment and treatment of children and adolescents with bipolar disorder. *Journal of the American Academy of Child and Adolescent Psychiatry 46*, 107-125.
- Masi, G., Perugi, G., Toni, C., Millepiedi, S., Mucci, M., Bertini, N., et al. (2006). Attention-deficit hyperactivity disorder – Bipolar comorbidity in children and adolescents. *Bipolar Disorders, 8*, 373-381.
- Miklowitz, D., & Johnson, S. (2006). The psychopathology of bipolar disorder. *Annual Review of Clinical Psychology, 2*, 199-235.
- Miklowitz, D., George, E., Axelson, D., Kim, E., Birmaher, B., et al. (2004). Family-focused treatment for adolescents with bipolar disorder. *Journal of Affective Disorders, 82* (Suppl. 1), S113–S128.
- Miklowitz, D., Goldstein, M., Nuechterlein, K., Synder, K., & Mintz, J. (1988). Family factors and the course of bipolar affective disorder. *Archives of General Psychiatry, 45*, 225-231.
- National Institute of Mental Health (NIMH). (2000). *Depression in Children and Adolescents. NIH Publication No. 00-4744.*
- Pavuluri, M., Birmaher, B., & Naylor, M. (2005). Pediatric bipolar disorder: A review of the past 10 years. *Journal of the American Academy of Child and Adolescent Psychiatry, 44*, 846-871.
- Pavuluri, M., Graczyk, P., Henry, D., Carbray, J., Heidenreich, J., & Miklowitz, D. (2004). Child- and family-focused cognitive-behavioral therapy for pediatric bipolar disorder: development and preliminary results. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*, 528-537.
- Pavuluri, M., Henry, D., Carbray, J., Sampson, G., Naylor, M., & Janicak, P. (2006). A one-year open-label trial of risperidone augmentation in lithium nonresponder youth with preschool-onset bipolar disorder. *Journal of Child and Adolescent Psychopharmacology, 16*, 336-350.
- Roberts, C., Bishop, B., & Rooney, R. (2008). Depression and bipolar disorder in childhood. In T.P. Gullotta & G.M. Blau (Eds.), *Handbook of childhood behavioral issues: Evidence-based approaches to prevention and treatment* (pp. 239-271). New York: Routledge.
- Scheffer, R. (2008). Nonpharmacological biological treatment for pediatric bipolar disorder: Omega-3 fatty acids and complementary and alternative medicine. In B. Geller & M.P. DelBello (Eds.), *Treatment of bipolar disorder in children and adolescents* (pp. 153-165). New York: Guilford Press.

- Tumuluru, R., Weller, E., Fristad, M., & Weller, R. (2003). Mania in six preschool children. *Journal of Child and Adolescent Psychopharmacology*, 13, 489-494.
- U.S. Department of Health and Human Services. (1999). *Mental Health: A Report of the Surgeon General*. Rockville, MD.
- Wagner, K., Weller, E., Carlson, G., Sachs, G., Biederman, J., et al. (2002). An open-label trial of divalproex in children and adolescents with bipolar disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, 41, 1224-1230.
- Young, R., Biggs, J., Ziegler, M., & Meyer, D. (1978). A rating scale for mania: Reliability, validity, and sensitivity. *British Journal of Psychiatry*, 133, 429-435.
- Youngstrom, E. (2007). Pediatric bipolar disorder. In E. J. Mash & R. A. Barkley (Eds.), *Assessment of childhood disorders* (4th ed.) (pp. 253-304). New York: Guilford Press.
- Youngstrom, E., Findling, R., Calabrese, J., Gracious, B., Demeter, C., et al. (2004). Comparing the diagnostic accuracy of six potential screening instruments for bipolar disorder in youth aged 5 to 17 years. *Journal of the American Academy of Child and Adolescent Psychiatry*, 43, 847-858.
- Youngstrom, E., Findling, R., Youngstrom, J., & Calabrese, J. (2005). Toward an evidence-based assessment of pediatric bipolar disorder. *Journal of Clinical Child and Adolescent Psychiatry*, 34, 433-448.
- Youngstrom, E., & Kendall, P. (2008). Psychological science and bipolar disorder. *Clinical Psychology Science and Practice*, 16, 93-97.
- Youngstrom, E., Meyers, O., Demeter, C., Youngstrom, J., Morello, L., et al. (2005). Comparing diagnostic checklists for pediatric bipolar disorder in academic and community mental health settings. *Bipolar Disorders*, 7 (6), 507-517.
- Youngstrom, E., Youngstrom, J., & Starr, M. (2005). Bipolar diagnoses in community mental health: Achenbach CBCL profiles and patterns of comorbidity. *Biological Psychiatry*, 58, 569-575.

Additional Resources

- Gleason, M., Egger, H., Graham, E., Greenhill, L., Kowatch, R., et al. (2007). Psychopharmacological Treatment for Very Young Children: Contexts and Guidelines. Special Communication. *Journal of the American Academy of Child and Adolescent Psychiatry*, 46 (12), 1532-1572.
- Jones, J. (2010). Identifying youth at high risk for bipolar disorder. Research reported in *Journal of Affective Disorders*, July 8, 2010. [Online]. Available: <http://psychcentral.com/news/2010/07/20/identifying-youth-at-high-risk-for-bipolar-disorder/15805.html>. [August 2010].
- Parens, E., & Johnston, J. (2010). Controversies concerning the diagnosis and treatment of bipolar disorder in children. *Child and Adolescent Psychiatry and Mental Health*, 4 (9). [Online]. Available: <http://www.capmh.com/content/4/1/9>. [August 2010].

Organizations/Resources

American Academy of Child & Adolescent Psychiatry (AACAP)

3615 Wisconsin Avenue, NW — Washington, DC 20016-3007

<http://www.aacap.org>

<http://www.aacap.org/page.wv?name=Bipolar+Disorder+In+Children+And+Teens§ion=Facts+for+Families>

http://www.aacap.org/cs/root/member_information/practice_information/practice_parameters/practice_parameters

ParentsMedGuide.org

Bipolar Disorder—Parents' Medication Guide for Bipolar Disorder in Children & Adolescents.

[Online]. Available: http://www.aacap.org/galleries/default-file/aacap_bipolar_medication_guide.pdf. [August 2010].

American Foundation for Suicide Prevention (AFSP)

120 Wall Street, 22nd Floor — New York, NY 10005

<http://www.afsp.org>

Bipolar Kids Home

<http://www.geocities.com/EnchantedForest/1068>

Center for Effective Collaboration and Practice (CECP)

1000 Thomas Jefferson Street, NW, Suite 400 — Washington, DC 20007

<http://cecp.air.org>

Center for Excellence in Research and Treatment of Bipolar Disorder (CERT-BD)

<http://www.med.unc.edu/psych/cert-bd>

Child & Adolescent Bipolar Foundation

1187 Wilmette Ave., P.M.B. #331 — Wilmette, IL 60091

<http://www.bpkids.org>

Flipswitch (podcast and blog for teens and 20s to understand depression and bipolar disorder)

<http://www.bpkids.org/flipswitch>

Depression and Bipolar Support Alliance (DBSA) (formerly the National Depressive and Manic Depressive Association)

730 Franklin Street, Suite 501 — Chicago, IL 60610

<http://www.dbsalliance.org>

Depression and Related Affective Disorders Association (DRADA)

2330 West Joppa Road, Suite 100 — Lutherville, MD 21093-4605

<http://www.goldbamboo.com/entity-e1732.html>

Evidence-based Mental Health Treatment for Children and Adolescents

www.effectivechildtherapy.com

Federation of Families for Children's Mental Health

<http://www.ffcmh.org>

Georgetown University Center for Child and Human Development

<http://gucchd.georgetown.edu>

Juvenile Bipolar Research Foundation

550 Ridgewood Road — Maplewood, NJ 07040
<http://www.bpchildresearch.org/about/index.html>

Mental Health America (MHA) (*formerly National Mental Health Association*)

<http://www.nmha.org/index.cfm?objectid=ca866daf-1372-4d20-c8023899e7497020>

Ryan Licht Sang Bipolar Foundation

<http://www.ryanlichtsangbipolarfoundation.org/site/c.ltJZJ8MMIsE/b.2107311/k.BCD3/Home.htm>

U.S. Department of Health and Human Services

National Institute of Mental Health (NIMH)

Bipolar Disorder in Children and Teens: A Parents Guide (2008)

http://www.nimh.nih.gov/health/publications/bipolar-disorder-in-children-and-teens-a-parents-guide/nimh_bipolar_children_parents_guide.pdf

Easy to Read Guide for Parents

<http://www.nimh.nih.gov/health/publications/bipolar-disorder-in-children-and-teens-easy-to-read/index.shtml>

Wisconsin United for Mental Health

http://www.wimentalhealth.org/disorders/mood_disorders/bipolar_disorder.php

EARLY-ONSET SCHIZOPHRENIA

Introduction

Causes and Risk Factors

Diagnostic Issues and Categories

Assessment

Comorbidity

Evidence-based Treatments

Pharmacological Treatment

Psychological Treatment

Treatment Considerations

Unproven Treatments

Cultural Considerations

Introduction

Schizophrenia is a pervasive, devastating, neuropsychiatric disorder associated with extreme deficits in cognition, behavior, and social functioning (McClellan & Werry, 2001). Estimates indicate that schizophrenia occurs in one percent of populations worldwide and in all known cultural and ethnic groups (McDonnell & McClellan, 2007). Onset of schizophrenia typically occurs between age 16 and 30; the rate of onset increases during adolescence, peaking at age 30 (Mueser & McGurk, 2004; McClellan & Werry). Schizophrenia in youth is extremely rare, and most information used to diagnose and treat this population has been garnered from adult studies (Brown et al., 2008). Schizophrenia with onset in youth accounts for approximately one percent of all individuals with schizophrenia (Kumra, 2008).

Onset before age 18 is commonly categorized as early-onset schizophrenia (EOS), having either an acute or insidious, i.e., a gradual onset without obvious symptoms. Onset before 13 years of age is considered childhood-onset schizophrenia (COS) and almost always has an insidious onset (McClellan & Werry, 2001). Males are two times more likely to be diagnosed before 18, and most youth with EOS maintain the diagnosis over time (McClellan & Werry; Asarnow, Tompson & McGrath, 2004). The diagnostic process has been defined for youth ages eight and older (McClellan & Werry). Pursuant to the American Academy of Child & Adolescent Psychiatry (AACAP), the diagnosis of EOS is made using the same diagnostic criteria as those used for adults (McClellan & Werry). Studies have shown that the most common criteria in EOS are hallucinations, formal thought disorder, and flattened affect, with systematic delusions and catatonic symptoms being less common (McClellan & Werry; Pavuluri, Herbener & Sweeney, 2004). Although these criteria are consistently found in EOS, it is important to note that EOS is a phasic disorder with much individual variability (Werry, McClellan & Chard, 1991; Asarnow & Tompson, 1999).

Causes and Risk Factors

It is likely that genetic, behavioral, and environmental factors impact the development of EOS (Kodish & McClellan, 2008). Developmental and/or behavioral abnormalities are common with EOS; some reports indicate incidence as high as 90 percent (McClellan & Werry, 2001; McDonnell & McClellan, 2007). The association between greater premorbid abnormalities, i.e., abnormalities preceding the disease, and EOS reflects a greater neurodevelopmental insult (McDonnell & McClellan). Environmental factors can intensify genetic or neurodevelopmental deficiencies, thus findings point to a combination and interaction between genetic and environmental influences (U.S. Department of Health and Human Services, 1999).

Research has indicated that early central nervous system lesions have been shown to affect the normal maturational processes of the brain in youth having schizophrenia (McClellan & Werry, 2001). The initial findings of a National Institute of Mental Health (NIMH, 2001) study of EOS showed that youth who had psychotic episodes before puberty demonstrated evidence of progressively abnormal brain development. Major changes occur in the brain during puberty, which could trigger symptoms of schizophrenia (NIMH, 2007). This study revealed that the ventricles enlarged abnormally in youth ages 14 to 18, suggesting a shrinking of brain tissue volume. This shrinking is significant because losses in the rear of the brain are influenced primarily by environmental factors and suggests that a non-genetic cause may play a role in the initial progression of the disorder. The brain loss pattern in youth is consistent with that seen in adults with schizophrenia.

The literature shows no evidence that psychosocial factors cause schizophrenia (McClellan & Werry, 2001). There is evidence that the onset, course, and severity of schizophrenia are due to the interaction between environmental and biological risk factors. Psychosocial factors play a part by influencing the onset, episode intensity, and relapse rate. Expressed emotion (EE), which is characterized by high levels of criticism, emotional over-involvement, or hostility in the family, is one such mediating factor that has been shown to have a strong influence in the course of the disorder. A study in adults showed that 65 percent of those returning to families characterized by high EE relapsed within one year, compared to 35 percent who returned to low EE families (Butzlaff & Hooley, 1998).

Studies have shown that schizophrenia is twice as prevalent among first-degree relatives of EOS youth (U.S. Department of Health and Human Services, 1999). Compared to the general population, the risk is five times higher for second-degree relatives of persons having schizophrenia, ten- to fifteen-fold higher for first-degree family members, as well as dizygotic (fraternal) twins, and forty to fifty times higher for monozygotic (identical) twins or for someone with both parents having schizophrenia (Carpenter, 2004). Environmental factors associated with schizophrenia include maternal malnutrition, infections during critical periods of fetal development, fetal hypoxia (a lack of oxygen to the brain), and other birth and obstetric complications (Carpenter).

EOS is linked to poorer outcomes and increased negative symptoms in adulthood (McClellan & Werry, 2001). Earlier age of onset has been associated with more severe impairments (Kodish & McClellan, 2008).

Diagnostic Issues and Categories

According to the AACAP Practice Parameters, the diagnosis of EOS is made using the same *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR)* criteria as those for adults. Evidence has shown that EOS and adult-onset schizophrenia are most likely the same disorder (McClellan & Werry, 2001). The diagnosis of schizophrenia, according to the *DSM-IV-TR*, requires at least a one-month duration of at least two of the following:

1. delusions;
2. hallucinations;
3. disorganized speech;
4. grossly disorganized or catatonic behavior; or
5. negative symptoms (APA, 2000).

Symptoms can be divided into two groups: positive and negative symptoms (Murphy, Cowan & Sederer, 2001). Positive symptoms are those which are in addition to normal experiences and which youth without schizophrenia will rarely experience (U.S. Department of Health and Human Services, 1999). Negative symptoms are those that involve a loss of normal function or experience (U.S. Department of Health and Human Services). Both categories are described in Table 1.

Table 1

Positive and Negative Symptoms of Schizophrenia

Positive Symptoms	Description
Delusions	Persecutory, referent, grandiose, somatic, or religious. May also involve thought withdrawal or insertion, or the belief that one is controlled by an outside force.
Hallucinations	Auditory, visual, tactile and/or olfactory (smell)
Disorganized speech	Loosening of associations; tangential or incoherent speech
Disorganized behavior	Difficulty in sustaining goal-oriented behavior
Catatonic behavior	Lack of response to one's environment. Motor immobility, mutism, posturing or stereotyped behavior, excessive motor behavior, echolalia (unconventional verbal behaviors), or echopraxia (imitation of movements of others)
Negative Symptoms	Description
Avolition	Difficulty initiating and maintaining motivation to complete tasks
Alogia	Poverty in the content and amount of speech
Affective flattening	Limited facial affective expression, eye contact, and body language

Sources: APA, 2000; McDonell & McClellan, 2007.

Only one symptom is needed if the hallucinations or delusions are especially bizarre (e.g., auditory hallucination providing a running commentary on the youth's behavior or thinking). Another criterion for the diagnosis of EOS is marked impairment of social, occupational and self-care functioning. In youth, this could be the failure to achieve age-appropriate levels of interpersonal, academic or occupational development (McDonell & McClellan, 2007). Disturbances must be present for at least six months, a criterion which can be difficult to assess since most youth first seek care when they are acutely psychotic and may not have experienced symptoms for six months (McClellan & Werry, 2001). In such a case, longitudinal assessment is essential for confirming a tentative EOS diagnosis. Clinicians will want to rule out other disorders (e.g., schizoaffective disorder, mood disorders with psychotic features) before an EOS diagnosis can be made.

The most common criteria for EOS are hallucinations, formal thought disorder and flattened affect, with systematic delusions and catatonic symptoms being less common (McClellan & Werry, 2001; Pavuluri, Herbener & Sweeney, 2004). Psychotic symptoms are the hallmark of the disorder and overt psychotic symptoms (active phase) must be present for a diagnosis to be made (McDonell & McClellan, 2007; McClellan & Werry). Because misdiagnosis is a major issue in the assessment and diagnosis of EOS, clinicians should take care to differentiate true psychotic symptoms from overactive imaginations, idiosyncratic thinking, and perceptions caused by developmental delays and/or exposure to traumatic events. Symptoms must represent a marked change in mental status or level of functioning (McClellan & Werry). Also youth with EOS display three characteristic communication deficits: illogical thinking, loose associations, and impaired discourse skills (Caplan, 1994; Caplan, Guthrie, Gish, Tanguay & David-Lando, 1989). Symptoms tend to shift over time from positive to negative (Brown et al., 2008).

Studies show that 10 to 20 percent of youth with EOS have an IQ in the borderline range or below (Brown et al., 2008). Bettes and Walker found that positive symptoms were associated with IQs greater than 85; negative symptoms were found to be associated with brain damage (1987). Deficits in communication and language are also common in youth with EOS (McDonell & McClellan, 2007). Research shows that youth with EOS have difficulty with tasks requiring greater capacity for information processing (Asarnow et al., 1994).

The *DSM-IV-TR* recognizes five subtypes of schizophrenia (McDonnell & McClellan, 2007):

- Paranoid Type—Characterized by hallucinations and persecutory delusions, without substantial disorganized behavior or speech.
- Catatonic Type—Rare, especially in EOS; it is marked by unresponsiveness to one's environment.
- Disorganized Type—Disorganized behavior and/or thought. May be too confused to provide descriptions of organized delusions and hallucinations.
- Undifferentiated Type—Meet criteria for schizophrenia but do not meet criteria for paranoid, disorganized, or catatonic types.
- Residual Type—Persons with schizophrenia who no longer manifest symptoms consistent with an active phase of illness, but still manifest negative symptoms, and other symptoms of the illness in a milder form.

Since EOS is a phasic disorder, individual variability must be considered when working with youth. Differences in clinical presentation of EOS across the phases must be taken into account during assessment and diagnosis. These phases and corresponding descriptions are listed below (McClellan & Werry, 2001; McDonnell & McClellan, 2007):

- Prodromal Phase—Prior to developing overt psychotic symptoms, most youth will experience some period of deteriorating function, which may include social isolation, idiosyncratic or bizarre preoccupations, unusual behaviors, academic problems and/or deteriorating self-care skills. However, while the presence of these problems should raise concerns, psychotic symptoms must be present before a diagnosis of schizophrenia can be made.
- Acute Phase—This is the phase in which youth often present, and is dominated by positive psychotic symptoms (i.e., hallucinations, delusions, formal thought disorder, bizarre psychotic behavior) and functional deterioration.
- Recovery Phase—This follows the acute phase, as the active psychosis begins to remit. This phase often has some on-going psychotic symptoms and may be associated with confusion, disorganization and dysphoria (state of anxiety and/or unease).
- Residual Phase—During this phase, positive psychotic symptoms are minimal. However, youth will still generally have on-going problems with “negative symptoms”, i.e., social withdrawal, apathy, and/or flat affect.
- Chronic Impairment—Some youth remain chronically impaired by persistent symptoms if they have not responded adequately to treatment.

Assessment

Proper assessment of EOS in youth is essential in early diagnosis, intervention, and treatment. Although no information on early intervention is available in the EOS literature, research has shown that the duration of untreated psychosis predicts poorer outcomes in adults with schizophrenia (Harrigan, McGorry & Hrstev, 2003). Unfortunately, EOS is often misdiagnosed because of its rarity and because its symptoms being similar to other mood disorders (McClellan & Werry, 2001). To prevent misdiagnosis and increase the chance for a better prognosis in youth, a complete, multi-informant, multi-method assessment is key (McDonnell & McClellan, 2007). The AACAP practice parameter recommends that the assessment also incorporate an understanding of the youth's developmental, social, educational, and psychological needs (McClellan & Werry).

A comprehensive diagnostic assessment should include interviews with both the youth and his family, a review of past records and other pertinent information, and a detailed evaluation of the psychotic symptoms (McClellan & Werry, 2001). Symptom presentation, course of illness, confounding factors, family psychiatric history, and a mental status examination are important issues that should be addressed during the assessment. During the initial assessment period, the clinician should choose both broadband (general screening tools) and narrowband (specific to disorder) measures in order to rule in/rule out other possible diagnoses or comorbid disorders.

One of the first steps in assessing EOS should be an examination by a primary care provider to rule out a medical reason for the youth's change from normal behavior. Many medical conditions, such as delirium, seizure disorders, central nervous system lesions, neurodegenerative disorders, and developmental disorders, can cause organic psychosis (McClellan & Werry, 2001). Psychotic symptoms brought on by substance abuse should also be ruled out. Other conditions that should be ruled out prior to a diagnosis of schizophrenia include psychotic mood disorders, behavioral/emotional disorders, schizoaffective disorder, Autism Spectrum Disorder, obsessive-compulsive disorder, and delusional disorders. Since most youth with psychotic symptoms do not have a psychotic disorder, there are three ways to differentiate typical from atypical psychotic symptoms (McDonnell & McClellan, 2007). To discern one symptom from another, clinicians should consider the following:

1. reports by youth are inconsistent, with no other documented evidence of a psychotic process;
2. qualitative reports which are not typical of psychotic symptoms; and
3. reported symptoms which occur only in specific situations.

Suggested assessment tools for schizophrenia are outlined in Table 2.

Table 2

Suggested Assessment Tools

Measure Type	Name of Measure	Who Completes	Data Generated
Clinical Interview	Schedule for Affective Disorders and Schizophrenia for School-Age Youth present and lifetime (K-SADS-P/L)	Clinician with Youth and Parent	Diagnosis
Clinical Interview	Structured Clinical Interview for DSM-IV, Childhood Diagnoses (KID-SCID)	Clinician with Youth and Parent	Diagnosis
Symptom Rating Scale	Scale for the Assessment of Positive Symptoms (SAPS)	Clinician with Youth	Symptom ratings
Symptom Rating Scale	Scale for the Assessment of Negative Symptoms (SANS)	Clinician with Youth	Symptom ratings
Symptom Rating Scale	Positive and Negative Syndrome Scale	Clinician with Youth	Symptom ratings
Behavior Checklist	Youth Self-Report (YSR)	Youth	Syndrome scale scores; competence scores
Behavior Checklist	Child Behavior Checklist (CBCL)	Parent	Syndrome scale scores; competence scores

Source: McDonnell & McClellan, 2007.

In addition, clinicians must acknowledge developmental, cultural, and intellectual factors which may impact assessment and diagnosis. This will allow the clinician to interpret clinical data correctly and to differentiate between appropriate and inappropriate behavior. It is also imperative that the clinician assesses not only for symptoms, but also for functional impairment and the degree to which the youth functions at home, school and in play.

Personality and projective tests are not indicated as a method of diagnosing schizophrenia in youth; research indicates no demonstrated ability to increase the diagnostic accuracy of EOS when using tools such as the Rorschach (McDonnell & McClellan, 2007).

Individuals having schizophrenia are at high risk for suicide. Although available statistics apply to the adult population, the high prevalence rate for suicide should be considered in assessing and treating youth. Studies have shown that 90 percent of youth who commit suicide have a mental disorder and up to 30 percent of the schizophrenic population will make an attempt in their lifetime

(Murphy, Cowan & Sederer, 2001), making monitoring youth with EOS for risk of suicide extremely important. A review of suicide assessment tools is provided in the *Collection's* "Youth Suicide" section.

Comorbidity

Youth suffering from EOS also have high rates of comorbid conditions (McDonnell & McClellan, 2007). These disorders include depression, anxiety, and externalizing disorders, such as attention deficit disorder (ADHD), conduct disorder, and oppositional defiant disorder (McClellan, Breiger, McCurry & Hlastla, 2003). In addition, developmental delays and cognitive difficulties are found at a high rate in youth with EOS; Autism Spectrum Disorder is a common first diagnosis and/or comorbid disorder (McDonnell & McClellan). In adolescents with EOS, comorbid substance abuse is also a major issue (Kumra, Thaden & Kranzler, 2005). While no research has been conducted with youth diagnosed with schizophrenia, research in adults with the disorder has shown that nicotine use is the most common form of substance abuse (NIMH, 2007).

Evidence-based Treatments

The AACAP Practice Parameter for treatment of EOS recommends a comprehensive, multimodal combination of both psychopharmacology and psychosocial therapies (McClellan & Werry, 2001). The AACAP also advises that treatment should be several factors, including treatment setting, the age of the youth, and the family environment. The focus of therapy, as set out by the AACAP, is to alleviate symptoms, reduce long-term mortality, and prevent relapse, while maintaining youth in their homes and communities (McClellan & Werry).

Currently, there are no pharmacological or psychosocial therapies with enough evidence in youth samples to meet the standards for empirically-supported treatments as defined by Chambless & Hollon (1998; Brown et al., 2008; McClellan & Werry, 2001). Thus, research on treatment of EOS is recent and sparse.

For this review, evidence-based treatments are divided into two categories: What Works and What Seems to Work. These treatments are discussed in the paragraphs which follow.

Pharmacological Treatment

Pharmacological treatment of youth diagnosed with EOS is modeled after treatment studies with adults since there are few controlled trials or studies of the efficacy and safety of psychopharmacological medications for youth with EOS (McClellan & Werry, 2001; Brown et al., 2008; Kodish & McClellan, 2008). In adults with schizophrenia, the use of antipsychotic medication is well-established and is considered a necessity in treatment (Mueser & McGurk, 2004). In youth and adults, traditional neuroleptics and atypical antipsychotics are most often the first medications used in treatment (McClellan & Werry; Mueser & McGurk). Compared to first-generation antipsychotics, atypical antipsychotic medications are at least as effective for positive symptoms in studies with adults and may be more helpful for negative symptoms (McClellan & Werry).

According to Brown et al., randomized double-blind studies in youth are limited to haloperidol, clozapine, risperidone, and olanzapine (2008). One of the largest studies to date indicated treatment response over an eight-week period was 53 percent for haloperidol, 74 percent for risperidone, and 88 percent for olanzapine (Sikich, Hamer, Bashford, Sheitman & Lieberman, 2004). Clozapine has documented efficacy in over 15 studies for treatment of schizophrenia in youth (Brown et al., 2008; McClellan & Werry, 2001). However, it is not considered a first-line agent in youth due to its considerable potential for adverse effects. Serious side effects include seizures and neutropenia, a blood condition in which the neutrophils—cells that defend the body against bacterial infections—are significantly reduced (McClellan & Werry; Godwin & Braden, 2009). These adverse side effects have been shown to occur at a higher rate in youth than in adults (McClellan & Werry). The AACAP

Practice Parameters recommend that clozapine be considered only after two trials of other antipsychotic medications because of the adverse affects associated with the medication (McClellan & Werry). Ziprasidone and molindone have also been shown to improve symptoms in youth with EOS (Meighan, Shelton & McDougle, 2004; Sikich et al., 2008).

Long-term monitoring of side effects is an essential component for any treatment regimen requiring antipsychotic agents (McClellan & Werry, 2001). A common side effect of atypical antipsychotics is weight gain, which can result in many general metabolic disorders in youth (Kowatch et al., 2005). Cognitive side effects, such as problems with word retrieval, working memory, and cognitive dulling, can also occur. Other side effects for both first and second generation antipsychotics include abnormal involuntary movements and neuroleptic malignant syndrome (McClellan & Werry; Brown et al., 2008). Youth may be at higher risk than adults for extrapyramidal side effects, i.e., repetitive, involuntary muscle movements or an undeniable urge to be moving. Because these medications may have serious side effects, parents and clinicians must have as much information as possible to make informed decisions about the risks of side effects and potential adverse reactions.

Preliminary data from a recent large-scale, multicenter trial, Treatment of Early Onset Schizophrenia Spectrum Disorders (TEOSS), found that second-generation/atypical antipsychotic medications did not demonstrate superior efficacy over traditional neuroleptic medications (i.e., molindone) (Sikich et al., 2008). This new evidence indicates that there may not be a difference in response rates for these two medications. Table 3 lists the pharmacological treatments for EOS.

Table 3

Pharmacological Treatments for EOS

What Works	Description
Currently no medication meets the criteria for a drug that works.	Not applicable.
What Seems to Work	Description
Traditional neuroleptics/first-generation antipsychotics	Molindone Haloperidol
Second-generation (atypical) antipsychotics	Clozapine Risperidone Olanzapine Ziprasidone

Sources: Brown et al., 2008; McClellan & Werry, 2001.

Psychological Treatment

Although no psychological treatments for EOS are considered evidence-based (Chambless & Hollon, 1998), evidence from adult studies has shown that family psychoeducation and support interventions (McDonell & Dyck, 2004) and Cognitive Behavioral Therapy (CBT) (Rector & Beck, 2001) have promise as adjunctive treatments to pharmacological treatment. In limited studies, these interventions have also been shown to be effective in reducing symptoms, increasing functioning, and decreasing cost of care in youth with EOS (Penn et al., 2005).

Family involvement in treatment for EOS is especially important because youth are usually dependent on their families (Brown et al., 2008). Evidence shows that family involvement can decrease the amount of time a youth spends in institutional care by ten months (Lenior, Dingemans, Linszen, de Haan & Schene, 2001). The AACAP Practice Parameters state that the goal of therapy is both to help the youth return to a premorbid level of functioning, i.e., prior to the development of the disorder, and to promote the mastery of age-appropriate developmental tasks (McClellan & Werry, 2001).

Table 4 lists the psychological treatments for EOS.

Table 4

Psychological Treatments for EOS

What Works	Description
Currently no psychological treatments meet criteria.	Not applicable
What Seems to Work	Description
Family psychoeducation and support	Helps to improve family functioning, problem-solving and communication skills, and decrease relapse rates.
Cognitive Behavioral Therapy (CBT)	Includes social skills training, problem-solving strategies, and self-help skills.

Sources: Brown et al., 2008; McClellan & Werry, 2001.

Treatment Considerations

Treatment protocols may vary, depending on the phase of illness (McClellan & Werry, 2001). Follow-up studies have shown that family acceptance, appropriate medication management and appropriate school placement are predictors of good response to treatment (Findling, Boorady & Sporn, 2007).

Specialized educational programs and/or vocational training programs may be indicated for some youth to address related cognitive and functional deficits (McClellan & Werry, 2001). Some youth will likely require more intensive community support services. There are some cases where the severity of symptoms necessitate long-term placement in a residential facility. However, as in treatment for all disorders in youth, the least restrictive setting option should always be utilized as appropriate. In addition to those treatments provided specifically for schizophrenia, other treatments may be needed to address comorbid conditions or other treatment implications, such as substance abuse, depression, and thoughts of suicide (McClellan & Werry).

Overall, a combination of pharmacological and psychosocial treatment is recommended (McClellan & Werry, 2001). Limited research has shown that combination treatment can reduce the risk of early transition to psychosis (McGorry et al., 2002).

Unproven Treatments

Psychodynamically-oriented therapies are considered to be potentially harmful for this population, thus their use is not recommended (U.S. Department of Health and Human Services, 1999). Case studies have described the use of electroconvulsive therapy (ECT) for youth with treatment-refractory schizophrenia. However, ECT does not appear to be as effective for schizophrenia as it is for mood disorders and should therefore be used for cases where several trials of medication therapy (including clozapine) have failed (McClellan & Werry, 2001). Social skills training and cognitive remediation are also not currently supported as treatments for EOS (Asarnow et al., 2004; Penn et al., 2004). In addition, because only the two psychological treatments listed in Table 4 have been studied for this population, any other psychological treatment for EOS would be considered unproven at this time.

Cultural Considerations

When assessing, diagnosing, and treating youth with mental health disorders, a clinician should take into consideration the youth's cultural background. Unfortunately, little is known about cultural differences in the prevalence or presentation of EOS. However, research has shown that minority

youth have a higher chance of being misdiagnosed with a behavior disorder or schizophrenia (DelBello, Lopez-Larson, Soutullo & Strakowski, 2001). Also, in some cultures and religious groups, certain delusions and hallucinations (e.g., hearing or seeing religious figures or spirits) are part of a standard religious practice. When taken out of context, cultural or religious beliefs could be misinterpreted as possible psychosis (McClellan & Werry, 2001). To avoid misdiagnosis, a clinician should carefully assess minority youth, especially when the presenting complaint involves psychotic symptoms (Youngstrom, 2007). Garb suggests that, when assessing minority youth, clinicians should gather family history data at the symptom level, if possible, and be cautious about face value interpretation due to the potential for cultural bias (1998).

Clinicians treating youth with EOS should acknowledge family dynamics in developing treatment plans. One cultural difference noted in EOS research is the role of expressed emotion as a risk factor for EOS. Unlike in Caucasian households, where a lower level of expressed emotion may buffer the consequences of schizophrenia, a higher level of expressed emotion in African American families is not shown to be a predictor of relapse (Kodish & McClellan, 2008).

Sources

American Psychiatric Association (APA). (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.) (DSM-IV-TR). Washington, DC: Author.

Asarnow, R., Asamen, J., Granholm, E., Sherman, T., Watkins, J., & Williams, M. (1994). Cognitive/neuropsychological studies of children with a schizophrenic disorder. *Schizophrenia Bulletin*, 20, 647-670.

Asarnow, J., & Tompson, M. (1999). Childhood-onset schizophrenia: A follow-up study. *European Child and Adolescent Psychiatry*, 8 (Suppl.), 12-19.

Asarnow, J., Tompson, M., & McGrath, E. (2004). Childhood-onset schizophrenia: Clinical and treatment issues. *Journal of Child Psychology and Psychiatry*, 45, 180-194.

Bettes, B., & Walker, E. (1987). Positive and negative symptoms in psychotic and other psychiatrically disturbed children. *The Journal of Child Psychology & Psychiatry*, 28, 555-567.

Brown, R., Antonuccio, D., DuPaul, G., Fristad, M., King, C., Leslie, L., McCormick, M., Pelham, W., Piacentini, J., & Vitiello, B. (2008). Bipolar disorder. *Childhood mental health disorders: Evidence base and contextual factors for psychosocial, psychopharmacological, and combined interventions* (pp. 87-96). Washington, DC: American Psychological Association.

Butzlaff, R., & Hooley, J. (1998). Expressed emotion and psychiatric relapse. *Archives of General Psychiatry*, 55, 547-552.

Caplan, R. (1994). Communication deficits in children with schizophrenia spectrum disorders. *Schizophrenia Bulletin*, 20, 671-674.

Caplan, R., Guthrie, D., Gish, B., Tanguay, P., & David-Lando, G. (1989). The kiddie formal thought disorder scale: clinical assessment, reliability, and validity. *Journal of the American Academy of Child and Adolescent Psychiatry*, 28, 408-416.

Carpenter, W. (2004). What causes schizophrenia? *ACP Medicine*, 27. [Online]. Available: http://www.acpmedicine.com/wnim/acp_0604.htm#L6. Not Available January 2011.

Chambless, D., & Hollon, S. (1998). Defining empirically supported therapies. *Journal of Consulting and Clinical Psychology*, 66, 7-18.

- DeBello, M., Lopez-Larson, M., Soutullo, C., & Strakowski, S. (2001). Effects of race on psychiatric diagnosis of hospitalized adolescents: A retrospective chart review. *Journal of Child and Adolescent Psychopharmacology*, *11*, 95-103.
- Findling, R., Boorady, R., & Sporn, A. (2007). The treatment of bipolar disorder and schizophrenia in children and adolescents. *Medscape CME*.
- Garb, H. (1998). *Studying the clinician: Judgment research and psychological assessment*. Washington, DC: American Psychological Association.
- Godwin, J., & Braden, C. (2009). Neutropenia. *Medscape eMedicine from WebMD*. [Online]. Available: <http://emedicine.medscape.com/article/204821-overview>. [May 2010].
- Harrigan, S., McGorry, P., & Hrstev, H. (2003). Does treatment delay in first-episode psychosis really matter? *Psychological Medicine*, *33*, 97-110.
- Kim, M., Ha Hyon, T., & Kwon Soo, J. (2004). Neurological abnormalities in schizophrenia and obsessive-compulsive disorder. *Medscape*.
- Kodish, I., & McClellan, J. (2008). In M. Hersen & D. Reitman (Eds.). *Handbook of psychological assessment, case conceptualization, and treatment: Volume 2, Children and Adolescents* (pp. 405-443). Hoboken, NJ: John Wiley & Sons.
- Kowatch, R., Fristad, M., Birmaher, B., Wagner, K., Findling, R., & Hellander, M. (2005). Treatment guidelines for children and adolescents with bipolar disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, *44*, 213-235.
- Kumra, S. (2008). Digging deeper using neuroimaging tools reveals important clues to early-onset schizophrenia. *Journal of the American Academy of Child and Adolescent Psychiatry*, *47*, 1103-1104.
- Kumra, S., Thaden, E., & Kranzler, H. (2005). Correlates of substance abuse in Adolescents with treatment-refractory schizophrenia and schizoaffective disorder. *Schizophrenia Research*, *73*, 369-371.
- Lenior, M., Dingemans, P., Linszen, D., de Haan, L., & Schene, A. (2001). Social functioning and the course of early-onset schizophrenia: Five-year follow-up of a psychosocial intervention. *British Journal of Psychiatry*, *179*, 53-58.
- McClellan, J., Breiger, D., McCurry, C., & Hlastla, S. (2003). Premorbid functioning in early onset psychotic disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, *42*, 666-672.
- McClellan, J., & Werry, J. (2001). Practice parameter for the assessment and treatment of children and adolescents with schizophrenia. *Journal of the American of Child & Adolescent Psychiatry*, *40* (Suppl.7), 4S-23S.
- McDonell, M., & Dyck, D. (2004). Multiple family group treatment as an effective intervention for children suffering from psychological disorders. *Clinical Psychology Review*, *24*, 685-706.
- McDonell, M., & McClellan, J. (2007). Early-onset schizophrenia. In E. Mash & R. Barkley (Eds.), *Assessment of childhood disorders* (4th ed.) (pp. 526-550). New York: Guilford Press.

- McGorry, P., Yung, A., Phillips, L., Yuen, H., Francey, S., Cosgrave, E., et al. (2002). Randomized controlled trial of interventions designed to reduce the risk of progression to first-episode psychosis in a clinical sample with subthreshold symptoms. *Archives of General Psychiatry*, *59*, 921-928.
- Meighen, K., Shelton, H., & McDougale, C. (2004). Case report: Ziprasidone treatment of two adolescents with psychosis. *Journal of Child and Adolescent Psychopharmacology*, *14*, 137-142.
- Mueser, K., & McGurk, S. (2004). Schizophrenia. *The Lancet*, *363*, 2063-2072.
- Murphy, M., Cowan, R., & Sederer, L. (2001). Disorders of childhood and adolescence. *Blueprints in psychiatry* (2nd ed.) Malden, Mass: Blackwell Science, Inc., 42.
- National Institute of Mental Health (NIMH). (2001). *Childhood-onset schizophrenia: an update from the National Institute of Mental Health*. [Online]. Available: <http://www.nimh.nih.gov/publicat/schizkids.cfm>. Not available January 2011.
- National Institute of Mental Health (NIMH). (2007). *Schizophrenia*. [Online]. Available: <http://www.nimh.nih.gov/health/publications/schizophrenia/complete-index.shtml>. [May 2010].
- Pavuluri, M., Herbener, E., & Sweeney, J. (2004). Psychotic symptoms in pediatric bipolar disorder. *Journal of Affective Disorders*, *80*, 19-28.
- Penn, D., Mueser, K., Tarrier, N., Gloege, A., Cather, C., Serrano, D. & Otto, M. (2004). Supportive therapy for schizophrenia: Possible mechanisms and implications for adjunctive psychosocial treatments. *Schizophrenia Bulletin*, *30* (1), 101-112.
- Penn, D., Waldheter, E., Perkins, D., Mueser, K., & Lieberman, J. (2005). Psychosocial treatment for first-episode psychosis: A research update. *American Journal of Psychiatry*, *162*, 2220-2232.
- Rector, N. & Beck, A. (2001). Cognitive behavioral therapy for schizophrenia: An empirical review. *Journal of Nervous and Mental Disease*, *189*, 278-287.
- Rosenfarb, I., Bellack, A. & Aziz, N. (2006). Family interactions and the course of schizophrenia in african american and white patients. *Journal of Abnormal Psychology*, *115*, 112-120.
- Sikich, L., Frazier, J., McClellan, J., Findling, R., Vitiello, B., Ritz, L., Ambler, D., Puglia, M., Maloney, A., Michael, E., De Jong, S., Slifka, K., Noyes, N., Hlastala, S., Pierson, L., McNamara, N., Delporto-Bedoya, D., Anderson, R., Hamer, R., & Lieberman, J. (2008). Double-blind comparison of first- and second-generation antipsychotics in early-onset schizophrenia and schizoaffective disorder: Findings from the treatment of early-onset schizophrenia spectrum disorders study. *The American Journal of Psychiatry*, *165*, 1420-1431.
- Sikich, L., Hamer, R., Bashford, R., Sheitman, B., & Lieberman, J. (2004). A pilot study of risperidone, olanzapine, and haloperidol in psychotic youth: A double-blind, randomized, 8-week trial. *Neuropsychopharmacology*, *29*, 133-145.
- Tibbok, P., & Warneke, L. (1999). Obsessive-compulsive disorder in schizophrenia: epidemiologic and biologic overlap. *Journal of Psychiatry Neuroscience*, *24* (1).
- U.S. Department of Health and Human Services. (1999). *Mental Health: A Report of the Surgeon General*. Rockville, MD.

Werry, J., McClellan, J., & Chard, L. (1991). Childhood and adolescent schizophrenic, bipolar, and schizoaffective disorders: A clinical and outcome study. *Journal of the American Academy of Child and Adolescent Psychiatry*, 30, 457-465.

Youngstrom, E. (2007). Pediatric bipolar disorder. In E. Mash & R. Barkley (Eds.). *Assessment of childhood disorders* (4th ed.) (pp. 253-304). New York: Guilford Press.

Additional Resources

Gordon, C. (1992). Childhood-Onset Schizophrenia, in E. Paschal, R. Peschel, C. Howe, and J. Howe (Eds.). *Neurobiological Disorders in Children and Adolescents*. San Francisco: Jossey-Bass Publishers.

Torrey, E. *Surviving Schizophrenia: For Families, Consumers, and Providers* (3rd ed.). Harper and Row, 1995.

Organizations

American Academy of Child & Adolescent Psychiatry (AACAP)

Schizophrenia in children—Facts for Families
http://www.aacap.org/cs/root/facts_for_families/schizophrenia_in_children

Mental Health America (MHA) (formerly National Mental Health Association)

2000 N. Beauregard Street, 6th Floor — Alexandria, VA 22311
703-684-7722 or 800-969-6642; Helpline: 800-273-TALK
<http://www.mentalwellness.com/mentalwellness>

MentalWellness.com

<http://www.mentalwellness.com>

National Alliance for Mental Illness (NAMI)

Early Onset Schizophrenia
http://www.nami.org/Content/ContentGroups/Helpline1/Early_Onset_Schizophrenia

National Alliance for Research on Schizophrenia and Depression (NARSAD)

60 Cutter Mill Road, Suite 404 — Great Neck, NY 11021
<http://www.narsad.org>

U.S. Department of Health and Human Services

National Institute of Mental Health (NIMH)

<http://www.nimh.nih.gov>

Substance Abuse and Mental Health Services Administration (SAMHSA)

National Mental Health Information Center
<http://mentalhealth.samhsa.gov>

SUBSTANCE USE DISORDERS

Introduction

Causes and Risk Factors

Diagnostic Categories

Substance Dependence

Substance Abuse

Comorbidity

Assessment

Evidence-based Treatments

Psychological Treatments

Pharmacological Treatments

Unproven Treatments

Cultural Considerations

Introduction

It is not uncommon for adolescents to experiment with a variety of substances. However, studies have shown that children who experiment with substances at a young age are more likely to use other drugs later in life (Focus Adolescent Services, 2000). For example, an estimated 40 percent of youth who begin drinking at or before the age of 14 years will become dependent on alcohol (Schneider Institute for Health Policy, 2001). Some adolescents' exposure may be limited to experimentation, but others may develop a dependency, potentially experiment with other dangerous drugs, and even cause significant harm to themselves and others.

In a national survey conducted in 2003, half of all high school seniors reported that they had tried illicit drugs at least once (Snyder & Sickmund, 2006). The survey also revealed that 41 percent of 10th grade students and 23 percent of 8th grade students had tried illegal drugs. Marijuana was the most frequently-used drug, as reported by 46 percent of the 12th grade students participating in the survey. More than three-quarters of these students also reported experimenting with alcohol: recent heavy drinking was reported by 28 percent of seniors, 22 percent of 10th graders, and 12 percent of 8th graders. Another survey conducted by the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA) examined the past year and lifetime prevalence rates for alcohol use among youth ages 12 to 17 (National Survey on Drug Use and Health, 2007). Table 1 outlines prevalence rates.

Table 1

Substance Use Prevalence Rates among Youth Ages 12 to 17

Substance	Past Year Prevalence Rate by Percent	Lifetime Prevalence Rate by Percent
Alcohol	31.8	39.4
Cigarettes	15.7	23.7
Marijuana	12.5	16.2
Inhalants	3.9	9.6
Cocaine	1.5	2.1
Ecstasy	1.3	1.8
LSD	0.5	0.8

Source: SAMHSA, National Survey on Drug Use and Health, 2007.

These findings are alarming because substance use among youth has been associated with a number of negative consequences, including physical aggression, academic and occupational problems, delinquency and criminal behavior, developmental problems, and long-term health problems (U.S. Department of Health and Human Services, 2007). In addition, children and adolescents who become chronic substance users often develop psychological or social problems. Studies of males entering the juvenile justice system confirm the link between substance use and crime (Gehshan, 2000). Complicating matters even further is the fact that many adolescents who abuse substances have a diagnosable mental health disorder. According to the National Comorbidity Study, 41 to 65 percent of individuals with a lifetime substance abuse disorder also have a lifetime history of at least one mental health disorder and about 51 percent of those with one or more lifetime mental health disorders also have a lifetime history of at least one substance use disorder (U.S. Department of Health and Human Services, 1999). These rates are highest in the 15 to 24 year-old age group (Kessler et al., as cited by the U.S. Department of Health and Human Services). One theory suggests that individuals in this age group may abuse drugs in an effort to self-medicate for a co-occurring mental disorder. In 2004, it was estimated that 1.4 million youth nationwide were in need of substance abuse treatment and fewer than 10 percent of them received services (Hills, 2007).

Substance use is frequently perceived differently than substance abuse. In the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR)*, substance-related disorders include substance dependence and substance abuse (American Psychiatric Association [APA], 2000). Substance abuse is defined as a maladaptive pattern of substance use manifested by recurrent and significant adverse consequences related to the repeated use of substances (APA). This section will utilize both terms as each was used in the literature.

Causes and Risk Factors

There are a number of factors that place youth at a higher risk for substance use. One study identified several of the risk factors for adolescent substance use (Vega, Zimmerman, Warheit, Apospori & Gil, 1993):

- perceived peer substance use;
- peer approval;
- low family pride;
- delinquency;
- willingness to engage in non-standard behavior;
- family substance use problems; and
- parent smoking.

Buu and her colleagues (2009) examined the long-term effects of family and neighborhood risk factors on adolescent substance use. The study found that parental substance use disorders, family socioeconomic status, family mobility, neighborhood residential instability, and neighborhood environmental change placed adolescents at risk for developing substance use disorders. Having a mental health disorder has also been found to place youth at a higher risk for developing a substance use disorder (Bukstein, 1998).

A youth's vulnerability to substance use is also increased by their social development and peer influences. Accordingly, a child or adolescent who is highly susceptible to these factors has a greater risk of developing a substance use disorder (Leshner, 2001). These risk factors may differ significantly during different phases of the youth's development. Parental and peer influences are often critical in early phases of substance use, while the influence of peers may increase as the child gets older (SAMHSA, 1999). Recent studies have also revealed an association between higher

levels of substance use and an adolescent's pubertal stage (not necessarily chronological age) because adolescents entering puberty at an earlier age also enter the risk period earlier (Patton et al., 2005).

Another major risk factor for adolescent substance abuse is the presence of childhood conduct problems (Brook et al., as cited by Kamon, Budney & Stanger, 2005). Substance abuse and conduct problems share important risk factors, including family conflict, poor parental monitoring, parental substance use, academic problems, and association with deviant peers (Anderson and Henry, Brook et al., as cited by Kamon, Budney & Stanger). More than half of adolescents with substance abuse problems also experience conduct problems, which can make treatment for substance abuse particularly challenging (Kaminer et al., as cited by Kamon, Budney & Stanger).

A core concept has evolved, based on scientific study which suggests that addiction is a brain disease that develops over time as a result of the initially voluntary behavior of substance use. Long-term substance use causes profound changes in brain structure and function, which result in uncontrollable compulsive drug or alcohol craving, seeking, and substance using (Leshner, 2001). Recent studies have also shown that one form of substance abuse—binge drinking—damages the adolescent brain more than the adult brain. Examination of differences in the effects of alcohol on receptor activity in the hippocampus of adolescents and adults reveals the impact of alcohol on these age groups (White, 2004). These differences suggest that adolescents are more vulnerable than adults to the impact of alcohol on learning and memory. Heavy drinking in early or middle adolescence, with resulting cortical damage, can lead to diminished control over cravings for alcohol and to poor decision-making (White). Thus, addiction must be viewed as a multifaceted disease.

Studies have also linked a gene to alcohol addiction. The CREB gene, so-named because it processes a protein called CREB, is involved in the process of alcohol tolerance, dependence, and withdrawal symptoms (Davis, 2004). Studies have linked this gene to anxiety-like behaviors and preference to alcohol. There is also data which supports the notion that some individuals who abuse alcohol have brain chemistries which predispose them to drinking (Personal Communication with Dr. Anita Everett, Former Inspector General for the Commonwealth of Virginia, July 2002). According to Leshner (2001), an individual who abuses substances over time loses substantial control over his or her voluntary behavior. For many individuals, these behaviors are truly uncontrollable, just like the behavioral demonstration of other brain diseases. Thus, once an individual is addicted to a substance, the nature of the illness does not vary significantly from other brain diseases.

Diagnostic Categories

According to the *DSM-IV-TR*, there are two categories of substance use disorders, substance dependence and substance abuse (APA, 2000). A child or adolescent can be diagnosed with substance dependence for all classes of substances, except for caffeine, and can be diagnosed with substance abuse for all substances, except for caffeine and nicotine. These categories are discussed below.

Substance Dependence

Substance dependence is a "...cluster of cognitive, behavioral, and physiological symptoms indicating that the individual continues to use the substance despite significant substance-related problems" (APA, 2000). Recurrent substance use associated with substance dependence can lead to withdrawal and tolerance, which are two symptoms of physiological dependence. Tolerance is the need for larger amounts of the substance to achieve the desired intoxication effects, and withdrawal is an intense and unpleasant cluster of symptoms which has physiological and cognitive symptoms associated with it. Withdrawal symptoms generally vary across substances. Youth who suffer from substance dependence often use the substance because they are trying to avoid or relieve themselves of the withdrawal symptoms, despite the negative consequences. Hence, according to

the APA, substance dependence is a maladaptive pattern of substance use that leads to clinical significant impairment or distress which includes three or more of the following:

- symptoms occurring anytime within a 12-month period;
- tolerance;
- withdrawal;
- taking larger quantities of substance over a longer period than intended;
- persistent and possibly unsuccessful efforts to cut down or control substance use;
- significant amounts of time spent obtaining, using, or recovering from the effects of the substance;
- important social, occupational, or recreational activities are reduced or no longer participated in because of the substance use; and
- continues use of the substance despite recognizing the role of substance use in persistent or recurrent physical or psychological problems.

Substance Abuse

The second category of substance use disorders is substance abuse, which is similar to substance dependence, but does not require as many symptoms and may be less severe (APA, 2000). Substance abuse is a maladaptive pattern of substance use that leads to clinical significant impairment or distress and includes one or more of the following symptoms exhibited within the past year, as outlined by the APA:

- a failure to fulfill obligations at work, school or home;
- the youth engages in recurrent use of substance in situations that can be physically harmful (e.g., driving a vehicle while under the influence of the substance);
- recurrent legal problems related to substance use (e.g., arrested for public intoxication);
- continued substance consumption, regardless of recurrent or persistent interpersonal or social problems which are caused or exacerbated by substance use (e.g., violent arguments with significant other); and
- these symptoms must have never met the criteria for substance dependence for the class of substance (APA).

Comorbidity

Mental disorders commonly found among children and adolescents diagnosed with a substance use disorder include conduct disorder (CD), oppositional defiant disorder (ODD), attention deficit hyperactivity disorder (ADHD), major depressive disorder (MDD), dysthymic disorder, bipolar disorder, generalized anxiety disorder (GAD), social phobia, posttraumatic stress disorder (PTSD), and bulimia nervosa (Bukstein, 1998). According to Kessler et al. (1996), data from this study indicates that, in nearly 90 percent of individuals with both mental health and substance use disorders, the mental disorder develops before the substance use disorder. Moreover, children will often be diagnosed with a mental health disorder in their pre-teen or early teen years, with the median age being age 11. The substance use disorder has been found to develop a few years later, between the ages of 17 and 21. It is important to note that a diagnosis does not ensure that youth will abuse alcohol or other drugs, but the high statistical coincidence occurring in these two conditions is significant.

According to epidemiologic data, 9 percent of adolescent females and 20 percent of adolescent males meet the adult diagnostic criteria for an alcohol use disorder (Cohen et al., 1993). Among adolescents and young adults with a substance abuse disorder, 41 to 65 percent also have a mental health disorder (U.S. Department of Health and Human Services, 1999). Overall, the lifetime co-occurrence of mental and addictive disorders has been estimated at approximately 50 percent (Kessler et al., 1996).

In recent years, evaluations of youth with co-occurring substance abuse and mental health disorders reveal very distinct patterns. Adolescents with co-occurring disorders typically have an earlier onset of substance use, engage in substance use more frequently, use substances for longer periods, and have greater rates of family, school, and legal issues (Hills, 2007). As noted by the President's New Freedom Commission on Mental Health, if either the substance abuse or the co-occurring disorder remains untreated, both usually worsen (2003). Additional complications often arise, including the risk for other medical problems, unemployment, homelessness, incarceration, suicide, and separation from families and friends (New Freedom Commission on Mental Health).

This comorbidity and lack of adequate treatment have significant clinical implications. First, these children and adolescents are particularly vulnerable to relapses and rehospitalization (Mueser, Drake & Miles, 1997). Studies have found that the most common cause of psychiatric relapse today is the use of alcohol, marijuana, and cocaine; conversely, the most common cause of relapse of substance use is an untreated psychiatric disorder (SAMHSA, 1997). In addition, individuals with co-occurring disorders exhibit greater depression and suicidality, violence, and noncompliance with medications and other treatments (Mueser, Drake & Miles). They also face greater difficulties with social problems, such as housing instability and homelessness, increased family burden, and increased vulnerability to HIV infection (Mueser, Drake & Miles). Thus, in order to ensure more positive outcomes, it is important that service providers recognize that adolescents with a co-occurring mental health disorder have special needs and may require a greater number of interventions and community resources.

Assessment

As stated earlier, a large number of adolescents experiment with alcohol and other drugs before becoming adults (Bukstein, 1998). However, in order to receive a diagnosis of substance use disorder, these youth must demonstrate significant levels of impairment in their daily lives, such as poor social relationships, declining academic performance, or chronic substance-related absences, suspensions, or expulsions from school (Bukstein).

When assessing youth suspected of co-occurring disorders, the primary goal is to determine whether substance use also exists and whether it fits the criteria set forth in *DSM-IV-TR* for substance use disorders (Bukstein, 1998). This can be assessed using diagnostic instruments, such as the Kiddie-Schedule for Affective Disorders and Schizophrenia and Lifetime Version or the Diagnostic Interview Schedule for Children. These diagnostic interviews use *DSM-IV* criteria to collect extensive information about substance related symptoms. This determination should also be based on a comprehensive developmental, social and medical history. Evaluators should obtain the necessary information from a variety of sources, including the youth, parents, family members, school personnel, previous treatment records, and perhaps other involved agencies (SAMHSA, 1997).

Once clinicians have established that the youth is using substances, they must then determine the nature of the use pattern. As set forth in the *DSM-IV-TR*, there are two categories of substance use disorders. The first diagnosis—substance abuse—is ascribed to a child or adolescent when their repeated use of alcohol or other drugs leads to physical, emotional, or social problems, but does not include compulsive use or addiction. The second category—substance dependence—is diagnosed when a child or adolescent persists in using alcohol or other drugs, despite symptoms of tolerance and withdrawal, or attempts to control the use. Information regarding patterns of use, including age of onset, progression of use for specific substances, frequency, and variability of use, and the types of substances used, is necessary in making this diagnosis (Bukstein, 1998).

Because the most common feature of substance use disorders in adolescents is impairment in psychosocial and academic functioning, the evaluator must determine whether the symptoms the youth displays are attributable to the substance use, are the result of preexisting or current problems,

or are a combination of both (Bukstein, 1998). During the preliminary evaluation, clinicians should routinely screen for any co-occurring mental disorders. In addition, the assessment should also attempt to identify other social and environmental factors, such as family or academic problems, which may affect the child's or adolescent's functioning.

Recognition of co-occurring substance use and mental health disorders is often difficult, and clinicians will have to keep in mind several issues when conducting the evaluation. First, the youth may display denial, distortion, and minimization when discussing substance use; therefore, the details provided by them may not be reliable. Furthermore, in cases of co-occurring mental health disorders, the reasons for the distressing symptoms and behaviors may not be fully understood by the youth and their family. Therefore, the information provided during the evaluation may not be particularly revealing (Bukstein, 1998). Moreover, reports of substance use may be distorted by the cognitive and emotional aspects of any underlying mental health disorder, further decreasing the validity of self-reporting (Mueser, Drake & Miles, 1997).

Clinicians must also consider that youth with co-occurring mental health and substance use disorders often present different symptoms than substance abusers who do not have a mental health disorder (Mueser, Drake & Miles, 1997). They may use lower amounts of alcohol and/or drugs and experience different consequences from use. Furthermore, some research shows that the youth who are dually-diagnosed with both a substance use and mental health disorder are less likely to develop dependence and tend to report less subjective distress resulting from their use (Mueser, Drake & Miles). Based on these differences, standard instruments may not identify the substance use disorder in these youth and the clinician may have to rely primarily on clinical interviews and patient histories.

There are a number of assessment tools specifically designed to measure diagnostic criteria for substance use disorders, the nature of substance use, and impairment in functioning among adolescents:

- Adolescent Diagnostic Interview (ADI; Winters & Henly, 1993) is a structured interview which assesses *DSM-IV* criteria for substance use disorders and measures the adolescent's level of functioning across several domains (e.g. peers, school behavior, and home behavior). The test-retest and interrater reliability is well-established for this instrument (Winters, 1999).
- Adolescent Drug Abuse Diagnosis (ADAD; Friedman & Utada, 1989) instrument is a structured comprehensive interview that assesses substance use and nine life problems and can be used for both treatment planning and assessing behavioral change over time. It has good interrater reliability and good test-retest reliability. It also has adequate external validity for most of the nine life problems scales (Winters, 1999).
- Adolescent Self-Assessment Profile (ASAP; Wanberg, 1992) is a self-report instrument that provides a differential assessment for an adolescent's substance use and psychosocial adjustment. It can be used in treatment to assess behavior and adjustment changes across time, and it has excellent reliabilities and good content and construct validity (Winters, 1999).
- American Drug and Alcohol Survey (ADAS; Oetting, Beauvais & Edwards, 1985) is a self-report instrument that assesses levels of substance use. This instrument can assess the magnitude of substance use among youth and is most useful at the local level.
- Chemical Dependency Assessment Profile (CDAP; Harrell, Honaker & Davis, 1991) is a multiple-choice and true-false self-report measure that assesses history of chemical use, patterns of use, reinforcement mechanisms, perception of situational stressors, and attitudes related to treatment, self-concept, and interpersonal relations. Psychometric properties for this measure could not be found (Winters, 1999).
- Juvenile Automated Substance Abuse Evaluation (JASAE; ADE, Inc., 1987) is a computer-assisted screening and assessment instrument that assesses substance use and abuse among juveniles, as well as attitude and life stressors. It is a brief assessment and is often used in conjunction with more extensive interviews. Construct validity and one month test-retest reliability has been established (Miller, 1999; Winters, 1999).

- Personal Experience Inventory (PEI; Winters & Henly, 1989) is a comprehensive assessment that assesses substance use and related problems, problem severity, and psychosocial risk factors. The scales have been found to be reliable and valid for assessing substance use disorders in African American, Latino, Asian American, and Native American populations (Winters, 1999).

Table 2 lists the assessment tools which may be used for substance use disorder.

Table 2

Suggested Assessment Tools for Substance Use Disorder

Name of Measure	Measure Type	Who Completes	Generated Information
Kiddie-Schedule for Affective Disorders (K-SADS) and Schizophrenia and Lifetime Version	Clinical Interview	Clinician with Youth and Parent	Diagnosis
Diagnostic Interview Schedule (DISC)	Clinical Interview	Clinician with Youth and Parent	Diagnosis
Adolescent Diagnostic Interview (ADI)	Clinical Interview	Youth	Diagnosis
Adolescent Drug Abuse Diagnosis (ADAD)	Clinical Interview	Youth	Symptom ratings
Adolescent Self-Assessment Profile (ASAP)	Self-Rating Scale	Youth	Symptom ratings
American Drug and Alcohol Survey (ADAS)	Self-Rating Scale	Youth	Symptom ratings
Chemical Dependency Assessment Profile (CDAP)	Self-Rating Scale	Youth	Symptom ratings
Juvenile Automated Substance Abuse Evaluation (JASAE)	Self-Rating Scale	Youth	Symptom ratings
Personal Experience Inventory (PEI)	Self-Rating Scale	Youth	Symptom ratings

Sources: Commission on Youth Graphic of citations provided in text.

Evidence-based Treatments

Numerous methods are used to treat children and adolescents with a substance use disorders. For this review, evidence-based treatments are divided into three categories: What Works, What Seems to Work, and What Does Not Work. These treatments, which are discussed in the following paragraphs, are also outlined in Table 3.

Table 3

Summary of Treatments for Substance Use Disorder

What Works	Description
Cognitive Behavioral Therapy (CBT)	A structured therapeutic approach that involves teaching youth about the thought-behavior link and working with them to modify their thinking patterns in a way that will lead to more adaptive behavior in challenging situations.
Family Therapy	A family-based therapy aimed at providing education, improving communication, and functioning among family members, and reestablishing parental influence through parent management training.
Multisystemic Therapy (MST)	An integrative, family-based treatment with a focus on improving psychosocial functioning for youth and families.
What Seems to Work	Description
Behavioral Therapies	Behavioral therapies focus on identifying specific problems and areas of deficit and working on improving these behaviors.
Motivational Interviewing	A brief treatment approach aimed to increase motivation for behavior change. It is focused on expressing empathy, discrepancies, avoiding argumentation, rolling with resistance, and supporting self-efficacy.
Some Medications	Psychopharmological medication can be used for detoxification purposes, as directed by a doctor. Medication may also be used to treat co-existing mental health disorders.
What Does Not Work	Description
Interpersonal and Psychodynamic Therapies	Interpersonal and psychodynamic therapies are methods of individual counseling that are often incorporated into the treatment plan and focus on unconscious psychological conflicts, distortions, and faulty learning.
Client-centered Therapies	A type of therapy focused on creating a non-judgmental environment, such that the therapist provides empathy and unconditional positive regard. This facilitates change and solution making on behalf of the youth.
Psychoeducation	Programs aimed at educating youth on substance use and may cover topics like peer pressure and consequences of substance use.
Project CARE	A program aimed at raising awareness about chemical dependency among youth through education and training.
Twelve-step Programs	A twelve-step program that uses the steps of Alcoholics Anonymous as principles for recovery and treating addictive behaviors.
Process Groups	A type of psychotherapy that is conducted in a small group setting. Groups can be specialized for specific purposes and therapy utilizes the group as a mechanism of change.

Sources: Commission on Youth Graphic of citations provided in text.

Psychological Treatments

Numerous psychological treatments are used to treat youth with substance use disorders. These are discussed below.

Cognitive Behavioral Therapy – The goal of Cognitive Behavioral Therapy (CBT) is the identification and modification of maladaptive thinking patterns to reduce negative thoughts, feelings, and behavior. For substance abusers, the focus of this intervention is generally relapse prevention (National Institute on Drug Abuse [NIDA], 1999). CBT can help the adolescent develop greater self-control, identify environmental and internal triggers leading to relapse, and develop strategies for dealing with stressors, triggers, and lapses into substance use. The role of clinicians is to aid the youth in anticipating the problems that they are likely to meet and to help them to develop effective coping strategies. CBT also includes elements directed toward substance use, such as relapse prevention, but also addresses social skills, anger control, and problem-solving (*Journal of the American Academy of Child and Adolescent Psychiatry*, 2005).

Several research studies support CBT as effective in treating a wide range of substance use disorders (Miller & Wilbourne, 2002; Stephens, Roffman & Curtin, 2000; Waldron, Slesnick, Brody, Turner & Peterson, 2001). Studies have also indicated that CBT has positive effects with adolescents treated for mental health disorders such as depression (Bukstein, 1998). In addition, studies have shown that CBT is effective for adolescents who have been diagnosed with conduct disorder and co-occurring substance abuse disorders (Kazdin, as cited by the *Journal of the American Academy of Child and Adolescent Psychiatry*, 2005).

Family Therapy – Although family therapy is considered an important modality in the treatment of adolescents with substance use disorders (Bukstein, 1998), clinicians and consumers should be aware that family therapy is a very broad term that encompasses a large number of treatment programs. Not all of these family therapies have been tested with children and adolescents with substance use disorder. Thus, it is important and relevant to ask “what kind of family therapy” when family therapy is recommended. Common elements across most family therapies include:

- (a) engagement of the family (versus working with the child alone);
- (b) focus on education about substance use and abuse;
- (c) emphasis on communication skills to improve family functioning; and
- (d) to reestablish parental influence through parent management training (Bukstein, 1998).

One program with empirical support is Multidimensional Family Therapy (MDFT), an outpatient, family-based treatment for adolescents with serious substance abuse issues (Liddle, 2009). This approach views drug use in terms of network of influences (individual, family, peer, community) and encourages treatment across settings in multiple ways. Sessions may be held in a clinic, home, court, school, or other community locations. For the child or adolescent, the emphasis of treatment is on skill-building, and the treatment plan often incorporates developmental tasks such as decision-making, negotiation, problem-solving skills, vocational skills, communication, and dealing with stress (Liddle, 2009). Parallel sessions are held with family members, in which parents examine their parenting style, learn to distinguish influence from control, and learn to have a positive and developmentally appropriate influence on their child. Research supports the use of this type of therapy for adolescents with substance use disorders (Friedman, Terras & Kreisher, 1995; Schmidt et al., 1996; NIDA, 1999).

A method of strategic family therapy has also been tested and found effective with substance using adolescents. Szapocznik et al. (1989) tested their strategic model against usual methods. The model included educational information for the parents and youth, communication skills training, and cultural training to integrate a family’s cultural practices into treatment.

Multisystemic Therapy – One promising intervention program for youth with co-occurring substance use and mental health disorders is Multisystemic Therapy (MST). MST aims to address the multifaceted nature of antisocial behavior at the individual, family, and community levels (Ouimette, 2007). This form of therapy is intended to address serious antisocial behavior in children and adolescents who abuse substances. Therapeutic efforts target the child's behavior within the context of the family environment, the school environment, and the neighborhood and community (NIDA, 1999). Treatment occurs in each of the child's natural settings. Research has shown that MST significantly reduces adolescent drug use during treatment and for at least six months after treatment (NIDA). It has also been found to reduce the number of juvenile incarcerations and out-of-home placements (NIDA).

MST is associated with significant, long-term reduction of aggressive behaviors in chronic and violent juvenile offenders (Henggeler & Brondino, 2002). Several research studies have reported that MST is associated with decreases in arrest and substance use rates (Borduin, Henggeler, Blaske & Stein, 1990; Borduin et al., 1995). Clinical trials indicate that MST is an effective intervention for substance-abusing youth, particularly for marijuana abstinence (Henggeler & Brondino).

Behavioral Therapies – Behavioral therapies with research support include goal monitoring, contingency management, and skill-building approaches. The underlying goal of a goal monitoring approach is to allow the youth and the treatment provider to identify specific problems and areas of deficit and to work on improving these behaviors (Bukstein, 1998). Therapeutic activities are then designed to achieve these goals and may include fulfilling specific assignments, rehearsing desired behaviors, and recording and reviewing progress (NIDA, 1999). Contingency management (CM) interventions are sometimes used separately or in conjunction with a goal monitoring approach. In CM approaches, positive reinforcers are provided at intervals based on specific behaviors from the youth. Both goal monitoring and CM approaches are often incorporated into inpatient, residential, or partial hospitalization programs (Bukstein).

In community-based care, caregivers are taught to monitor goals and/or more effectively manage contingencies. Research shows that, when consistently applied, this type of therapy helps adolescents become drug-free and increases their ability to maintain abstinence after treatment ends (Azrin et al., 1996; NIDA, 1999). Participants have also been found to show improvement in areas such as employment, school attendance, family relationships, depression, and institutionalization (NIDA).

Substance use prevention, treatment, and rehabilitation often include assistance in developing needed skills and functions that were passed by while the child was struggling with the substance use disorders (SAMHSA, 1997). Skill development is also included in many cognitive-behavioral approaches to substance use (Bukstein, 1998). The general focus of treatment includes educating the youth with relapse prevention skills, substance refusal skills, resisting peer pressure, assertiveness skills, communication skills, problem-solving, anger control, and leisure time management. Whereas it is frequently incorporated in treatment plans, research supporting skill-building alone is not supported by research. However, given the empirical support for CBT, there is more confidence in skill-building approaches than some other approaches.

Motivational Interviewing – Motivational interviewing is a brief treatment approach that aims to increase motivation for behavior change in addicted and related problematic behaviors. It is based on five core principles, including the expression of empathy, highlighting discrepancies, avoiding argumentation, rolling with resistance, and supporting self-efficacy (Evans et al., 2005). Motivational approaches are accepting of ambivalence and uncertain motivation, and work on exploring these ambivalences. There has been ample support for the efficacy of motivational interviewing in treating substance use disorders among adults (Burke, Arkowitz & Menchola, 2003). Research examining

motivational interviewing among youth has found support for the efficacy of motivational interviewing in reducing substance related behaviors (Monti et al., 1999).

Individual Psychotherapy – CBT, behavioral therapies, and motivational interviewing approaches are sometimes provided on an individual basis. Interpersonal therapy and psychodynamic therapies are methods of individual counseling that are often incorporated into the child or adolescent's treatment plan. These two types of therapy assume that substance use symptoms and behaviors are the result of unconscious psychological conflicts, distortions, and faulty learning (APA, 2006). Although the effectiveness of these two forms of treatment is suggested from case reports, no controlled studies support the use of these methods in treating substance use disorders among children and adolescents (Bukstein, 1998).

Pharmacological Treatments

Psychopharmacological medication can be used in the treatment of substance use disorders and may be used in the initial stages of treatment for detoxification purposes, as directed by a physician. When medication is utilized for the treatment of a co-occurring mental health disorder, a cautious approach, as well as an integrated treatment strategy, is crucial.

Medical detoxification is a form of pharmacotherapy that is used to treat any withdrawal effects by substituting a legal drug for an illicit one during prolonged periods of abstinence (Bukstein, 1998). This approach is most frequently used for chronic abusers of highly addictive substances such as opium (i.e., methadone treatment) (Bukstein). Research has shown that detoxification will not by itself change long-term drug use and must be incorporated into a long-term treatment plan (NIDA, 1999). Furthermore, it is important to note that substitutions, such as methadone, are infrequently used in children and adolescents and often limited by law (Bukstein). Detoxification should be reserved for only the most severely dependent adolescents who have been resistant to other forms of treatment (Bukstein).

Medication may also be used to treat co-occurring mental health disorders and is often an important treatment element. However, NIDA recommends that medication should be pursued only as a last resort in this population, as substance use disorders may increase the potential for misuse and overdose (1999). Further, medications should be prescribed only to those children and adolescents who displayed psychiatric symptoms prior to the substance use or only if the symptoms are present during periods of abstinence (NIDA). A definitive assessment requires that the youth abstain from the use of substances for a specified period, typically several weeks. Finally, if medication is prescribed, it is critical that the youth's physician closely monitors the medication regimen with the awareness that the youth may still be using other illicit substances.

Children and adolescents diagnosed with a co-occurring mood disorder, ADHD, severe aggressive behavior or an anxiety disorder are most frequently prescribed medication (Bukstein, 1998). Research is being conducted on the effectiveness of medications in adolescents with co-occurring substance use and mental health disorders. Clinical trials with pemoline and bupropion for ADHD and fluoxetine for depression have shown promise (*Journal of the American Academy of Child and Adolescent Psychiatry*, 2005). Pemoline has shown promise in safely treating youth with ADHD and co-occurring substance use (Riggs, 2003). Pemoline is considered a significant treatment option for ADHD because of its low abuse potential and once-per-day dosing (Riggs). More recently, a trial of a stimulant medication demonstrated the efficacy of medication improving ADHD symptoms in adolescents with comorbid ADHD and substance abuse disorder. This study also demonstrated that medication treatment of ADHD alone, without specific substance abuse disorder or other psychosocial treatment, did not decrease substance use (*Journal of the American Academy of Child and Adolescent Psychiatry*).

Preliminary trials with lithium and selective serotonin reuptake inhibitors (SSRIs) produced considerable improvements in adolescents with substance abuse disorders and comorbid mood disorders (*Journal of the American Academy of Child and Adolescent Psychiatry*, 2005). Preliminary data shows that SSRIs are safe for treating adolescents with depression, even if they are still using substances (Riggs, 2003).

One controlled study was conducted to ascertain the effectiveness of lithium for adolescents with bipolar disorder and co-occurring substance use disorder. Lithium was found to be effective in stabilizing mania, even that which is accompanied by on-going substance use (Riggs, 2003). However, it was not effective in treating the substance use or in inducing abstinence. It is important that the adolescent receive concurrent treatments for substance use and bipolar disorder (Riggs).

Unproven Treatments

Some commonly used pharmacological agents, such as psychostimulants and benzodiazepines, have well-founded abuse potential (*Journal of the American Academy of Child and Adolescent Psychiatry*, 2005). Alternative agents to psychostimulants should be considered because they have lower potential for abuse.

Benzodiazepines, typically prescribed for anxiety, are usually contraindicated in the presence of a substance use disorder due to their addictive properties (SAMHSA, 1997). Tricyclic antidepressants are contraindicated for the treatment of depression or ADHD in adolescents who engage in substance use, particularly marijuana, because of the risk of death in the event of an overdose (Riggs, 2003).

The following information is from the 2007 Biennial Report of the Hawaii Department of Health (Chorpita & Daleiden, 2007). For the treatment of substance abuse, studies have found no support for the following treatments: Client-Centered Therapy, Education, Group Therapy, Project CARE, or the Twelve-Step Program. Moreover, these findings also indicate that Group Therapy and Project CARE treatment approaches may negatively affect treatment outcomes for substance abuse.

Cultural Considerations

Research indicates that there may be ethnic differences in risk factor profiles and that cultural differences should be taken into account when considering how risk factors predict substance use problems (Vega et al., 1993). In addition, research cited by Walton (2001) suggests that females may enter substance abuse treatment with unique needs. They present symptoms of greater psychological distress, such as low self-esteem and depression, and are much more likely to report prior physical and/or sexual abuse than their male counterparts. These issues must be effectively addressed within the context of treatment in order to improve outcomes.

Walton (2001) also cites research which has found that females and minorities often enter treatment with fewer financial resources and positive social supports. Studies have found that many African Americans are at a higher risk of relapse because they may often face more difficult social situations following treatment, such as high-stress and low-support environments.

Sources

ADE, Inc. (1987). *Juvenile Automated Substance Abuse Evaluations (JASAE)*. Clarkston, MI: ADE, Inc.

American Psychiatric Association (APA). (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.) (*DSM-IV-TR*). Washington, DC: Author.

- American Psychiatric Association (APA) (2006). *APA practice guidelines for the treatment of psychiatric disorders compendium 2006*, Edited by J. McIntyre, S. Charles and D. Anzina. APA Press.
- Azrin, N., Acierno, R., Kogan, K., Donohue, B., Besalel, V., McMahon, P. (1996). Follow-up results of supportive versus behavioral therapy for illicit drug use. *Behaviour Research and Therapy*, 34 (1), 41-46.
- Borduin, C., Henggeler, S., Blaske, D., & Stein, R. (1990). Multisystemic treatment of adolescent sexual offenders. *International Journal of Offender Therapy and Comparative Criminology*, 35, 105-114.
- Borduin, C., Mann, B., Cone, L., Henggeler, S., Fucci, B., Blaske, D., & Williams, R. (1995). Multisystemic treatment of serious juvenile offenders: Long-term prevention of criminality and violence. *Journal of Consulting and Clinical Psychology*, 63, 569-578.
- Bukstein, O. (1998). Summary of the practice parameters for the assessment and treatment of children and adolescents with substance use disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36 (suppl), 140S-156S.
- Burke, B., Arkowitz, H., & Menchola, M. (2003). The efficacy of motivational interviewing: A meta-analysis of controlled trials. *Journal of Consulting and Clinical Psychology*, 60, 9784-9979.
- Buu, A., Dipiazza, C., Wang, J., Puttler, L., Fitzgerald, H., & Zucker, R. (2009). Parent, family, and neighborhood effects on the development of child substance use and other psychopathology from preschool to the start of adulthood. *Journal of Studies on Alcohol and Drugs*.
- Chorpita, B., & Daleiden, E. (2007). *2007 Biennial Report: Effective Psychosocial Interventions for Youth with Behavioral and Emotional Needs*. Child and Adolescent Mental Health Division, Hawaii Department of Health.
- Cohen, P., Cohen, J., Kasen, S., Velez, C., Hartmark, C., Johnson, J., et al. (1993). An Epidemiological Study of Disorders in Late Childhood and Adolescence—I. Age- and Gender-Specific Prevalence. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 34, 851-867.
- Davis, J. (2004). Researchers identify alcoholism gene. *WebMD Medical News*. [Online]. Available: <http://www.webmd.com/mental-health/news/20040526/researchers-identify-alcoholism-gene>. [July 2010].
- Evans, D., Foa, E., Gur, R., Hendin, H., O'Brien, C. Seligman, M., & Walsh B. (2005). *Treating and preventing adolescent mental health disorders: What we know and what we don't know*. New York, Oxford University.
- Focus Adolescent Services. (2000). *Drugs and Teen Substance Abuse*. [Online]. Available: <http://www.focusas.com/SubstanceAbuse.html>. [September 2010].
- Friedman, A., Terras, A., & Kreisher, C. (1995). Family and client characteristics as predictors of outpatient treatment outcome for adolescent drug abusers. *Journal of Substance Abuse*, 7, 345-356.

- Friedman, A., & Utada, A. (1989). A method for diagnosing and planning the treatment of adolescent drug abusers: The Adolescent Drug Abuse Diagnosis (ADAD) Instrument. *Journal of Drug Education, 19* (4), 285-312.
- Gehshan, S. (2000). *Substance Abuse Treatment in State Children's Health Insurance Programs*. Washington, DC: National Conference of State Legislatures,
- Harrell, T., Honaker, L., & Davis, E. (1991). Cognitive and behavioral dimensions of dysfunction in alcohol and polydrug abusers. *Journal of Substance Abuse, 3*, 415-426.
- Henggeler, S., & Brondino, M. (2002). Four-year follow-up of Multisystemic Therapy with substance-abusing and substance-dependent juvenile offenders. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*, 868-874.
- Hills, H. (2007). *Treating adolescents with co-occurring disorders*. Florida Certification Board/Southern Coast ATTC Monograph Series # 2.
- Journal of the American Academy of Child and Adolescent Psychiatry*. (2005). Practice Parameter for the Assessment and Treatment of Children and Adolescents with Substance Use Disorders, *44* (6), 609-621.
- Kamon, J., Budney, A., & Stanger, C. (2005). A contingency management intervention for adolescent marijuana abuse and conduct problems. *Journal of the American Academy of Child and Adolescent Psychiatry, 44* (6), 513-521.
- Kessler, R., Nelson, C., McGonagle, K., Edlund, M., Frank, R., & Leaf, P. (1996). The epidemiology of co-occurring addictive and mental disorders in the national comorbidity survey: implications for prevention and service utilization. *American Journal of Orthopsychiatry, 66*, 17-31.
- Leshner, A. (2001). Addiction is a brain disease-and it matters. *Issues in Science and Technology, 17-19*.
- Liddle, H. (2009). Treating adolescent substance abuse using Multidimensional Family Therapy. In J. R. Weisz & A. E. Kazdin (Eds.). *Evidence-based psychotherapies for children and adolescents* (2nd ed.). New York: Guilford Press.
- Miller, G. (1999). *Learning the language of addiction counseling*. Boston: Allyn & Bacon.
- Miller, W., & Wilbourne, P. (2002). Mesa Grande: A methodological analysis of clinical trials of treatments for alcohol use disorders. *Addiction, 97* (3), 265-277.
- Monti, M., Colby, S., Barnett, N. et al. (1999) Brief intervention for harm reduction with alcohol-positive older adolescents in a hospital emergency department. *Journal of Consulting and Clinical Psychology, 67* (6), 989-994
- Mueser, K., Drake, R., & Miles, K. (1997). The Course and Treatment of Substance Use Disorder in Persons with Severe Mental Illness. In Onken, L.S., Blane, J.D., Genser, S., & Horton, A.M. (Eds.), *Treatment of Drug-Dependent Individuals with Comorbid Mental Disorders*. National Institute on Drug Abuse Research Monograph 172: U.S. Department of Health and Human Services.

- National Clearinghouse for Alcohol and Drug Information. (1993). *Treatment of Adolescents with Substance Use Disorders, updates TIP 4*. Substance Abuse & Mental Health Services Administration (SAMHSA).
- National Institute on Drug Abuse (NIDA). (1999). *Principles of Drug Addiction Treatment: A Research-Based Guide*. National Institute of Health.
- New Freedom Commission on Mental Health. (2003). *Achieving the Promise: Transforming Mental Health Care in America. Final Report*. DHHS Pub. No. SMA-03-3832. Rockville, MD.
- Oetting, E., Beauvais, F., & Edwards, R. (1985). *The American drug and alcohol survey*. Ft. Collins, CO: Rocky Mountain Behavioral Science Institute, Inc.
- Ouimette, P. (2007). *Co-Occurring Mental Health & Substance Abuse Disorders*. Washington State University Spokane, the Washington Institute for Mental Illness Research & Training. [Online]. Available: <http://www1.dshs.wa.gov/pdf/hrsa/mh/cobestpract.pdf>. [September 2010].
- Patton, G., McMorris, J., Taumbaurou, W., Hemphill, S., Donath, S., & Catalano, R. (2005). Puberty and the onset of substance use and abuse. *Journal of the American Academy of Child and Adolescent Psychiatry*, 44 (5), 460.
- Riggs, P. (2003). Treating adolescents for substance abuse and comorbid psychiatric disorders. *Science & Practice Perspectives*. University of Colorado School of Medicine.
- Schmidt, S., Liddle, H., & Dakof, G. (1996). Effects of Multidimensional Family Therapy: Relationship of Changes in Parenting Practices to Symptom Reduction in Adolescent Substance Abuse. *Journal of Family Psychology*, 10, 1-16.
- Schneider Institute for Health Policy (2001). Substance abuse: The nation's number one health problem. *Robert Wood Johnson Foundation*. [Online]. Available: <http://www.rwjf.org/files/publications/other/SubstanceAbuseChartbook.pdf>. [September 2010].
- Snyder, H., & Sickmund, M. (2006). *Juvenile Offenders and Victims: 2006 National Report*. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.
- Stephens, R., Roffman, R., & Curtin, L. (2000). Comparison of extended versus brief treatments for marijuana use. *Journal of Consulting and Clinical Psychology* 68, 898-908.
- Substance Abuse and Mental Health Services Administration (SAMHSA). (1997). National Advisory Council. *Improving Services for Individuals at Risk of, or with, Co-Occurring Substance-Related and Mental Health Disorders: A SAMHSA Conference Report and a National Strategy*. U.S. Department of Health and Human Services.
- Substance Abuse and Mental Health Services Administration (SAMHSA). (1999). *The Relationship between Mental Health and Substance Abuse among Adolescents*. Office of Applied Studies. U.S. Department of Health and Human Services.
- Substance Abuse and Mental Health Services Administration (SAMHSA) (2007). *National Survey on Drug Use and Health, 2007*. [Online]. Available: <http://oas.samhsa.gov/nsduh/2k7nsduh/2k7Results.pdf>. [September 2010].

- Szapocznik, J., Rio, A., Murray, E., Cohen, R., Scopetta, M., Rivas-Vazquez, A., Hervis, O., Posada, V., Kurtines, W. (1989). Structural family versus psychodynamic child therapy for problematic Hispanic boys. *Journal of Consulting and Clinical Psychology*, 57, 571-578.
- U.S. Department of Health and Human Services. (1999). *Mental Health: A Report of the Surgeon General*. Rockville, MD.
- U.S. Department of Health and Human Services (2007). *The Surgeon General's Call to Action to Prevent and Reduce Underage Drinking*. U.S. Department of Health and Human Services, Office of the Surgeon General.
- Vega, W., Zimmerman, R., Warheit, G., Apospori, E., & Gil, A. (1993). Risk factors for early adolescent drug use in four ethnic and racial groups. *American Journal of Public Health February*, 3 (2).
- Waldron, H., Slesnick, N., Brody, J., Turner, C., & Peterson, T. (2001). Treatment outcomes for adolescent substance abuse at 4- and 7-month assessments. *Journal of Consulting and Clinical Psychology*, 69, 802-813.
- Wanberg, K. (1992). *Adolescent Self Assessment Profile*. Arvada, CO: Center for Alcohol/Drug Abuse Research and Evaluation.
- Walton, M. (2001). Diversity in Relapse Prevention Needs: Gender and Race Comparisons Among Substance Abuse Treatment Patients. *American Journal of Drug and Alcohol Abuse*, 27, 225-240.
- White, A. (2004). *Alcohol and the Adolescent Brain*. Department of Psychiatry, Duke Medical Center. [Online]. Available: <http://www.duke.edu/~amwhite/Adolescence/adolescent5.html>. Not available July 2010.
- Winters, K. (1999). *Screening and assessing adolescents for substance use disorders. Treatment Improvement Protocol (TIP) Series 31*. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Winters, K., & Henly, G. (1989). *Personal Experience Inventory (PEI) Test and Manual*. Los Angeles, CA: Western Psychological Services.
- Winters, K., & Henly, G. (1993). *Adolescent Diagnostic Interview Schedule and Manual*. Los Angeles, CA: Western Psychological Services.

Additional Resources

Stop Underage Drinking, a Portal of Federal Resources

Underage Drinking Prevention: Resources for Town Hall Meetings

<http://www.stopalcoholabuse.gov/townhall/resources.aspx>

Substance Abuse and Mental Health Services Administration (SAMHSA). (1997). National Advisory Council. *Improving Services for Individuals at Risk of, or with, Co-Occurring Substance-Related and Mental Health Disorders: A SAMHSA Conference Report and A National Strategy*. U.S. Department of Health and Human Services.

Virginia Governor's Office for Substance Abuse Prevention (GOSAP)

A Parent's Guide to Underage Drinking

<http://www.publicsafety.virginia.gov/UnderAgeDrinking.pdf>

Organizations

Mid-Atlantic Addiction Technology Transfer Center (ATTC)

VCU Department of Psychiatry
P.O. Box 980469 — Richmond, VA 23298-0469
http://www.attcnetwork.org/regcenters/index_midatlantic.asp

National Alliance for the Mentally Ill (NAMI)

Colonial Place Three, 2107 Wilson Boulevard, Suite 300 — Arlington, VA 22201-3042
<http://www.nami.org>

National Clearinghouse for Alcohol and Drug Information

P.O. Box 2345 — Rockville, MD 20847-2345
<http://www.health.org>

National Institute on Alcohol Abuse and Alcoholism (NIAAA)

6000 Executive Boulevard, Willco Building — Bethesda, MD 20892-7033
<http://www.niaaa.nih.gov>

National Institute on Drug Abuse (NIDA)

6001 Executive Boulevard — Bethesda, MD 20892-9561
<http://www.nida.nih.gov>

Mental Health America (MHA) *(formerly National Mental Health Association)*

2000 North Beauregard Street, 6th Floor — Alexandria, VA 22311
<http://www.nmha.org>

Substance Abuse and Mental Health Services Administration (SAMHSA)

U.S. Department of Health and Human Services
5600 Fishers Lane — Rockville, MD 20857
<http://www.samhsa.gov>

The National GAINS Center for People with Co-Occurring Disorders in the Justice System Policy Research, Inc.

www.prainc.com

Virginia Department of Behavioral Health and Developmental Services (DBHDS)

Office of Substance Abuse Services — P.O. Box 1797 — Richmond, VA 23219
<http://www.dbhds.virginia.gov/OSAS-default.htm>

Virginia Governor's Office for Substance Abuse Prevention (GOSAP)

P.O. Box 1475 - 202 North Ninth Street, Fourth Floor — Richmond, VA 23219
<http://www.publicsafety.virginia.gov/Initiatives/GOSAP>

YOUTH SUICIDE

Introduction

Risk Factors

Individual/Demographic Characteristics

Psychological Characteristics

Other Risk Factors

Assessment

Promising Practices in Youth Suicide Prevention

Crisis Management

On-going Treatment

Pharmacological Treatment

Antidepressants and the Risk of Suicidal Behavior

Unproven Treatments

No-suicide Contracts

Contraindicated Treatments

Introduction

Youth suicide (i.e., self-inflicted injury resulting in death) and suicide attempts (i.e., self-inflicted injury with intent to die or ambivalent intent) constitute a major public health problem in the United States. Suicide is the third leading cause of death for 15 to 24 year-olds, and the sixth leading cause of death for 5 to 14 year-olds (American Academy of Child & Adolescent Psychiatry [AACAP], 2004; U.S. Centers for Disease Control and Prevention [CDC], 2007). Moreover, the middle teen years mark the period in which most suicide attempts occur, although the rate of suicide among adolescents is lower than the rate for older individuals (McKeown, Cuffe & Schultz, 2006). Males are 4.7 times more likely to complete suicide than females, while females are two to three times more likely to attempt suicide than males (Crowell, Beauchaine & Lenzenweger, 2008).

According to Garland and Zigler (1993), the rate of suicide among adolescents increased from 3.6 per 100,000 in 1960 to 11.3 per 100,000 in 1988. Between 1994 and 2003, the rate of suicide among adolescents declined steadily (McKeown et al., 2006). The CDC reported that 2003 had the largest one-year increase in youth suicide for the preceding 15-year period (2007). In 2005, Virginia's rate of suicide in youth ages 5 to 14 was slightly higher than the national rate (1.1 per 100,000 in Virginia, compared to 0.7 per 100,000 nationally). Virginia's rate for those 15 to 24, however, slightly lower (8.49 per 100,000), compared to 10.0 per 100,000 nationally (Virginia Department of Health, 2009; World Health Organization, 2009).

The CDC also reported a change in the methods used to attempt suicide. Firearms were the most common method for both females and males in 1990. However, in 2004, hanging/suffocation was the most common method of suicide for females, resulting in 71 percent of suicides in females ages ten to 14, and 49 percent among both males and females ages 15 to 19 (CDC, 2007). Although the use of firearms has changed for females, firearms remain the most common method of suicide for males (CDC).

There has been increasing attention paid to the issues of suicide and suicide prevention. In response, the U.S. Surgeon General issued a "Call to Action" in 1999, emphasizing the need for greater awareness of this national problem (U.S. Department of Health and Human Services, 2001). Shortly thereafter, the Department published *National Strategy for Suicide Prevention* to address issues such as collaboration with agencies and stakeholders (Vetter, 2002).

While non-suicidal self-injurious behavior (NSIB) is serious, the individual's intention and ambivalence about the outcome distinguish it from suicidal behavior (Miller, Rathus & Linehan, 2007). This disorder is discussed in the "Non-Suicidal Self-Injurious" section of the *Collection*.

Risk Factors

The following paragraphs discuss a range of characteristics and factors associated with the risks of youth suicide.

Individual/Demographic Characteristics

Research on who commits suicide clearly indicates that adolescent females attempt suicide at a rate two to three times higher than adolescent males, but that males are nearly five times more likely to die from their suicide attempts (Crowell, Beauchaine & Lenzenweger, 2008; Spirito & Overholser, 2003). For the most part, the rate of suicide increases with age during childhood and adolescence (Spirito & Overholser).

While the rate of suicide attempts varies slightly from study to study, research indicates that African American and Latino youth have a higher rate of suicide attempts than Caucasian youth; however, the rate of suicide attempts requiring medical attention is very similar among these groups (Spirito & Overholser, 2003). Gould, Shaffer & Greenberg (2003) indicate that the rate of suicide is higher among Caucasian youth than their African American counterparts. Historically, suicide rates have been high among Native American youth, as much as 20 times the national average for some groups (AACAP, 2000).

Evidence of any link between socioeconomic status and suicide is sparse and difficult to interpret. Gould et al. (2003) report that one study that looked at the socioeconomic status of youth who committed suicide and found no difference, while another study found that low income Latino and Caucasian youth and middle income African American youth had higher rates of suicide than their counterparts in higher income groups.

Psychological Characteristics

There are a number of psychological disorders associated with increased risk of suicide. These include major depressive disorder (MDD), bipolar disorder, substance abuse, and conduct disorder (CD) (McKeown, Cuffe & Schultz, 2006). In addition, more than 90 percent of the adolescents who commit suicide suffered from at least one psychiatric disorder at the time of death (AACAP, 2000; Gould et al., 2003). More than half had suffered from a psychiatric disorder for at least two years preceding the event (AACAP). Depression has been consistently identified as the most common psychological disorder among adolescents who have committed suicide (Gould et al.). Additionally, there is a high prevalence of substance abuse among older adolescents, particularly males, who commit suicide (Gould et al.). There is also a particularly high prevalence of co-occurring depressive disorders and substance abuse among those who commit suicide (Gould et al.). High risk factors of future suicide attempts include a history of suicide attempts and non-suicidal self-injurious behavior (NSIB). Another strong predictor is suicidal or homicidal ideation (McKeown et al.; Miller, Rathus & Linehan, 2007; Spirito & Overholser, 2003).

Youth most at risk of attempting suicide are likely to have recently experienced stressful life events, such as school and work problems, legal problems and interpersonal conflict (Gould et al., 2003). The research cited suggests that parental divorce and strained parent-child relationships may be factors, after accounting for parent and youth psychopathology (Gould et al.). One study cited by Virginia Department of Health's Suicide Prevention Resource Center reported that 35 percent of youth suicides occurred the same day those youth experienced a crisis, such as a relationship breakup or an argument with a parent (2006). Youth diagnosed with a mental disorder may be faced with a greater number of stressful events and may also perceive events as being more stressful than those not having a diagnosed mental disorder (AACAP, 2000). It can be difficult to discern whether

stress is a result of a mental disorder or is related to events with which youth are unable to cope (AACAP).

Other Risk Factors

There are a number of environmental factors and distressing experiences associated with increased risk of suicide. McKeown, Cuffe and Schultz (2006) found that the presence of firearms in the home is significantly associated with higher rates of suicide. This is in line with findings by Gould et al., that firearms account for the greatest number of suicides among older youth and young adults (2003).

There is strong research evidence to suggest that abuse, both physical and sexual, is associated with increased risk of youth suicide (Gould et al., 2003). There is growing, though inconclusive, evidence for a contagion effect for youth suicide (Gould et al.). Some studies have found that the suicide rate among adolescents rises following a highly publicized suicide.

Family environment and genetic factors are associated with increased risk for suicide among youth. Additionally, family history of suicide and suicide attempts and parental psychopathology are associated with increased risk for youth suicide (Gould et al., 2003). Even after accounting for the effects of parental psychopathology, completed suicide by the mother corresponded with a fivefold increase in suicide by offspring, while completed suicide by the father corresponded with a doubling suicide by offspring (Gould et al.) Studies conducted with twins indicate that at least part of this increased suicidal risk could be attributed to genetic factors (Gould et al.).

Assessment

Every psychological assessment by a clinician should include an assessment of the youth's risk of suicide (Lloyd-Richardson, 2008; Nock, Teper & Hollender, 2007). Clinicians should keep in mind that, while parents are an important source of information, research has shown that parents tend to underreport their children's non-suicidal self-injurious behavior (NSIB) (Nock, Holmburg, Photos & Michel, 2007), thus making direct assessment critical. Clinicians should further evaluate every youth reporting suicidal ideation (i.e., thoughts of suicide), even though thoughts about death are relatively common among youth and do not always indicate severe psychopathology (AACAP, 2000). While suicide ideation is an important indication of risk for suicide (90 percent of youth who attempted suicide had previously reported suicide ideation), not every youth who reports thinking about death, hurting themselves or ending their lives will attempt suicide (Spirito & Overholser, 2003). The severity of hopelessness, isolation, suicidal ideation, and hesitation to discuss their suicidal thoughts are factors that may differentiate between youth who only contemplate death and suicide and those who, in fact, attempt to kill themselves.

The AACAP (2000) has provided guidelines for the assessment of suicidal risk among children and adolescents. These are minimal standards which, by definition, are expected to apply in almost all cases and instances where these standards are not followed should be supported in the medical record. These are outlined in Table 1.

In addition, there are a number of standardized suicide measures that range from long and comprehensive to short screeners. These are described in Table 2.

Table 1

Assessment Guidelines

<p>Important questions to ask when conducting a youth suicide assessment:</p> <p>To what degree is the youth in a high risk for suicide group?</p> <ul style="list-style-type: none"> ○ Are they male? (<i>Males are higher risk than females.</i>) ○ Have they made past suicide attempts? ○ Do they have a mood disorder? ○ Do they use substance? (<i>among males</i>) ○ Are they older than 16? (<i>among males</i>) <p>To what degree is the youth who has attempted suicide at high risk for suicide?</p> <ul style="list-style-type: none"> ○ Are they still thinking about committing suicide? ○ Have they made past suicide attempts? ○ Did they use a method other than ingestion or superficial cutting? ○ Are they older than 16? ○ Are they male? ○ Are they living alone? ○ Are they currently depressed, manic, hypomanic, severely anxious, or a combination of these? ○ Do they use substances? ○ Are they irritable, agitated, delusional, or hallucinating or have they threatened violence against others? <p><i>If there is a recent history of suicidal ideation or suicidal behavior, the youth should continue to be monitored.</i></p>
--

Source: AACAP, 2000.

Table 2

Summary of Assessment Tools

Assessment Tool	Type	Length	Description
Suicide Ideation Questionnaire (SIQ)	Self-Report	Variable	A self-report measure that assesses suicidal thoughts (15 questions for youth in grades 7-9; 30 for youth in grades 10-12)
High School Questionnaire (SRS and MAPS)	Self-Report	Variable	SRS is a short screener for suicidality; MAPS is a 2-hour computer-administered assessment of risk and protective factors.
Imminent Danger Assessment	Clinical interview	20-30 minutes	Aids clinicians in determining the imminent danger of suicide
Schedule for Affective Disorders (K-SADS)	Clinical Interview	2.5-3.0 hours	A semi-structured diagnostic clinical interview designed for use with youth that provides a systematic approach for evaluating suicidality
Diagnostic Interview Schedule for Children (DISC)	Clinical Interview	1.5-2.0 hours	A structured diagnostic clinical interview that can be used to evaluate suicidality

Source: Goldston & Compton, 2007.

The Suicide Ideation Questionnaire (SIQ) (Spirito & Overholser, 2003; Goldston & Compton, 2007) is a short self-report questionnaire that includes versions for both younger and older youth and addresses frequency, intensity, duration, and specificity of suicidal thoughts (Spirito & Overholser). The High School Questionnaire is a multi-component questionnaire comprised of the Suicide Risk Screen (SRS) and the Measure of Adolescent Potential for Suicide (MAPS) (Goldston & Compton, 2007). The SRS is a brief measure that assesses past suicidal behavior, suicidal thoughts, and psychopathology (Thompson & Eggert, 1999). MAPS - a computer-administered, self-report

measure - can decrease the likelihood of suicide (Spirito & Overholser, 2003). This questionnaire assesses the following:

- direct risk factors, including exposure to suicidal behavior, attitudes/beliefs about suicide, suicide ideation, suicide plans, and past suicide attempts;
- related risk factors, such as anger, anxiety, depression, and hopelessness; and
- protective factors, including support, self-esteem, coping, and personal control.

The drawback to the MAPS is its length, which is two hours for administration of the full measure.

Bradley and Rotheram-Borus developed the *Imminent Danger Assessment*, a clinical interview to assess a youth's imminent risk of suicide (Goldston & Compton, 2007). The interview consists of five tasks, each providing information about the youth's level of risk and ability to remain safe (Goldston & Compton). The tasks ask the youth to:

1. identify positive aspects about himself or the future;
2. use a feeling thermometer to identify emotions, particularly emotions that lead to the suicidal thoughts or feelings;
3. generate alternative coping strategies for situations that provoke suicidal feelings and thoughts;
4. identify three supportive individuals from whom they could seek support from if they feel that they cannot keep themselves safe; and
5. agree to keep themselves safe and tell someone he/she feels unable to keep themselves safe (Goldston & Compton).

The Imminent Danger Assessment provides the clinician with the following information about the youth:

- degree of hopelessness;
- ability to identify their emotions so that they can seek support prior to becoming suicidal;
- reason for saying that they are not suicidal (is the adolescent truly no longer suicidal or are they saying that they are no longer suicidal to avoid further discussion about the state of mind or to avoid hospitalization);
- ability to identify their support system; and
- ability to cope with suicidal tendencies (Goldston & Compton, 2007).

The Schedule for Affective Disorders (K-SADS) and the Diagnostic Interview Schedule for Children (DISC) are both diagnostic clinical interviews with extensive sections assessing suicidality (Goldston & Compton, 2007). The K-SADS is a semi-structured clinical interview that prompts the clinician to ask about suicidal ideation, non-suicidal self-injurious behavior, history of suicide and other related topics (Goldston & Compton). The DISC prompts the clinician to ask about the same topics in a more structured manner (Goldston & Compton).

Promising Practices in Youth Suicide Prevention

Currently there are no treatments which have been deemed evidence-based; accordingly there is no table summarizing evidence-based treatments provided. Despite limited literature, however, there is research to support the use of some techniques over others. The following paragraphs summarize the literature regarding treatment focus, crisis management, and on-going treatment.

In a review of the literature on treatments for suicide ideation, suicide attempts, and non-suicidal self-injurious behavior in both youth and adults, treatments which target suicidal behavior directly are shown to be effective (Miller, Rathus & Linehan, 2007). There is little research to support the effectiveness (as measured by number of suicide attempts or lethality of attempts) of treatments focusing on depression, bipolar disorder, and other underlying disorders associated with suicide (Miller, Rathus & Linehan). Spirito and Overholser note that, while it is important to treat the underlying psychopathology, such treatments do not necessarily reduce suicidal behavior (2003). In a related finding, a study looking at the outcome of two types of treatment for suicidal females, the

treatment that focused directly on suicidal behavior—Dialectical Behavior Therapy—outperformed the treatment for the control group—community treatment by an expert therapist—in reducing suicide attempts. The treatments, however, did not differ in their effect on depressive symptoms (Linehan et al., 2006).

Crisis Management

According to the AACAP, clinicians should be prepared to hospitalize suicide attempters who express a persistent wish to die or are exhibiting symptoms of severe mental disorders. Discharge should occur only after the following three issues have been addressed:

- 1) making certain adequate supervision is available;
- 2) ensuring that the level of suicidality has stabilized; and
- 3) gaining assurance that the youth's environment will be rid of all potentially-lethal items, such as guns or medications by having an explicit conversation with the youth and parent or caregiver about the importance of securing such items. (2000)

When working with youth at high risk for suicide (particularly during the period following a suicide attempt), therapists must be available 24 hours per day, or arrange an on-call system or equivalent system, and repeatedly assess the youth's state of risk (Spirito & Overholser, 2003). Additionally, parents need to be directed to increase the level of supervision provided the youth.

On-going Treatment

AACAP (2000) states that psychotherapy, while not by itself an evidence-based practice, is an important component to the treatment of suicidality in youth. A minimum standard of therapy should be adapted to the individual and that Cognitive Behavioral Therapy (CBT), Dialectical Behavioral Therapy (DBT), Interpersonal Therapy for Adolescents, Psychodynamic Therapy and Family Therapy are all options when choosing a treatment modality (AACAP). However, as previously noted, research is sparse with this population.

Pharmacological Treatment

The U.S. Department of Health and Human Services (2001) has outlined pharmacological interventions thought to be effective in reducing suicide. However, it must be emphasized that any medications prescribed to a suicidal youth must be carefully monitored by a third party such that any change of behavior or side effects can be immediately reported. New interventions are being developed and tested for the treatment of disorders associated with suicidal behaviors. Since few studies of treatments for mental disorders have included youth with suicidal behaviors, treatments need to be assessed for their potential to reduce suicide. Furthermore, after the youth is thoroughly assessed for any mental disorders, the clinician must tailor the pharmacological interventions to any disorders which may have been diagnosed.

Antidepressants and the Risk of Suicidal Behavior

According to the AACAP, selective serotonin reuptake inhibitors (SSRIs) may be successful in reducing suicidal ideation and suicide attempts in non-depressed adults with certain personality disorders (2000). However, it is necessary to closely monitor youth taking SSRIs, as there is some evidence which suggests that SSRIs can increase suicidality in youth and young adults under age 24 (Hammad, Laughren & Racoosin, 2006). A more detailed discussion of the use of antidepressants in treating children and adolescents is included in the "Antidepressants and the Risk of Suicidal Behavior" section of the *Collection*.

Unproven Treatments

The paragraphs which follow discuss treatments for youth suicide which are unproven and contraindicated.

No-suicide Contracts

The first discussion in the literature regarding the use of so-called no-suicide contracts was in 1973. These contracts were explicitly designed to be used for assessment purposes in much the same way as they are used in the *Imminent Danger Assessment* discussed under Assessment (Goldston & Compton, 2007). Due in part to the complications and ethical concerns of conducting research on suicidal patients, the literature on the effectiveness of these contracts is inconclusive (McMyler & Prymachuk, 2008). McMyler and Prymachuk reviewed the literature and summarized the findings from ten empirical studies, all of which have significant methodological flaws. Further, the studies' results were diverse, with some suggesting that using the contract reduces suicidal behavior and others suggesting that they increase suicidal behavior (McMyler & Prymachuk). Goldston and Compton discourage using no-suicide contracts and instead encourage developing a collaborative safety plan with their patients which identifies steps the patient can take during times of high suicidal risk, but avoids agreements that could be perceived as coercive.

Contraindicated Treatments

Tricyclic antidepressants are not recommended for use with suicidal youth, as their effectiveness has not been demonstrated (AACAP, 2000). Additionally, they are potentially lethal due to the small difference between therapeutic and toxic doses (AACAP). Medications, such as the benzodiazapines and certain barbiturates, should be used with great caution as they may result in disinhibition or impulsivity (AACAP).

Sources

American Academy of Child & Adolescent Psychiatry (AACAP). (2000). *Practice parameter for the assessment and treatment of children and adolescents with suicidal behavior*, 40 (7).

American Academy of Child & Adolescent Psychiatry (AACAP) (2004). *Teen suicide. Facts for families*. [Online]. Available: <http://www.aacap.org/publications/factsfam/suicide.htm>. [July 2005].

Crowell, S., Beauchaine, T., & Lenzenseger, M. (2008). The development of borderline personality disorder and self-injurious behavior. In T. Beauchaine & S. Hinshaw (Eds.) *Child and adolescent psychopathology* (510-539). Hoboken, NJ: John Wiley & Sons.

Fritz, G. (2001). Prevention of child and adolescent suicide. *The Brown University Child and Adolescent Behavior Letter*.

Garland, A., & Zigler, E. (1993) Adolescent suicide prevention: Current research and social policy implications. *American Psychologist*, 48 (2), 169-182.

Goldston, D., & Compton, J. (2007) Adolescent suicide and nonsuicidal self-harm behaviors and risk. In E. Mash & R. Barkley (Eds.), *Assessment of childhood disorders* (305-343).

Gould, M., Shaffer, D., & Greenberg, T. (2003). The epidemiology of youth suicide. In R. King & A. Apter (Eds.), *Suicide in children and adolescents* (pp. 1-40). New York, NY: Cambridge University Press.

Gould, M., Veltin, D., Kleinman, M., Lucas, C., Thomas, J., & Chung, M. (2004). Teenagers' attitudes about coping strategies and help-seeking behavior for suicidality. *Journal of the American Academy of Child and Adolescent Psychiatry*, 43 (9), 1124-1133.

- Hammad, T., Laughren, T., & Racoosin, J. (2006). Suicidality in pediatric patients treated with antidepressant drugs. *Archives of General Psychiatry*, 63 (3), 332-339.
- Linehan, M., Comtois, K., Murray, A., Brown, M., Gallop, R., Heard, H., & Lindenboim, N. (2006) Two-year randomized controlled trial and follow-up of dialectical behavior therapy vs. therapy by experts for suicidal behaviors and borderline personality disorder. *Archives of General Psychiatry*, 63, 757-767.
- Lloyd-Richardson, E. (2008). Adolescent nonsuicidal self-injury—Who is doing it and why. *Journal of Developmental and Behavioral Pediatrics*, 29 (3), 216-218.
- McKeown, R., Cuffe, S., & Schultz, R. (2006). U.S. suicide rates by age group, 1970-2002: An examination of recent trends. *American Journal of Public Health*, 96 (10), 1744-1751.
- McMyler, C., & Prymachuk, S. (2008). Do 'no-suicide' contracts work? *Journal of Psychiatric and Mental Health Nursing*, 15, 512-522.
- Miller, A., Rathus, J., & Linehan, M. (2007). *Dialectic behavior therapy with suicidal adolescents*. New York: Guilford Press.
- Nock, M., Holmberg, E., Photos, V., & Michel, B. (2007). Self-injurious thoughts and behaviors interview: Development, reliability, and validity in an adolescent sample. *Psychological Assessment*, 19 (3), 309-317.
- Nock, M., Teper, R., & Hollender, M. (2007). Psychological treatment of self-injury among adolescents. *Journal of Clinical Psychology: In Session*, 63 (11), 1081-1089.
- Spirito, A., & Overholser, J. (Eds.) (2003). *Evaluating and treating adolescent suicide attempters*. Oxford, UK: Academic Press.
- Thompson, E., & Eggert, L. (1999) Using the suicide risk screen to identify suicidal adolescents among potential high school dropouts. *Journal of the American Academy of Child and Adolescent Psychiatry*, 38 (12), 1506-1514.
- U.S. Centers for Disease Control and Prevention (CDC). (2007). *Facts at a glance*. [Online]. Available: <http://www.cdc.gov/ncipc/dvp/suicide/SuicideDataSheet.pdf>. [January 2011].
- U.S. Department of Health & Human Services. (2001). *National strategy for suicide prevention: goals and objectives for action*. [Online]. Available: <https://store.samhsa.gov/shin/content/SMA01-3517/SMA01-3517.pdf>. [January 2011].
- Vetter, J. (2002). *Suicide prevention in Virginia: problem, planning and activity—an overview presentation* to the Joint Commission on Behavioral Health Care, Nov. 6, 2002. Suicide and Youth Violence Prevention Program, Virginia Department of Health.
- Virginia Department of Health. (2009). *Youth suicide prevention. Data and statistics*. [Online]. Available: <http://www.vahealth.org/civp/preventsuicideva/data.asp>. [January 2011].
- Virginia Department of Health, Office of the Chief Medical Examiner. (2006). *Violent death in Virginia: a report from the Virginia violent death reporting system*. [Online]. Available: <http://www.vdh.virginia.gov/medExam/documents/NVDRS2004.pdf>. Not available November 2009.

World Health Organization. (2009). *Suicide prevention and special programmes: country reports and charts available*. [Online]. Available: http://www.who.int/mental_health/prevention/suicide/country_reports/en/index.html. [November 2009].

VIRGINIA CRISIS CENTERS

Information provided by Virginia Department of Health Suicide and Youth Violence Prevention Program and local providers. [February 2010]

ACTS Helpline

Hotline: 703-368-4141

Serving Prince William County, Manassas City and Manassas Park

P.O. Box 74 — Dumfries, VA 22026

<http://www.actspwc.org/Programs/helpline.asp>

Concern Hotline

Clarke Hotline: 540-667-0145

Frederick Hotline: 540-667-0145

Page Hotline: 540-743-3733

Shenandoah Hotline: 540-459-4742

Warren Hotline: 540-635-4357

Winchester Hotline: 540-667-0145

P.O. Box 2032 — Winchester, VA 22604

www.concernhotline.com

The Crisis Center

Hotline: 800-273-TALK (8255)

100 Oakview Avenue — Bristol, VA 24201

www.crisiscenterinc.org

Crisis Line of Central Virginia

Teen Talk: 434-947-7277

Chatterline: 434-947-KIDS (5437)

Crisis Line: 434-947-HELP (4357)

Suicide: 800-273-TALK (8255)

P.O. Box 3074 — Lynchburg, VA 24503

www.crisislineofcentralvirginia.org

Crisis Line of Norfolk

Hotline: 800-273-TALK (8255)

P.O. Box 3278 — Norfolk, VA 23514

www.preventsuicidetpc.org

CrisisLink

Hotline: 703-527-4077

2503D N. Harrison Street, #114 — Arlington, VA 22207

www.crisislink.org

Crisis Response Team

Trained in an internationally recognized crisis response model by the National Organization for Victim Assistance to offer immediate assistance to the Greater Washington, DC community in the event of natural and manmade disasters, including acts of terrorism, transportation and industrial accidents, suicide and homicide. Its immediate goal is to reclaim a sense of safety and security. The Team helps victims through the process of restoring order to a chaotic situation and gives them the information and resources needed to continue with the healing process.

continued next page

VIRGINIA CRISIS CENTERS

Madison House

www.madisonhouse.org

Hotline: 434-296-TALK

170 Rugby Road — Charlottesville, VA 22903

The Raft Crisis Hotline

Hotline: 540-961-8400

700 University City Boulevard — Blacksburg, VA 24068

www.nrvcs.org

Organizations

American Association of Suicidology

1-800-273-TALK (8255)

<http://www.suicidology.org>

For information about the School Suicide Prevention Accreditation Program, go to <http://www.suicidology.org/web/guest/certification-programs/school-professionals>.

American Foundation for Suicide Prevention

<http://www.afsp.org>

Children's Safety Network

<http://www.childrenssafetynetwork.org>

Jason Foundation, Inc.

<http://www.jasonfoundation.com>

The Link's National Resource Center for Suicide Prevention

<http://www.thelink.org>

National Alliance for the Mentally Ill (NAMI)

<http://www.nami.org>

National Organization for People of Color against Suicide (NOPCAS)

P.O. Box 75571 - Washington, DC 20013

www.nopcas.com

National Suicide Prevention Lifeline

800-SUICIDE (784-2433) (Toll-Free 24 hours/7 days a week)

800-273-TALK (8255)

TTY: 1-800-799-4TTY (4889)

<http://suicidepreventionlifeline.org>

National Youth Violence Prevention Resource Center

<http://www.safeyouth.org>

Suicide Awareness/Voices of Education (SAVE)

<http://www.save.org>

Suicide Prevention Action Network USA, Inc. (SPAN)

http://www.spanusa.org/C_suicide-resources.html

Suicide Prevention Resource Center (SPRC)

<http://www.sprc.org>

**U.S. Department of Health and Human Services
Centers for Disease Control and Prevention (CDC)**

National Center for Injury Prevention and Control

Suicide Prevention Activities

800-CDC-INFO (232-4636)

<http://www.cdc.gov/ncipc/dvp/PreventingSuicide.htm>

Substance Abuse and Mental Health Services (SAMHSA)

<http://www.samhsa.gov>

National Strategy for Suicide Prevention

<http://www.mentalhealth.org/suicideprevention/strategy.asp>

Virginia Department of Health

Division of Injury and Violence Prevention

P.O. Box 2448, 109 Governor Street — Richmond, VA 23219

804-864-7736

For the Virginia Suicide Prevention Resource Directory, go to

<http://www.vahealth.org/Injury/preventsuicideva/index.htm>.

Youth Suicide Prevention Program (YSPP)

<http://www.yspp.org>

ANTIDEPRESSANTS AND THE RISK OF SUICIDAL BEHAVIOR

Introduction

Food and Drug Administration Advisory Statement

Effectiveness of Selective Serotonin Reuptake Inhibitors (SSRIs) and the Risk of Suicidality

Limitations of the Research on Suicidality and Antidepressants

Conclusion

Introduction

Research indicates that, at any one time, as many as eight percent of adolescents experience depression (Lock, Walker, Rickert & Katzman, 2005). Because mood disorders, such as depression, substantially increase the risk of suicide, much attention has been placed on measuring the effectiveness of treatments for depression. This is particularly true for adolescents because depression in that age group is a strong indicator of suicidal behavior (Treatment for Adolescents with Depression Study [TADS], 2004; Miller, Rathus & Linehan, 2007). Given the serious nature of depression among adolescents, it is imperative that the most effective treatment be made available while minimizing any risks associated with these treatments (Lock, Walker, Rickert & Katzman).

Different treatments have been shown to be effective for children and adolescents diagnosed with depression. Certain antidepressant medications, selective serotonin reuptake inhibitors (SSRIs), have been shown to be effective (National Institute of Mental Health [NIMH], n.d.) However, research has also revealed a possible relationship between suicidal thoughts or actions, known as suicidality, and the use of SSRIs in children and adolescents with depression. This section will review the current literature on the benefits and risks associated with antidepressant use in children and adolescents with depression. Additional information about effective treatments for youth with depression is located in the “Depression and Dysthymia” section of the *Collection*.

Food and Drug Administration Advisory Statement

The first accounts of the use of SSRIs in youth with depression was presented to the Food and Drug Administration (FDA) in 2003 (Hammad, Laughren & Racoosin, 2006). The report suggested the possibility that youth diagnosed with major depressive disorder (MDD) being treated with paroxetine, a type of SSRI, experienced increased risk of suicidal thoughts and behaviors (Hammad, Laughren & Racoosin). In response, the FDA reviewed data from the 24 placebo-controlled clinical trials conducted on the use of antidepressants for youth (23 of which were conducted by antidepressant drug manufacturers), specifically looking for the medication’s effects on suicide-related adverse events. This review, as cited by Hammad, Laughren & Racoosin, indicated that:

- 167 events were classified as suicide-related events, although no completed suicides took place in any of the trials; and
- One to three percent of youth taking antidepressants may experience the onset of suicidal thoughts or behaviors or the worsening of suicidal thoughts and behaviors beyond what would be expected from the underlying psychopathology alone, resulting in a doubling of the number of youth experiencing suicidal thoughts or behaviors.

In 2004, the FDA released a statement based on the recommendations of the Psychopharmacologic Drugs Advisory Committee and the Pediatric Drugs Advisory Committee regarding the possibility that increased suicidal thinking and behavior was associated with antidepressant use in pediatric patients (Wolf, 2005). The Advisory Committees’ statement reflected

the findings from controlled pediatric antidepressant trials, which found that antidepressant use in pediatric patients presented an increased risk of suicidality (Wolf).

The FDA then directed manufacturers to add a black-box warning to the health professional label on antidepressants to describe the increased risk of suicidal thoughts and behavior in children and adolescents (2004). The following points were to be included:

- Antidepressants increase the risk of suicidal thinking and behavior in children and adolescents with MDD and other psychiatric disorders.
- Anyone considering the use of an antidepressant in a child or adolescent for any clinical use must balance the risk of increased suicidality with the clinical need.
- Patients who are started on therapy should be observed closely for clinical worsening, suicidality, or unusual changes in behavior.
- Families and caregivers should be advised to closely observe the patient and to communicate with the prescriber.
- A statement regarding whether the particular drug is approved for any pediatric indication(s) and, if so, which one(s).

Sources: FDA, 2004; Wolf, 2005.

The FDA warning instructs clinicians prescribing antidepressants to children to inform parents and custodial adults of the black-box warning. While an advisory statement was issued, the Advisory Committees did have a split decision (15 yes; 8 no) regarding recommendations for a black-box warning for the increased risk of suicidality (Wolf, 2005). In response to the black-box warning, some practitioners have ceased prescribing antidepressants to children and have begun to refer patients to child and adolescent psychiatrists (Virginia Joint Commission on Health Care, 2005).

Effectiveness of Selective Serotonin Reuptake Inhibitors (SSRIs) and the Risk of Suicidality

In evaluating the risk-benefit ratio of using antidepressants, particularly SSRIs, for children and adolescents diagnosed with depression, it is important to have an understanding of the evidence supporting the use of these medicines. Much of what is known about the benefits of antidepressants in treating youth with depression comes from the Treatment for Adolescents with Depression Study (TADS, 2004). TADS was conducted in spring 2000 through spring 2003 in 13 clinics throughout the United States. TADS examined the short and long-term effectiveness of one SSRI, fluoxetine, and evaluated its effectiveness, both alone and in combination with psychotherapy, for treating depression in adolescents ages 12 to 17.

TADS compared four different treatment conditions for adolescents with depression: Cognitive Behavioral Therapy (CBT), SSRI therapy (fluoxetine), combined CBT and SSRI therapy, and a placebo (TADS, 2004). TADS' data indicated that there was an increase in harm-related events among the adolescents who received fluoxetine as part of treatment. Specifically, adolescents treated with fluoxetine alone were twice as likely to experience a suicidal event compared with those treated with combination therapy or just CBT.

The study team also concluded that, after accounting for benefit and risk, the combination of fluoxetine and CBT was more effective than either treatment alone. Additionally, the SSRI treatment alone was shown to be more effective than the placebo (TADS, 2004). In fact, 61 percent of the youth treated with fluoxetine experienced a reduction in their depressive symptoms, compared to 35 percent for the placebo (Lock, Walker, Rickert & Katzman, 2005).

The primary conclusion of TADS was that fluoxetine treatment for depression in youth is effective, but accompanied with some risks, whereas combining CBT with fluoxetine can improve outcomes and reduce the risks associated with fluoxetine (TADS). Overall, fluoxetine has demonstrated the

largest effect difference between active drug and placebo (American Academy of Child & Adolescent Psychiatry [AACAP], 2007). It is unclear why other SSRIs have not consistently demonstrated effectiveness over placebo, but possibilities include little effect and poor study design, too-low doses, and insufficient duration of treatment (AACAP).

Researchers have also looked at the trends in suicide since SSRIs became more commonly used. Olfson, Shaffer, Marcus and Greenberg (2003) examined the trend in the number of suicides occurring from 1990 to 2000 and compared those to the number of youth prescribed antidepressants during that period. This study found an inverse relationship between youth suicide and use of antidepressants and noted that the increased rate of antidepressant use in children and adolescents from 1990 to 2000 was associated with a decrease in suicide rates (Olfson et al.). Further, analysis indicated that SSRI use was associated with an even more notable decrease in the suicide rate in high-risk populations, older adolescents and males, and underserved populations, minorities and low income youth (Olfson et al.).

Another study comparing the use of CBT, sertraline (an SSRI), CBT plus sertraline, and a placebo in the treatment of youth with anxiety disorders found that, when compared to the placebo, sertraline was not associated with increased suicidality (Walkup et al., 2008). There were no suicide attempts and there were no significant differences in the rate of suicidal ideation between any of the groups (Walkup et al.). This study, however, focused on anxious, rather than depressed youth. Thus, the study does not directly assist in understanding the risk associated with employing SSRIs in treating depressed youth.

Limitations of the Research on Suicidality and Antidepressants

When making decisions about the risks associated with antidepressants, particularly SSRIs, it is important to understand the limits of the research. Suicidality can be very difficult to measure. This is because the statistical method used to evaluate the risk associated with treating children and adolescents with antidepressants can only be used in studies where a minimum of one adverse event has taken place (AACAP, 2007). Conversely, a study which fails to detect a significant increase in suicidal risk associated with antidepressant medication does not necessarily indicate that there is not a risk (Walkup et al., 2008).

Hammad, Laughren and Racoosin outlined some of the major limitations of the meta-analysis of suicidality in the antidepressant treatment trials (2006). These studies' limitations are:

1. subsequent analysis using the same data increases the uncertainty of the results;
2. analysis is based on short term (4 to 16 weeks) outcomes, making any conclusions about the long-term consequences of antidepressants in youth impossible; and
3. measuring suicidal ideation and behavior is inherently difficult due to the distressing nature of the topic.

It is difficult to know whether the increase in suicidal ideation and behavior represents a true increase or simply a change in the rate of report (Hammad, Laughren & Racoosin). Additionally, all of the trials used by the FDA in making the decision about the black-box warning excluded youth with severe suicidality (Guirgus-Blake, Wright & Rich, 2008). Thus, conclusions about the effects of antidepressants on suicidality difficult to formulate. Knowing the effects of antidepressants on youth with severe suicidality is critical, but also currently beyond the present state of the research.

Conclusion

In summary, the evidence suggests that antidepressants are associated with a real increase in suicidality among youth and young adults. There is, however, evidence to suggest that the benefits associated with treating moderately to severely depressed youth with antidepressants outweighs the risks (Hammad, Laughren & Racoosin, 2006; AACAP, 2007).

The results of research conducted by Olfson et al. (2003) suggest that the use of antidepressants has significantly decreased the rate of suicides, yet drug treatment trials indicate that antidepressant use increases the rate of suicidal ideation and behavior among adolescents (Hammad, et al., 2006; TADS, 2004). There is also evidence that SSRIs are more effective than placebo medication in treating adolescents with depressive disorders and that the risks associated with SSRIs can be reduced when youth are concurrently receiving CBT (Sharp & Hellings, 2006; TADS). This is a significant finding in the discussion of the effects of antidepressants on suicide since depressive disorders are a significant predictor of suicidal ideation, suicide attempts, and completed suicide (Gould et al., 2003). Another significant finding is that the period of greatest risk for increased suicidality appears to be in the early stages of SSRI treatment (Lock et al., 2005).

In a position paper of the Society for Adolescent Medicine, Lock et al. (2005) concluded that, after balancing the increased risk of suicidality among adolescents treated with SSRIs with their benefits, the evidence supports the use of SSRIs for adolescents with MDD. The American Medical Association (AMA) has asserted that its review of various studies supports the view that antidepressants reduce suicidal behavior and completed suicide attempts overall (2005). The organization does acknowledge, however, that the risk of such behavior appears to be highest during the initial course of drug therapy. The AMA's position is that antidepressants should continue to be available, with their use guided by sensible clinical judgment (AMA). The AACAP concluded that, with close supervision, the risk-to-benefit ratio supports using SSRIs in the treatment of child and adolescent depression (2007). The Society for Adolescent Medicine, AMA, AACAP and American Psychological Association (APA) support the use of fluoxetine, the only medication approved by the FDA for the treatment of youth with depression, but recommend close monitoring by both parents and clinicians (FDA, 2004; Lock et al., 2005; AMA, 2005; AACAP, 2007; APA, 2006).

Sources

- American Academy of Child & Adolescent Psychiatry (AACAP). (2007). Practice parameters for the assessment and treatment of children and adolescents with depressive disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, 46, 1503-1526.
- American Medical Association (AMA). (2005). Safety and efficacy of SSRIS in children and adolescents (A-05). *Council on Scientific Affairs*. [Online]. Available: <http://www.ama-assn.org/ama/pub/category/15186.html>. Not available December 2009.
- American Psychological Association (APA). (2006) Medicate or not. *Monitor on Psychology*, 37 (10), 24-27.
- Gould, M., Shaffer, D., & Greenberg, T. (2003). The epidemiology of youth suicide. In R. A. King & A. Apter (Eds.) *Suicide in Children and Adolescents* (pp. 1-40). New York, NY: Cambridge University Press.
- Guirgus-Blake, J., Wright, A., & Rich, J. (2008). Which drugs are safest for moderate to severe depression in adolescents? *Journal of Family Practice*, 5 (57), 327-329.
- Hammad, T., Laughren, T., & Racoosin, J. (2006). Suicidality in pediatric patients treated with antidepressant drugs. *Archives of General Psychiatry*, 63, 332-339.
- Lock, J., Walker, L., Rickert, V., & Katzman, D. (2005). Suicidality in adolescents being treated with antidepressant medications and the black box label: position paper of the society for adolescent medicine. *Journal of Adolescent Health*, 36, 92-93.
- Miller, A., Rathus, J., & Linehan, M. (2007). *Dialectic behavior therapy with suicidal adolescents*. New York: Guilford Press.

National Institute of Mental Health (NIMH). (n.d.). *Antidepressant medications for children and adolescents: information for parents and caregivers*. [Online]. Available: <http://www.nimh.nih.gov/health/topics/child-and-adolescent-mental-health/antidepressant-medications-for-children-and-adolescents-information-for-parents-and-caregivers.shtml>. [September 2010].

Olfson, M., Shaffer, D., Marcus, S., & Greenberg, T. (2003). Relationship between antidepressant medication treatment and suicide in adolescents. *Archives of General Psychiatry*, 60, 978-982.

Sharp, S., & Hellings, J. (2006). Efficacy and safety of selective serotonin reuptake inhibitors in the treatment of depression in children and adolescents. *Clinical Drug Investigation*, 26 (5), 247-255.

Treatment for Adolescents with Depression Study (TADS) Team. (2004). Fluoxetine, cognitive-behavioral therapy, and their combination for adolescents with depression: treatment for adolescents with depression study randomized controlled trial. *Journal of the American Medical Association*, 292, 807-820.

U.S. Food and Drug Administration (FDA). (2004). Suicidality in Children and Adolescents Being Treated with Antidepressant Medications. [Online]. Available: <http://www.fda.gov/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/DrugSafetyInformationforHealthcareProfessionals/PublicHealthAdvisories/ucm161679.htm>. [January 2011].

Virginia Joint Commission on Health Care. (2005). Decision Matrix.

Walkup, J., Albano, A., Piacentini, J., Birmaher, B., Compton, S., et al. (2008). Cognitive behavioral therapy, sertraline, or a combination in childhood anxiety. *The New England Journal of Medicine*, 359 (26), 2753-2766.

Wolf, D. (2005). Suicidality following black-box warning—letters to the editor. *Journal of the American Academy of Child and Adolescent Psychiatry*, 44 (5), 405.

Additional Resources

Cuffe, S. (2004). *Do Antidepressants Increase the Risk of Suicide in Children and Adolescents?* American Academy of Child & Adolescent Psychiatry (AACAP) DevelopMentor. http://www.aacap.org/cs/root/developmentor/do_antidepressants_increase_the_risk_of_suicide_in_children_and_adolescents

March, J., Silva, S., Petrycki, S. & the Treatment for Adolescents with Depression Study (TADS) Team. (2004). Fluoxetine, cognitive behavioral therapy, and a combination for adolescents with depression: treatment for adolescents with depression study (tads) randomized controlled trial. *Journal of the American Medical Association*, 292, 807-820.

American Academy of Child & Adolescent Psychiatry (AACAP)

Psychiatric Medication

http://www.aacap.org/cs/new_psychiatric_medications/psychiatric_medications

American Psychiatric Association (APA)

The Use of Medication in Treating Childhood and Adolescent Depression: Information for Patients and Families

<http://www.psych.org/Share/Parents-Med-Guide/HTML-Depression.aspx>

MayoClinic.com

Antidepressants and Children: Explore the Pros and Cons

<http://www.mayoclinic.com/invoke.cfm?id=MH00059>

National Institute of Mental Health (NIMH)

Antidepressant Medications for Children and Adolescents: Information for Parents and Caregivers

<http://www.nimh.nih.gov/about/updates/2005/antidepressant-medications-for-children-and-adolescents-information-for-parents-and-caregivers.shtml>

New York University Child Study Center

Guide to Psychiatric Medications for Children and Adolescents

http://www.aboutourkids.org/articles/guide_psychiatric_medications_children_adolescents

Organizations**American Academy of Child & Adolescent Psychiatry (AACAP)**

3615 Wisconsin Avenue, N.W. — Washington, DC 20016-3007

<http://www.aacap.org>

American Academy of Pediatrics (AAP)

141 Northwest Point Blvd. — Elk Grove Village, IL 60007-1098

<http://www.aap.org>

American Psychological Association (APA)

750 First Street, N.E. — Washington, DC 20002-4242

<http://www.apa.org>

Center for Healthier Children, Families, and Communities

1100 Glendon Avenue, Suite 850 — Los Angeles, CA 90024

<http://healthychild.ucla.edu>

National Institute of Mental Health (NIMH)

Treatment of Children with Mental Disorders

6001 Executive Blvd., Room 8184, MSC 9663 — Bethesda, MD 20892-9663

<http://www.nimh.nih.gov1>

SCHOOL-BASED MENTAL HEALTH SERVICES

Introduction

School-based Mental Health Services – An Educational Perspective

School-based Mental Health Services – A Mental Health Perspective

Federal and State Laws Addressing Mental Health Services in Schools

Conclusion

Introduction

It should come as no surprise that schools nationally are the major providers of mental health services for children (Rones & Hoagwood, 2000). Although only 16 percent of all children receive mental health services, 70 to 80 percent of these children receive that care in the school setting (The Center for Health and Health Care in Schools, 2007). Schools provide a setting for the early identification of emotional and behavioral problems and provision of services due to the critical, daily role they play in the growth and development of children. Furthermore, services offered in the school environment are more convenient to children and families and therefore are far more likely to be utilized than many services in the community. In Virginia, 86 percent of children attend public school (Virginia Supreme Court, 2009).

Although schools are not the primary agency responsible for addressing emotional and behavioral issues, the Individuals with Disabilities in Education Act (IDEA) requires that schools follow specific procedures to meet the educational needs of children with disabilities. The reauthorization of the IDEA in 2004 has improved the landscape of education for children with mental health needs. The introduction of evidence-based practices fulfills the goals set forth in IDEA in serving children both with and without disabilities. In light of these developments, the provision of mental health services in schools continues to evolve and demands collaborative efforts from both educational and mental health professionals. There are apparent organizational and political realities impacting the provision of evidence-based mental health services in the school setting.

In 2001 the U.S. Surgeon General defined mental health as, "...the successful performance of mental function, resulting in productive activities, fulfilling relationships with other people, and the ability to adapt to change and to cope with adversity" (U.S. Department of Health and Human Services, 2001). Schools play a vital role in recognizing mental health disorders of children and adolescents (U.S. Department of Health and Human Services). Because of compulsory attendance laws, and because of the role that schools have historically played in U.S. culture, schools have become the *de facto* mental health provider in many across the country. In the following section, school-based mental health services will be discussed, as will the history of mental health service delivery in the school setting.

School-based Mental Health Services – An Educational Perspective

Although the National Association of School Nurses, the National Association of School Social Workers, and the newly launched U.S. Office of Safe and Supportive Schools contribute information, materials, and training to the efforts of schools in addressing the mental health needs of children in school, the National Association of School Psychologists and the American Psychological Association Division of School Psychology provide the bulk of the research and information available regarding children's mental health needs in schools. From an educational perspective, there are three major functions that schools serve as agents of mental health: prevention, intervention, and

treatment. These functions, as outlined by Wayne H. Barry, M.Ed. (Personal Communication, October 8, 2010) are discussed in the following paragraphs:

Prevention – Schools provide children the opportunity to develop a host of skills that will assist them in addressing the major developmental challenges of life. Schools provide a place where children are encouraged to develop goals and a direction for their lives through a curriculum that affords career exploration and developmentally appropriate activities. Finally, much of a school's non-academic curriculum is designed to assist students in solving problems of both a personal and interpersonal nature. Schools are vigilant in carrying out their responsibility to teach children how to solve both academic problems and problems that involve interpersonal conflict and its resolution. Schools are second to no other place in the community in providing excellent role models and developmentally appropriate activities and resources for helping children develop a sense of importance, values, and direction.

Intervention – Schools are required to provide school counseling and support services that assist students in recovering from life's disappointments and setbacks. School nurses, school counselors, school psychologists, school social workers, and student assistance workers help children develop behaviors and/or interpersonal skills which target specific developmental tasks. School nurses assist children with addressing self-efficacy issues regarding healthcare and development, sleep and/or eating problems, medication management, and weight management. In addition to the important work of academic counseling and developing study habits, test-taking skills, school counselors help students adjust to changes in their environment, address adjustment and anxiety issues and help students deal with anger, teasing, or bullying. When necessary, mental health professionals in the school setting assist teachers and administrators with making contact with a student's family and facilitating school-home collaboration in addressing difficulties. Many of these interventions have become entrenched in the school routine and may not be perceived as mental health interventions.

Treatment – Treatment is twofold. First, school mental health professionals may refer parents and students to community services for an assessment of treatment needs and determination of the appropriate level of care. The school staff may continue to facilitate collaboration, when appropriate, and provide case management and support services during school hours. Children who live in a dysfunctional or chaotic home environment are more likely to experience difficulties learning, and are less likely to experience academic success. Some, but not all of these children, qualify for special education services (Felitti & Anda, 2009).

Secondly, schools steward the provision of rehabilitative services designed to maintain and improve a child's level of personal and interpersonal functioning as required by the child's individualized education program (IEP). There are a number of children in any one school who have participated in an extremely thorough referral, diagnostic, and eligibility determination process, and have been determined in need of special education services (and related services). Federal law requires schools to be vigilant in seeing that special education students receive a free and appropriate education (FAPE) in the least restrictive environment (LRE), and that their progress and eligibility for services be reviewed on a pre-determined schedule. While children with emotional disabilities are the most likely of the 13 categories of special education children to be receiving mental health services, any child with special education needs may require, and benefit from, mental health services as a related service.

School-based Mental Health Services—A Mental Health Perspective

There are three major research centers that collect and disseminate information to improve mental health services for children in schools. The National Center for Mental Health in Schools (NCMHIS) Project of the Program and Policy Analysis Center at the University of California at Los Angeles, The Research and Training Center for Children’s Mental Health at the Louis de la Parte Florida Mental Health Institute of the University of South Florida, and the Center for Child and Human Development at Georgetown University all serve as important clearinghouses of information. The NCMHIS provides a very useful way of conceptualizing the type and intensity of mental health services children need in school. Figure 1 captures the essential features of this model.

While Adelman and Taylor offer an insightful model of the school-based mental health service delivery model, two studies conducted between 2000 and 2005 – *The School Health Policies and Programs Study 2000* and *School Mental Health Services in the United States 2002-2003* – outline how mental health services are actually being delivered in schools (Brener, Martindale & Weist, 2001; Foster et al., 2005). Both reports describe the approaches for providing mental health services in schools. These approaches are as follows:

1. School-financed student support services in which school divisions hire professional staff to provide traditional mental health services;
2. Formal connections with community mental health services in which there are formal agreements between schools and school divisions and one or more community agency to provide mental health services and to enhance service coordination (the service can be co-located within the school or provided at the community agency);
3. School-division mental health units or clinics in which divisions operate and finance their own mental health units or clinic that provides services, training, and/or consultation to schools, or divisions organize multidisciplinary teams to provide a range of psychosocial and mental health services;
4. Classroom-based curricula, which are activity-driven approaches aimed at optimizing learning by enhancing social and emotional growth. Interventions tend to be teacher-led and prevention-oriented; and
5. Comprehensive, multifaceted, and integrated approaches in which divisions bring multiple partners together to provide a full spectrum of services for children and youth with mental health needs.

Regardless of how mental health services are delivered in schools, there are several factors associated with program effectiveness that are inescapable. Kutash, Duchnowski & Lynn outline these factors as follows (2006):

- ✓ consistent implementation;
- ✓ multi-component programs, i.e., child, teacher, and parent components;
- ✓ multiple approaches, i.e., information sessions combined with skill training;
- ✓ targeting specific behaviors and skills;
- ✓ developmentally-appropriate strategies; and
- ✓ strategies integrated into the classroom curriculum.

Federal and State Laws Addressing Mental Health Services in Schools

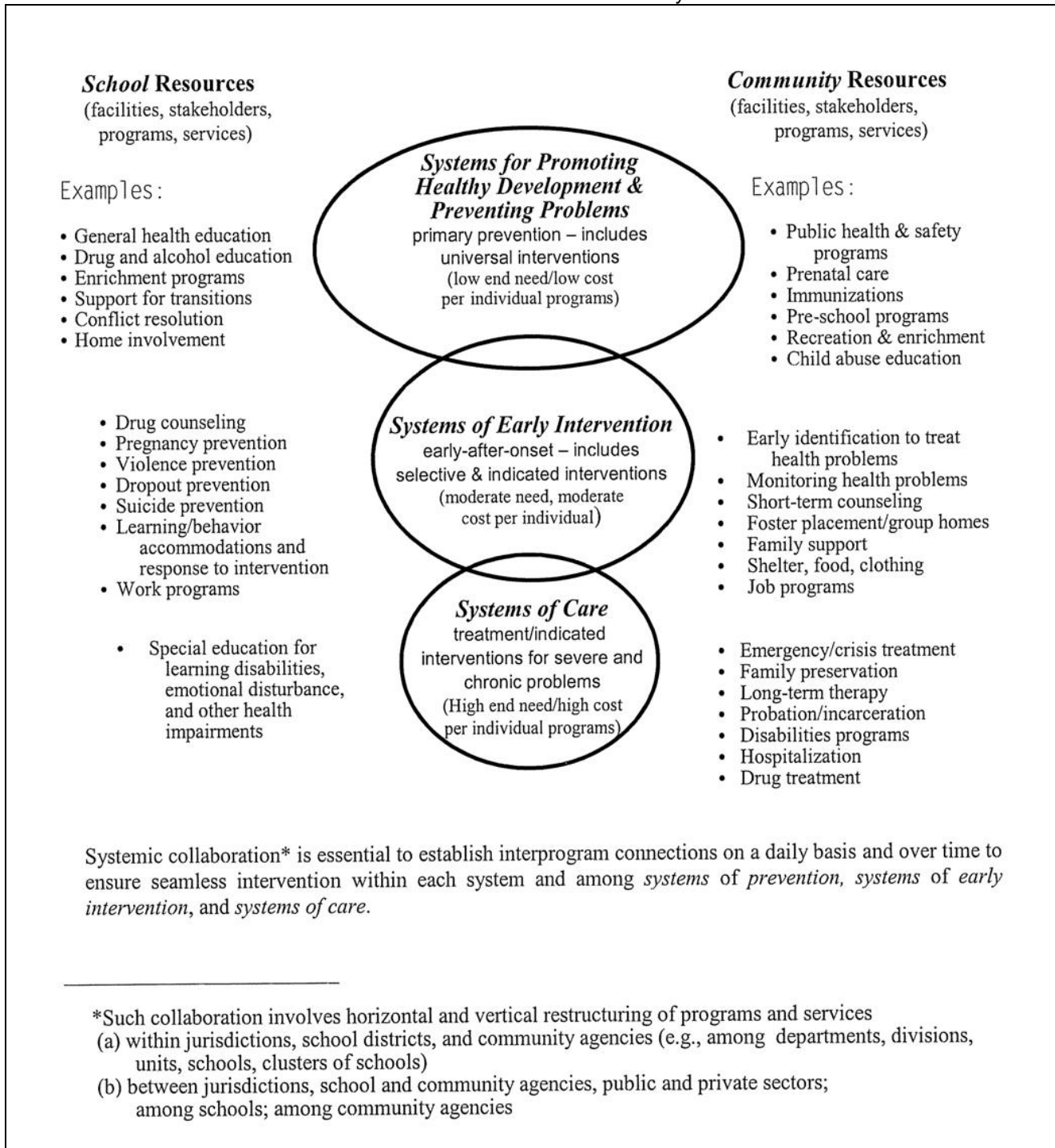
Several pieces of legislation, as well as a report commissioned by President George W. Bush, helped to improve mental health service delivery to children in schools. Public Law 94-142, the *Education for All Handicapped Children Act of 1975*, was the original legislation requiring schools to open their doors to all children with disabilities. Serious emotional disturbance (SED) was one of the original categories of children to be served by school personnel as a result of the years-long battle to pass legislation. Re-authorizations of this Act over the next 30 years, most notably in 1997 and 2004, expanded protections and services. One added provision was that a child was not required to have an SED to obtain mental health

counseling in order to assist with their disability. Another addition was the provision of counseling for parents designed to assist in the understanding and assisting with services for their child's disability. Additionally, Section 504 of the *Rehabilitation Act of 1973* guaranteed

Figure 1

National Center for Mental Health in Schools

School-based Mental Health Delivery Model



Source: Adelman & Taylor, 2010.

accommodations to ensure access to major life activities for individuals with disability, or for those who were suffering the effects of a disability. President Bush's re-authorization in 2002 of the *Elementary and Secondary Education Act of 1965*, more popularly known as the *No Child Left Behind Act* (NCLB), allowed schools to expand services to address the mental health needs of children not requiring special education services. In 2003, the President's New Freedom Commission on Mental Health punctuated many of the original observations and recommendations made in the Surgeon General's 1999 report on mental health services in the United States. In 2005, the report on *School Mental Health Services in the United States, 2002-2003* provided the first nationwide baseline data regarding mental health services in schools. This report notes the following:

- Virtually all schools reported having at least one staff member whose responsibilities included providing mental health services to students;
- 87 percent of schools reported that all students, not just those served in special education, were eligible to receive mental health services;
- Over 80 percent of schools provided assessment for mental health problems, behavior management consultation, and crisis intervention, as well as referrals to specialized programs. A majority provided counseling and case management;
- 49 percent of school divisions used contractual arrangements with community-based organizations to provide mental health services to students; and
- 60 percent of school divisions reported that referrals to community-based providers had increased over the previous year. Unfortunately, one-third of school divisions reported the availability of outside providers to deliver services to students decreased.

In 1990, Virginia enacted a law requiring each Virginia public school board to establish a school health advisory board (SHAB) consisting of parents, students, health professionals, educators and others. According to § 22.1-275.1 of the *Code of Virginia*, the SHABs assist with the development of health policy in the school division and the evaluation of the status of school health, health education, the school environment and health services. The Department of Education (DOE) encourages local SHABs to incorporate the federal Centers for Disease Control and Prevention (CDC) Coordinated School Health Model in carrying out their responsibilities. Importantly, mental health services for both students and staff are a prominent feature of the CDC model.

Conclusion

The New Freedom Commission's report reflects a trend towards the adoption of approaches that address risk and protective factors within the school environment. Effective school based programs, as outlined in the Report, employ a full continuum of mental health services and supports to help address the needs of all students and their families. Effective school mental health programs can promote connections between education and other systems including mental health, child welfare, and juvenile services. School mental health programs may be a crucial first step in identifying those students who may suffer from mental health disorders. It is important that policymakers recognize the tremendous potential that exists in reaching children with mental health needs through school-based programming. The increased involvement of the educational system in the process of mental health intervention and treatment could dramatically influence the accessibility and utilization of services, and could result in substantial growth in the number of positive child outcomes.

Sources

Adelman, H., & Taylor, L. (2010). *Turning around, transforming, and continuously improving schools: federal proposals are still based on a two- rather than a three-component blueprint*. Center for Mental Health in Schools. [Online]. Available: <http://smhp.psych.ucla.edu/pdfdocs/turning.pdf>. [September 2010].

- Adelman, H., Taylor, L., & Nelson, P. (2010). *Addressing barriers to learning*. The Center for Mental Health in Schools, University of California at Los Angeles.
- Brener, N., Martindale, J., & Weist, M. (2001). Mental health and social services: results from the school health policies and programs study 2000. *Journal of School Health, 71*, 7, 305-312.
- Center for Health and Health Care in Schools. (2007). *Children's Mental Health Needs, Disparities and School-Based Services: A Fact Sheet*. [Online]. Available: <http://www.healthinschools.org/News-Room/Fact-Sheets/MentalHealth.aspx>. [October 2010].
- Christner, R., & Mennuti, R., eds. (2009). *School-Based Mental Health: A Practitioner's Guide to Comparative Practices*. New York: Routledge Press.
- Dittman, M. (2005). Council of directors of school psychology programs, *APA Monitor, 36*, 5, [Online]. Available: <http://www.apa.org/monitor/may05/progress.aspx>. [October 2010].
- Felitti, V., & Anda, R. (2009). The adverse childhood experiences (ACE) study: Bridging the gap between childhood trauma and negative consequences later in life. [Online]. Available: <http://www.acestudy.org>. [October 2010].
- Foster, S., Rollefson, M., Doksum, T., Noonan, D., Robinson, G., & Teich, J. (2005). *School Mental Health Services in the United States, 2002-2003*. DHHS Publication Number (SMA) 05-4068. Rockville, MD. Center for Mental Health Services, U.S. Substance Abuse and Mental Health Services Administration.
- Kutash, K., Duchnowski, A., & Lynn, N. (2006). *School-Based Mental Health: An Empirical Guide for Decision-Makers*. The Research and Training Center for Children's Mental Health, Louis de la Parte Florida Mental Health Institute, University of South Florida.
- National Center for Mental Health in Schools at UCLA & the National Association of School Psychologists. (2010). *Enhancing the Blueprint for School Improvement in the ESEA Reauthorization: Moving From a Two- to a Three-Component Approach*.
- President's New Freedom Commission on Mental Health. (2003). *Achieving the Promise: Transforming Mental Health Care in America. Final Report*. DHHS Pub. No. SMA-03-3832. Rockville, MD.
- Rones, M., & Hoagwood, K. (2000). School-based mental health services: A research review. *Clinical Child and Family Psychology Review, 3*, 223-241.
- U.S. Department of Health and Human Services. (1999). *Mental Health: A Report of the Surgeon General*. Rockville, MD.
- U.S. Department of Health and Human Services. (2001). *Mental Health: Culture, Race, and Ethnicity – A Supplement to Mental Health: A Report of the Surgeon General*. Rockville, MD.
- Virginia Supreme Court. (2009). *Virginia Supreme Court Commission on Mental Health Law Reform* [Online]. Available: <http://www.courts.state.va.us/programs/cmh/home.html>. [October 2010].

Selected Evidence-based Resources

Center for the Study and Prevention of Violence at the University of Colorado at Boulder
 Blueprints for Violence Prevention Overview
<http://www.colorado.edu/cspv/blueprints>

Center for the Application of Prevention Technology

http://captus.samhsa.gov/national/resources/evidence_based.cfm

Collaborative for Academic, Social and Emotional Learning (CASEL)

Reviews & Evidence-Based Programs & Practices

<http://www.casel.org/links.php#prevention>

National Institute on Drug Abuse (NIDA)

Research-Based Drug Abuse Prevention Programs

<http://www.drugabuse.gov/Prevention/examples.html>

Office of Juvenile Justice and Delinquency Prevention (OJJDP)

Model Programs Guide

http://www.dsgonline.com/mpg2.5/mpg_index.htm

Promising Practices Network

http://www.promisingpractices.net/programs_indicator.asp

Substance Abuse and Mental Health Services (SAMHSA)

National Registry of Evidence-Based Programs and Practices

<http://www.nrepp.samhsa.gov>

U.S. Department of Education

Safe, Disciplined and Drug-Free Expert Panel

<http://www.ed.gov/admins/lead/safety/exemplary01/edlite-exemplarychart.html>

Institute of Education Sciences

What Works Clearinghouse

<http://ies.ed.gov/ncee/wwc>

Organizations/General Resources

Center for Health and Health Care in Schools

<http://www.healthinschools.org>

National Association of School Psychologists

<http://www.nasponline.org>

Center for Child and Human Development

<http://gucchd.georgetown.edu>

Center for Mental Health in Schools: School Mental Health Project

<http://smhp.psych.ucla.edu>

Office of Special Education and Rehabilitative Services Programs (OSERS)

<http://www2.ed.gov/about/offices/list/osers/osep/index.html?src=mr>

Research and Training Center for Children's Mental Health

<http://rtckids.fmhi.usf.edu>

Virginia Resources

Department of Education

<http://www.doe.virginia.gov>

Department of Health

<http://www.vdh.virginia.gov>

Department of Behavioral Health and Developmental Services (DBDHDS)

<http://www.dbhds.virginia.gov>

JUVENILE OFFENDING

Introduction

Risk and Protective Factors

Assessment

Comorbid Disorders

Evidence-based Treatments

Home and Community-Based Models

Psychological Treatments

Additional Treatment Considerations

Unproven Treatments

Cultural Considerations

Services in Virginia

Services in Juvenile Detention Centers

Mental Health Services Transition Plans

Conclusion

Introduction

The responsibility for children's mental health is dispersed across multiple systems: schools, juvenile justice, and child welfare (U.S. Department of Health and Human Services, 1999). Unfortunately, an increasing number of youth with mental health disorders continue to enter, and remain involved in the juvenile justice system.

The National Center for Mental Health and Juvenile Justice (NCMHJJ) and the Council of Juvenile Correctional Administrators conducted a study of mental health prevalence in youth involved in the juvenile justice system. According to this study, 70 percent of these youth meet the criteria for at least one mental health disorder and approximately 27 percent experience a mental health disorder so severe that they require critical and immediate treatment (NCMHJJ, 2006).

Estimates provided by state and local juvenile justice facilities suggest that juvenile offenders have significant mental health treatment needs. A study of juveniles in detention homes conducted by the Virginia Department of Juvenile Justice (DJJ) showed that more than 40 percent of males and almost 60 percent of females were in need of mental health services; more than seven percent of males and more than 15 percent of females had urgent mental health treatment needs (Virginia Joint Commission for Behavioral Health Care, Virginia State Crime Commission and Virginia Commission on Youth, 2002).

Juveniles entering the justice system typically manifest complex mental health and behavioral health needs. However, a lack of community-based treatments has resulted in youth with mental health disorders being placed in the juvenile justice system for minor and non-violent offenses (NCMHJJ, 2005). According to the National Alliance for the Mentally Ill (NAMI), 36 percent of respondents to a nationwide survey of families having children with severe mental health disorders said that their children were in the juvenile justice system because of the unavailability of mental health care services (1999). Data compiled from national studies reveals that the rate of mental health disorders is higher in youth in the juvenile justice population than in the general population (Otto, Greenstein, Johnson & Friedman, 1992; Teplin, Abram, McClelland, Dulcan & Mericle, 2002; Wierson, Forehand & Frame, 1992). The psychiatric disorders seen most commonly in juvenile offenders are listed in Table 1.

Table 1

Most Common Mental Health Disorders Seen Among Juvenile Offenders

Conduct Disorder	Attention Deficit Hyperactivity Disorder
Oppositional Defiant Disorder	Posttraumatic Stress Disorder
Major Depressive Disorder	Intellectual Disability
Dysthymic Disorder	Learning Disorders
Bipolar Disorder	Fetal Alcohol Syndrome

Source: Boesky, 2002.

Risk and Protective Factors

Several risk factors are predictive of violent juvenile offending. These include substance use, low grade point average, aggressive responses to shame, unavailability of caring adults in the community, learning difficulties, and weak parental involvement (Hart, O'Toole, Price-Sharp & Shaffer, 2007). Carr and Vandiver (2001) identified the protective factors that were associated with lower rates of recidivism among youth offenders. These protective factors are personal, familial, social, and academic (Carr & Vandiver). For example, juveniles with a lower risk for recidivism reported being happier with themselves, having more positive attitudes toward school rules and law enforcement, and having more structure and rules within their homes. Conversely, the risk factors which have been found to be related to subsequent institutional placement include chronic school truancy, prior outpatient treatment for mental health or substance abuse, and prior use of a firearm (Research & Training Center on Family Support and Children's Mental Health, 2001).

The presence of one or more mental health disorders also serves as a risk factor for juvenile offending, placement within the juvenile justice system, and likelihood of recidivism (Cottle, Lee & Heilbrun, 2001). The findings of a study conducted by the Research & Training Center on Family Support and Children's Mental Health (2001) indicated that children at risk for institutional placement are placed according to the primary type of dysfunction they display, with behaviorally-disordered children becoming incarcerated and emotionally-disordered children being placed into the state mental health system. In addition, the NCMHJJ (2005) identified gender-specific risk factors such that females were found to be at a greater risk of being victims of sexual abuse, which may also influence high-risk behaviors linked to delinquency (Greene, Peters & Associates, 1998). Further, a meta-analysis indicated that specific mental health problems, including conduct problems, anxiety, and other non-severe psychopathology, may also impact the likelihood of subsequent recidivism (Cottle, Lee & Heilbrun).

Assessment

Bartol and Bartol (2008) highlighted several risk assessment instruments which have been used to assess risk for violence and recidivism. The Historical/Clinical/Risk Management Scale (HCR-20; Webster, Harris, Rice, Cormier & Quinsey, 1994) assesses risk for violence among individuals suffering from serious mental health disorders, and has demonstrated good internal consistency and reliability (Belfrage, 1998), as well as predictive validity in forensic psychiatric settings (Brown, 2001). The Violence Risk Appraisal Guide (VRAG; Harris, Rice & Quinsey, 1993) assesses risk for violence across a long period of time, and has demonstrated predictive validity for violent recidivism across a range of studies (Harris & Rice, 2003). However, the degree of predictive validity is less striking when it is used with offenders suffering from major psychopathology (Grann, Belfrage & Tengstrom, 2000).

The Iterative Classification Tree (ICT; Monahan et al., 2001) uses a flowchart format to identify individuals as being at low- or high-risk for violent offending. There is limited research examining the reliability and validity of the ICT, but initial research has found support for the predictive validity (Monahan et al., 2005). The Level of Service Inventory–Revised (LSI-R; Andrews & Bonta, 1995) assesses risk factors for services needed, as well as for reconviction. Previous research has found that the LSI-R demonstrates reliability and validity for assessing risk for recidivism (Loza & Simourd, 1994). Finally, the Psychopathy Checklist–Revised (PCL-R; Hare, 2003) assesses violent behavior and recidivism, and has demonstrated good reliability and predictive validity for general and violent recidivism (Tengstrom, Grann, Langstroem & Kullgren, 2000).

Comorbid Disorders

A high percentage of youth in the juvenile justice system meet the American Psychiatric Association’s *Diagnostic and Statistical Manual, Fourth Edition, Text Revision (DSM IV-TR)* criteria for more than one mental health disorder. Among youth in the juvenile justice system who have a mental health diagnosis, about 70 percent have a co-occurring substance abuse disorder (Skowrya & Coccozza, 2006). Further, 25 percent of youth experience mental health disorders so severe that their ability to function is impaired (Skowrya & Coccozza). Co-occurring mental health and substance abuse problems place distinct demands upon treatment programs and require strong collaboration. Solutions for treating co-occurring disorders for youth in the justice system are complicated, particularly because adolescents often return to the peer, family, and community environments that initially supported and promoted their substance abuse.

Evidence-based Treatments

Heightened awareness of mental health disorders has led to increased research and new treatment practices in the juvenile justice system. Among delinquent juveniles who receive structured, meaningful, and sensitive treatment, recidivism rates are 25 percent lower than those in untreated control groups. Highly successful programs reduce rates of reoffense by as much as 80 percent (Coalition for Juvenile Justice, 2000).

NCMHJJ has compiled information on treatments for juvenile offenders (2002). These interventions incorporate several treatment components and are discussed in the following paragraphs. These treatment approaches are described by their treatment settings in the paragraphs which follow. Table 2 outlines these treatments as What Works and What Seems to Work.

Home and Community-Based Models

Although several of these treatment approaches may be applied and utilized in the institutional setting, the following discussion refers to the application of these approaches in the community setting.

Multisystemic Therapy

Multisystemic Therapy (MST) is an integrative, family-based treatment which focuses on improving psychosocial functioning for youth and families with the goal of reducing or eliminating the need for out-of-home placements. MST addresses the numerous factors shaping serious antisocial behaviors in juvenile offending while focusing on the youth and their family, peers, school, and neighborhood/community support (Henggeler, as cited by the NCMHJJ, 2002). The underlying premise of MST is that the behavioral problems in children and adolescents can be improved through the interaction with or between two or more of these systems.

MST has an extensive body of research to support its effectiveness with juvenile populations having emotional and behavioral problems. Evaluations have shown reductions of up to 70 percent in long-term rates of re-arrest and reductions of up to 64 percent in out-of-home placements, along with improvements in family functioning and decreased mental health problems (National Mental Health Association, NMHA [now Mental Health America, MHA], 2004).

Table 2

Summary of Treatments for Juvenile Offenders

What Works	Description
Multisystemic Therapy (MST)	An integrative, family-based treatment with a focus on improving psychosocial functioning for youth and families.
Functional Family Therapy (FFT)	A family-based program that focuses on delinquency, treating maladaptive and “acting out” behaviors, and identifying obtainable changes.
Multidimensional Treatment Foster Care (MTFC)	As an alternative to corrections, MTFC places juvenile offenders who require residential treatment with carefully trained foster families who provide youth with close supervision, fair and consistent limits, consequences, and a supportive relationship with an adult.
Cognitive Behavioral Therapy (CBT)	A structured, therapeutic approach that involves teaching youth about the thought-behavior link and working with them to modify their thinking patterns in a way that will lead to more adaptive behavior in challenging situations.
Dialectical Behavior Therapy	A therapeutic approach that includes individual and group therapy components and specifically aims to increase self-esteem and decrease self-injurious behaviors and behaviors that interfere with therapy.
What Seems to Work	Description
Family Centered Treatment (FCT)*	FCT seeks to address the causes of parental system breakdown while integrating behavioral change. FCT provides intensive in-home services and is structured into four phases: joining and assessment; restructuring; value change; and generalization.
Brief Strategic Family Therapy	A short-term, family-focused therapy that focuses on changing family interactions and contextual factors that lead to behavior problems in youth.
Aggression Replacement Therapy (ART)	A short-term, educational program that focuses on anger management and provides youth with the skills to demonstrate non-aggressive behaviors, decrease antisocial behaviors, and utilize prosocial behaviors.

Source: NCMHJJ, 2002; Sullivan, Benneer & Painter, 2009 (FCT)*.

Functional Family Therapy

Functional Family Therapy (FFT) is a family-based prevention and intervention program that integrates established clinical therapy, empirically supported principles, and extensive clinical experience. This model allows for intervention in complex problems through clinical practice that is flexibly structured, culturally sensitive, and accountable to families (Sexton and Alexander, as cited by the NCMHJJ, 2002).

FFT focuses on the delinquency problem and on treating youth who exhibit maladaptive and “acting out” behaviors by seeking to reduce them by identifying obtainable changes (NMHA, 2004). A research study indicated that, one year after treatment, youth who participated in FFT had a re-arrest rate of approximately 25 percent (NMHA). This was significantly lower than the arrest rate (45 to 75 percent) for youth who had not received FFT (NMHA).

Multidimensional Treatment Foster Care

Multidimensional Treatment Foster Care (MTFC) recruits, trains, and supervises foster families to provide youth with close supervision, fair and consistent limits and consequences and a supportive relationship with an adult (NCMHJJ, 2002). As an alternative to corrections, it places juvenile offenders who require residential treatment with these carefully trained foster families. It promotes both rehabilitation and public safety (Chamberlain, 1998). During the placement timeframe, the youth’s biological or adoptive family is also receiving family therapy to further the goal of returning the youth to that family (NMHA, 2004).

Chamberlain (1998) found that MTFC was superior to traditional group care in short- and long-term outcomes among juvenile offenders. These outcomes included decreases in running away from home, higher rates of program completion, and decreases in the frequency of being locked up in a detention or training center. Research has shown that male juvenile offenders who participated in MTFC, as compared to traditional group care, were more likely to return home to reside with relatives and have less official and self-reported criminality (e.g., violent crimes or delinquent behaviors) (Chamberlain & Reid, 1998).

Family Centered Treatment

A recent treatment approach which shows promise is Family Centered Treatment (FCT). The information in the following paragraph is from the Institute for Family Centered Treatment (Sullivan, Benneer & Painter, 2009).

FCT was developed by Institute for Family Centered Services (IFCS) as an intensive, in-home treatment. The goal of FCT is to keep the youth in the community and divert them from further penetration into the juvenile justice system. FCT seeks to address the causes of parental system breakdown, while integrating behavioral change. FCT is structured into four phases: joining and assessment; restructuring; value change; and generalization. The FCT program performs at least as well as residential programs and at a substantially lower cost. One study has been conducted and found, in the first year following treatment, 23 percent fewer youth were in a residential placements, 16 percent fewer youth in pending placements, 30 percent reduction in length of residential placement, and 11 percent fewer youth in secure detentions. Additional research is needed to show the long-term effectiveness of FCT.

Psychological Treatments

Psychological treatments provide guidance and support for juveniles with mental disorders (NCMHJJ, 2007). Treatments are conducted by trained professionals and the length and type vary according to individual treatment plans (NCMJJ). Some examples of psychological treatments are discussed below.

Cognitive Behavioral Therapy

Cognitive Behavioral Therapy (CBT) is a therapeutic approach that focuses on the relationship between thoughts, feelings and behaviors in maladaptive outcomes. For example, CBT may focus on the idea that dysfunctional thoughts lead to maladaptive behaviors and feelings. This structured approach involves teaching youth about the relationship between thoughts and behaviors and helps them employ more adaptive behaviors in challenging situations. This approach is especially beneficial for youth in the juvenile justice system because it is very structured and focuses on the triggers for disruptive or aggressive behavior (NMHA, as cited by the NCMHJJ, 2002). CBT

addresses poor interpersonal and problem-solving skills by teaching participants social skills, coping, anger management, self-control, or social responsibility (NMHA, 2004). A meta-analysis highlighted the effectiveness of CBT in treating convicted offenders, specifically highlighting the impact of CBT in reducing recidivism rates and displaying the positive effects of cognitive restructuring and skills (Wilson, Bouffard & MacKenzie, 2005).

Dialectical Behavior Therapy

Dialectical Behavior Therapy (DBT) was originally validated for use with borderline personality disorder, but has since been adapted to treat juvenile offenders (Linehan et al., 1991). It consists of individual and group therapy components and focuses on validating the behaviors and feelings of the juvenile. It also focuses on the youth's making positive changes, such as development of emotional regulation skills (Skowrya & Coccozza, 2006). DBT specifically aims to increase self-esteem and decrease self-injurious and other negative behaviors that interfere with therapy. Linehan and colleagues highlighted positive outcomes associated with DBT, including decreases in substance abuse, crisis situations and suicidal ideation, and increases in treatment retention. One study adapted DBT for the treatment of incarcerated female juvenile offenders and found a significant decrease in problem behaviors in these females (Trupin, Stewart, Beach & Boesky, 2002).

Brief Strategic Family Therapy

Brief Strategic Family Therapy is a short-term, family-focused therapy that concentrates on changing family interactions and contextual factors which may lead to behavior problems in youth (U.S. Department of Health and Human Services [HHS], 2004). It includes three therapeutic techniques, including developing a therapeutic alliance with family members, diagnosing the problem behavior(s), and restructuring, or changing family interactions that lead to these problematic behaviors. Brief Strategic Family Therapy has been linked to decreases in substance abuse, reductions in negative attitudes and behaviors, and improvements in positive attitudes and behaviors (HHS).

Aggression Replacement Therapy

Aggression Replacement Therapy (ART) is a short-term, educational program that focuses on anger management, while providing youth with the skills to decrease antisocial behaviors and to utilize prosocial behaviors. The three main components of ART include Structured Learning Training (learning interpersonal and social skills), Anger Control Training (learning how to deal with one's anger), and Moral Reasoning (learning how to develop mature moral reasoning) (Skowrya & Coccozza, 2006). Research has shown ART to be associated with productive interpersonal interactions, improved problem-solving skills, and increased moral reasoning (Glick & Goldstein, 1987).

Additional Treatment Considerations

Pharmacological treatments may be incorporated as a part of the juvenile's treatment plan when being utilized for a diagnosed mental health disorder. Evidence-based pharmacological treatments for the various mental health disorders are discussed in greater detail in each of the *Collection's* sections on specific disorders.

In addition to these specific treatment programs, researchers and policymakers have described some broader approaches or philosophies that are thought to produce positive outcomes for juvenile offenders. One such approach is the integrative systems of care (SOC) approach. The SOC approach typically involves collaboration across agencies, such as juvenile justice and mental health, with the goal of developing coordinated plans for family-centered services which build upon the strengths of the youth and their family.

The Coalition for Juvenile Justice (2000) outlined nine components that are critical to effective treatment for juvenile offenders:

1. highly structured, intensive programs focusing on changing specific behaviors;
2. development of basic social skills;
3. individual counseling that directly addresses behavior, attitudes, and perceptions;
4. sensitivity to a youth's race, culture, gender, and sexual orientation;
5. family member involvement in the treatment and rehabilitation of children;
6. community-based, rather than institution-based treatment;
7. services, support, and supervision that "wrap around" a child and family in an individualized way;
8. recognition that youth think and feel differently than adults, especially under stress; and
9. strong aftercare treatment.

Unproven Treatments

Sukhodlsky and Ruchkin (2006) reviewed the treatments generally used for youth in the juvenile justice system and highlighted the limited application of evidence-based treatments to juvenile offenders. In short, while there may be ample evidence for treating youth with various psychopathologies using the aforementioned treatments, there is limited research on the implementation of these treatments in the juvenile justice system. This limitation highlights the need for more research to examine the effectiveness of these treatments among the juvenile offender population.

Cultural Considerations

The U.S. Surgeon General's Report on Culture, Race, and Ethnicity indicates a lack of research on culturally sensitive, evidence-based mental health treatments for minority youth in the juvenile justice system (2001). This report highlights the need for considering race and ethnicity in treatment outcomes, particularly because minority youth are overrepresented in the juvenile justice system (Snyder & Sickmund, 1999).

Services in Virginia

Each year, a significant number of juveniles with mental health problems enter Virginia's juvenile justice system. DJJ assesses juveniles as they enter the system to ascertain their needs and what services are to be provided. Below is information about two Virginia-specific initiatives.

Juvenile Detention Centers

The information contained in this section is taken from the *Integrated Policy and Plan to Provide and Improve Access to Mental Health, Mental Retardation and Substance Abuse Services for Children, Adolescents and their Families* published in 2009 by the Virginia Department of Mental Health, Mental Retardation and Substance Abuse Services [DMHMRSAS] (now the Virginia Department of Behavioral Health and Developmental Services [DBHDS]).

The Virginia Department of Juvenile Justice (DJJ) estimated that at least 50 percent of Virginia's juvenile detention population was in need of behavioral health services (DMHMRSAS, 2009). The DBHDS and DJJ funded five projects with a combination of federal and state funding to allow Community Service Boards (CSBs) to provide mental health screening, assessment services, and community-based referrals for youths in local juvenile detention facilities. The 2006 General Assembly appropriated \$1.14 million for nine additional projects and also covered the federal share of funding for the others, to bring the total number of projects to 14.

These programs, which increase local system capacity to identify and intervene in the lives of children involved in the juvenile justice system, serve approximately 2,500 youth annually and support 23 programs. Programs in operation include:

- Alexandria CSB/Northern VA Detention Home
- Blue Ridge Behavioral Health/Roanoke Detention Center
- Central Virginia CSB/ Lynchburg Detention Center
- Region 10 CSB/Blue Ridge Detention Center
- Chesapeake CSB/Chesapeake Juvenile Justice Center
- Chesterfield CSB/Chesterfield Juvenile Detention Home
- Colonial CSB/Merrimac Detention Center
- Crossroads CSB/Piedmont Juvenile Detention Home
- Danville CSB/W.W. Moore Detention Center
- District 19 CSB/Crater Juvenile Detention Home
- Fairfax-Falls Church CSB/Fairfax Juvenile Detention Home
- Hampton-Newport News CSB/Newport News Juvenile Detention Home
- Henrico CSB/Henrico Juvenile Detention Home
- Loudoun CSB/Loudoun Juvenile Detention Home
- New River Valley CSB/New River Valley Detention Center
- Norfolk CSB/Norfolk Juvenile Detention Home
- Northwestern CSB/Northwestern Juvenile Detention Home
- Planning District One Behavioral health/Highlands Juvenile Detention Home
- Prince William CSB/Prince William Juvenile Detention Home
- Rappahannock CSB/Rappahannock Juvenile Detention Home
- Richmond Behavioral Health/Richmond Juvenile Detention Home
- Valley CSB/Shenandoah Juvenile Detention Center
- Virginia Beach CSB/Virginia Beach Juvenile Detention Home

The following information is from the Virginia Department of Behavioral Health and Developmental Services (P. Fisher, personal communication, April 6, 2010). During the first two quarters of fiscal year 2010, 2,563 youth received a mental health service while in detention. Services include:

- Case management: 459 youth;
- Emergency services: 123 youth;
- Early intervention services: 507 youth; and
- Assessment and evaluation services: 705 youth.

Mental Health Services Transition Plans

The following is taken from the Virginia Department of Juvenile Justice (DJJ) (2010).

In 2005, the Virginia General Assembly enacted legislation requiring the planning and provision of mental health, substance abuse or other therapeutic treatment services for juveniles who were returning to the community following commitment to a juvenile correctional center or post-dispositional detention. The intent of this requirement was to improve outcomes for juveniles committed to the Department through improved transition planning. The implementation date for these Plans was January 2008. Once this requirement was implemented, all juveniles committed to the Department of Juvenile Justice are to be evaluated, at intake, by a Qualified Mental Health Professional to determine if they qualify for a Mental Health Services Transition Plan. Services for identified residents secured prior to release. For all identified youth, the assigned counselor must schedule a facility eligibility review meeting 90 days prior to the juvenile's release date. This meeting includes the juvenile's legal guardian, probation or parole officer, facility staff knowledgeable about the juvenile's mental health needs, and the juvenile.

Conclusion

Community agencies, such as social services, public school divisions, and juvenile justice, frequently serve youth with untreated or under-treated mental health disorders. The juvenile justice system serves those youth whose behavior or actions bring them under the purview of the court. The juvenile justice system can neither select its service population nor refuse to accept a youth based on mental health diagnosis (Boesky, 2002). Although juvenile offenders with mental health disorders are a challenging population, promising intervention strategies do exist. However, it is important to remember that, although the juvenile justice system should respond to the mental health needs of the youth, the juvenile justice system cannot supplant the mental health system (Boesky).

Sources

- Andrews, D., & Bonta, J. (1995). *The level of service inventory—revised*. Toronto, ON, Canada: Multi-Health Systems.
- American Psychiatric Association (APA). (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.) (*DSM-IV-TR*). Washington, DC: Author.
- Bartol, C., & Bartol, A. (2008). *Introduction to forensic psychology: research and application* (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Belfrage, H. (1998). Implementing the HCR-20 scheme for risk assessment in a forensic psychiatric hospital: Integrating research and clinical practice. *Journal of Forensic Psychiatry*, 9, 328-338.
- Boesky, L. (2002). *Juvenile offenders with mental health disorders: who are they and what do we do with them?* American Correctional Association, 4.
- Brown, L. (2001). *Assessing risk for elopement and breaches of conditional release in insanity acquittees*. Unpublished Ph.D. Dissertation. Simon Fraser University, Burnaby, British Columbia, Canada.
- Burns, B., & Hoagwood, K. (Eds.) (2002), *Community treatment for youth: evidence-based interventions for severe emotional and behavioral disorders*. New York: Oxford University Press.
- Carr, M., & Vandiver, T. (2001). Risk and protective factors among youth offenders. *Adolescence*, 36 (143), 409-426
- Chamberlain, P., & Reid, J. (1998). Comparison of two community alternatives to incarceration for chronic juvenile offenders. *Journal of Consulting Psychology*, 66 (4), 624-633.
- Chamberlain, P. (1998). Office of Juvenile Justice and Delinquency Prevention. *Treatment Foster Care*.
- Coalition for Juvenile Justice. (2000). *Handle with care: serving the mental health needs of young offenders coalition for juvenile justice*. 2000 Annual Report.
- Cottle, C., Lee, R., & Heilbrun, K. (2001). *The prediction of criminal recidivism in juveniles: a meta-analysis*. *Criminal Justice and Behavior*, 28, 367-394.
- Glick, B., & Goldstein, A. (1987). Aggression replacement training. *Journal of Counseling and Development*, 65, 356-362.

- Grann, M., Belfrage, H., & Tengstrom, A. (2000). Actuarial assessment of risk for violence: Predictive validity of the VRAG and the historical part of the HCR-20. *Criminal Justice and Behavior, 27*, 97-114.
- Greene, Peters, & Associates. (1998). *Guiding principles for promising female programming: an inventory of best practices*. Washington, DC: U.S. Department of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.
- Hare, R. (2003). *The psychopathy checklist* (2nd ed.). Toronto: Multi-Health Systems.
- Harris, G., & Rice, M. (2003). Actuarial assessment of risk among sex offenders. *Annals of the New York Academy of Sciences, 989*, 198-210.
- Harris, G., Rice, M., & Quinsey, V. (1993). Violent recidivism of mentally disordered offenders: the development of a statistical prediction instrument. *Criminal Justice and Behavior, 20*, 315-335.
- Hart, J., O'Toole, S., Price-Sharp, J., & Shaffer, T. (2007). The risk and protective factors of violent juvenile offending: An examination of gender differences. *Youth Violence and Juvenile Justice, 5*, 367-384.
- Linehan, M., Armstrong, H., Suarez, A., Allmon, D., & Heard, H. (1991). *Cognitive-behavioral treatment of chronically parasuicidal borderline patients*. *Archives of General Psychiatry, 48*, 1060-1064.
- Loza, W., & Simourd, D. (1994). Psychometric evaluation of the Level of Supervision Inventory (LSI) among male Canadian federal offenders. *Criminal Justice and Behavior, 21*, 468-480.
- Monahan, J., Steadman, H., Robbins, P., Appelbaum, P., Banks, S., Grisso, T., et al. (2005). An actuarial model of violence risk assessment for persons with mental disorders. *Psychiatric Services, 56*, 810-815.
- Monahan, J., Steadman, H., Silver, E., Appelbaum, P., Robbins, P., Mulvey, E., et al. (2001). *Rethinking Risk Assessment: The MacArthur Study of Mental Disorder and Violence*. New York: Oxford University Press.
- National Alliance for the Mentally Ill (NAMI). (1999). *Families on the Brink: The Impact of Ignoring Children with Serious Mental Illness, Results of a National Survey of Parents And Caregivers*.
- National Alliance for the Mentally Ill (NAMI) Virginia. (2009). *Fact Sheet: Mental Illness in Virginia's Youth Population*.
- National Center for Mental Health and Juvenile Justice (NCMHJJ). (2002). *Best Practice Interventions*.
- National Center for Mental Health and Juvenile Justice (NCMHJJ). (2005). *The MacArthur initiative on mental health and juvenile justice*. [Online]. Available: <http://www.ncmhjj.com/projects/macarthur.asp>. [January 2011].
- National Center for Mental Health and Juvenile Justice (NCMHJJ). (2006). *Youth with mental health disorders in the juvenile justice system: results from a multi-state prevalence study*. [Online]. Available: <http://www.ncmhjj.com/pdfs/publications/PrevalenceRPB.pdf>. [January 2011].

- National Center for Mental Health and Juvenile Justice (NCMHJJ). (2007). *Trauma among youth in the juvenile justice system: critical issues and new directions*. [Online]. Available: [http://www.ncmhjj.com/pdfs/Trauma and youth.pdf](http://www.ncmhjj.com/pdfs/Trauma%20and%20youth.pdf). [October 2007].
- National Mental Health Association (NMHA). (2004). *Mental health treatment for youth in the juvenile justice system, a compendium of promising practices*. Not available August 2010.
- Otto, R., Greenstein, J., Johnson M., & Friedman, R. (1992). Prevalence of mental disorders among youth in juvenile justice system. in J. Cocozza (Ed.). *Responding to the Mental Health Needs of Youth in the Juvenile Justice System*. Seattle, WA: National Coalition for the Mentally Ill in the Criminal Justice System.
- Research & Training Center on Family Support and Children's Mental Health. (2001). Data trends, summaries of research on mental health services for children and adolescents and their families. *Juvenile Justice and Mental Health*.
- Skowrya, K. & Cocozza, J. (2006). *Blueprint for Change: A comprehensive model for the identification and treatment of youth with mental health needs in contact with the juvenile justice system*. Delmar, NY: Skowrya and Cocozza.
- Snyder, H., & Sickmund, M. (1999). *Juvenile Offenders And Victims: 1999 National Report*. Washington, DC: U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention.
- Sukhodlsky, D., & Ruchkin, V. (2006). Evidence-based psychosocial treatments in the juvenile justice system. *Child and Adolescent Psychiatric Clinics of North America*, 15, 501-516.
- Sullivan, M., Benneer, L., & Painter, W. (2009). *A quasi-experimental examination of family centered treatment®: outcomes for a juvenile delinquent population*. [Online]. Available: <http://www.ifcsinc.com/research/A%20Quasi-experimental%20Examination%20of%20FCT%2007.13.2009.pdf>. [March 2010].
- Tengstrom, A., Grann, M., Langstroem, N., & Kullgren, G. (2000). Psychopathy (PCL-R) as a predictor of violent recidivism among criminal offenders with schizophrenia. *Law and Human Behavior*, 24, 45-58.
- Teplin, L., Abram, K., McClelland, G., Dulcan, M., & Mericle, A. (2002). Psychiatric disorders in youth in juvenile detention. *Archives of General Psychiatry*, 59 (1), 1133-1143.
- Trupin, E., Stewart, D., Beach, B., & Boesky, L. (2002). Effectiveness of a dialectical behaviour therapy program for incarcerated female juvenile offenders. *Child and Adolescent Mental Health*, 7 (3), 121-127.
- U.S. Department of Health and Human Services. (2004). *Brief Strategic Family Therapy: SAMHSA Model Program Facts Sheet*. Rockville, MD: U.S. Substance Abuse and Mental Health Services Administration.
- U.S. Department of Health and Human Services. (1999). *Mental Health: A Report of the Surgeon General*. Rockville, MD.
- U.S. Department of Health and Human Services. (2001). *Mental Health: Culture, Race, and Ethnicity—A Supplement to Mental Health: A Report of the Surgeon General*. Rockville, MD: U.S.

Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services.

U.S. Public Health Service. (2000). *Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda*. Washington, DC: Department of Health and Human Services.

Virginia Department of Juvenile Justice. (2010). *Agency Strategic Plan for 2010-2012*. Virginia Performs Website. [Online]. Available: <http://vaperforms.virginia.gov/agencylevel/stratplan/spReport.cfm?AgencyCode=777>. [August 2010].

Virginia Department of Mental Health, Mental Retardation and Substance Abuse Services (DMHMRSAS). (2009). *An Integrated Policy and Plan to Provide and Improve Access to Mental Health, Mental Retardation and Substance Abuse Services for Children, Adolescents and Their Families*. [Online]. Available: <http://www.dbhds.virginia.gov/documents/reports/CFS-330FReport.pdf>. [March 2010].

Virginia Joint Commission for Behavioral Health Care, Virginia State Crime Commission and Virginia Commission on Youth. (2002). *Studying Treatment Options for Offenders Who Have Mental Illness or Substance Abuse Disorders, Senate Document 25*. [Online]. Available: <http://leg2.state.va.us/DLS/h&sdocs.nsf/a762cd2685f84d7a85256f030053196e/5f89aeb84aa01eba85256bc1004544fd?OpenDoc>. [May 2010].

Webster, C., Harris, G., Rice, M., Cormier, C., & Quinsey, V. (1994). *The violence prediction scheme: Assessing dangerousness in high risk men*. Toronto, Ontario: University of Toronto.

Wierson, M., Forehand, R., & Frame, C. (1992). Epidemiology and treatment of mental health problems in juvenile delinquents. *Advances in Behaviour Research and Therapy*, 14, 93-120.

Wilson, D., Bouffard, L., & MacKenzie, D. (2005). A Quantitative Review of Structured, Group-Oriented, Cognitive-Behavioral Programs for Offenders. *Criminal Justice and Behavior*, 32 (2), 172-204.

Additional Resources

Chamberlain, P. (2003). *Treating Chronic Juvenile Offenders: Advances Made Through the Oregon Multidimensional Treatment Foster Care Model*. Washington, DC: American Psychological Association.

Cocozza, J., & Skowrya, R. (2000). *Youth with Mental Health Disorders: Issues and Emerging Responses*. Washington, DC: Office of Juvenile Justice and Delinquency Prevention, U.S. Department of Justice.

Huber, J., & Wolfson, J. (2000). *Handle with Care: Serving the Mental Health Needs of Young Offenders*. Washington, DC: Coalition for Juvenile Justice.

Schindler, M. (January/February 1999). Mental health issues facing adolescents: part I. *AACAP News*.

Schindler, M. (March/April 1999). Mental health issues facing adolescents: part II. *AACAP News*.

Organizations

National Association of Cognitive-Behavioral Therapists

www.nacbt.org

Family Centered Treatment

Institute for Family Centered Services, Inc.

757-410-3896

<http://www.ifcsinc.com/contact/locations.php?stateid=va>

Functional Family Therapy

206-369-5894

<http://www.fftinc.com>

Multidimensional Treatment Foster Care

<http://www.mtfc.com>

Multisystemic Therapy

<http://www.mstservices.com>

Virginia

Department of Behavioral Health and Developmental Services (DBDHDS)

<http://www.dbhds.virginia.gov>

Department of Criminal Justice Services (DCJS)

<http://www.dcjs.virginia.gov>

Department of Juvenile Justice (DJJ)

<http://www.djj.virginia.gov>

O

VERVIEW OF DEVELOPMENTAL DISABILITIES

Introduction

Co-occurrence of Mental Health Disorders and Developmental Disabilities

Introduction

Developmental disabilities, as defined by the Centers for Disease Control (CDC), are a diverse group of severe chronic conditions that cause mental and/or physical impairments. According to the U.S. Department of Health and Human Services (2010), individuals with developmental disabilities have substantial limitations in 3 or more of the following areas:

- self-care;
- comprehension and language;
- skills (receptive and expressive language);
- learning;
- mobility;
- self-direction;
- capacity for independent living;
- economic self-sufficiency; and/or
- ability to function independently without coordinated services.

Developmental disabilities can occur at any time during development (up to 22 years of age) and typically last throughout an individual's lifetime (CDC, 2011a).

Developmental disability is an umbrella term for disabilities occurring during early childhood (American Association on Intellectual and Developmental Disabilities [AAIDD], 2013). Some developmental disabilities are physical, such as cerebral palsy or epilepsy. Some youth may have both a physical and intellectual disability, such as Down Syndrome or Fetal Alcohol Syndrome. Developmental disabilities include, but are not limited to, the following:

- Autism Spectrum Disorder;
- Behavior Disorders;
- Brain Injury;
- Cerebral Palsy;
- Down Syndrome;
- Fetal Alcohol Syndrome;
- Intellectual Disability; and
- Spina Bifida.

In the United States, developmental disabilities affect approximately 17 percent of children younger than 18 years of age (CDC, as cited by Davis, Jivanjee, & Koroloff, 2010). The CDC and the U.S. Administration on Developmental Disabilities report that 1.8 percent of the total general population has a developmental disability. Using this rate, it is estimated that there are 144,018 adults and children in Virginia with a developmental disability (Virginia Department of Behavioral Health and Developmental Services [DBHDS], 2011). In December 2010, the Virginia Department of Education reported 8,244 children ages 3 to 5 were diagnosed with a developmental disability (DBHDS).

Developmental disabilities require a combination and sequence of care, treatment, or other services of lifelong or extended duration. Service providers should acknowledge the diverse needs of individuals with developmental disorders and formulate goals to help them live more active, productive, and independent lives (CDC, 2010).

Co-occurrence of Mental Health Disorders and Developmental Disabilities

Youth with developmental disabilities may also have a diagnosable mental health disorder, also known as a dual diagnosis. While most professionals understand dual diagnosis to describe those who suffer from both mental health disorders and substance abuse, the term is also used to describe the double challenge of a developmental disability and a mental health disorder (Hartwell-Walker, 2012). A dual diagnosis may cause significant clinical impairment and place an additional burden upon these youth and their families.

Youth diagnosed with both a mental health disorder and a developmental disability are representative of all ages and levels of functioning. Estimates of the frequency of dual diagnosis of mental health disorders and developmental disabilities vary widely. However, many professionals estimate 30 to 35 percent of all individuals with a developmental disability also have a mental health disorder (Fletcher, as cited by Davis, Jivanjee & Koroloff, 2010). The full range of psychopathology that exists in the general population can also co-exist in youth diagnosed with developmental disabilities (Davis, Jivanjee & Koroloff).

It is important to acknowledge that there are notable limitations to studies evaluating the incidence or prevalence of co-occurring mental health and developmental disabilities. These include the following challenges:

- The technology for assessing mental health disorders in youth with developmental disabilities is not yet well developed (Davis, Jivanjee & Koroloff, 2010).
- Assessment may be affected by “diagnostic overshadowing” which can occur when symptoms of a mental health disorder are “overshadowed” by the presence of a diagnosed developmental disability, and the behaviors are attributed only to the developmental disability (Reiss, Levitan & Szyszko, as cited by Davis, Jivanjee & Koroloff).
- Variability in the way that developmental disabilities and mental health disorders are defined makes it difficult to obtain reliable estimates of dual disorders. Clinicians or service providers who assign a primary diagnosis of the developmental disability could possibly ignore the mental health disorder (NADD, n.d.).

The Virginia Department of Behavioral Health and Developmental Services (DBHDS) has noted an increasing demand for services and specialized interventions by individuals with co-occurring mental health disorders and developmental disabilities (DBHDS, 2012). The U.S. Health and Human Services (HHS) Office on Disability and other federal agencies have worked to address the needs of youth with mental health and developmental disorders. In 2005, a national summit was convened to consider the special needs of youth with dual disorders (HHS, 2005). This summit highlighted that youth with co-occurring developmental disabilities and mental health disorders may not be identified and when they are, their needs are frequently overlooked. The co-existence of developmental disabilities and mental health disorders can have serious effects on the youth’s daily functioning by interfering with educational and vocational activities and by disrupting family and peer relationships. The presence of a mental health disorder can greatly reduce the quality of life of youth with a developmental disability, making it important that accurate diagnosis and appropriate treatment be obtained.

The following sections discuss mental health disorders which may co-occur with Autism Spectrum Disorder and Intellectual Disability reflect recommendations adopted by the Commission on Youth for revisions to *Collection 5th Edition*.

Sources

- American Association on Intellectual and Developmental Disabilities (AAIDD). (2013). *FAQ on Intellectual Disability*. [Online]. Available: http://www.aaidd.org/content_104.cfm. [January 2013].
- Centers for Disease Control (CDC). (2011a). *About Developmental Disabilities*. [Online]. Available: <http://www.cdc.gov/ncbddd/dd/dd1.htm>. [March 2012].
- Centers for Disease Control (CDC). (2011b). *Monitoring Developmental Disabilities*. [Online]. Available: <http://www.cdc.gov/ncbddd/dd/ddsurv.htm>. [March 2012].
- Davis, M., Jivanjee, P. & Koroloff, N. (2010). *Paving the way: Meeting transition needs of young people with developmental disabilities and serious mental health conditions*. Portland, OR: Research and Training Center Family Support and Children's Mental Health.
- Hartwell-Walker, M. (2012). *The Diagnostic Manual for the Mentally Ill and Intellectually Disabled*. *Psych Central*. [Online]. Available: <http://psychcentral.com/lib/2008/diagnostic-manual-intellectual-disability-dm-id-a-textbook-of-diagnosis-of-mental-disorders-in-persons-with-intellectual-disability>. [July 2012].
- National Association of State Mental Health Program Directors (NASMHPD). (2004). *Serving individuals with co-occurring developmental disabilities and mental illnesses: Systems barriers and strategies for reform*. [Online]. Available: http://www.nasmhpd.org/general_files/publications/MIDD%20report102704FINAL.pdf.
- The National Association of the Dually Diagnosed (NADD). (n.d.) *Information on Dual Diagnosis*. [Online]. Available: <http://thenadd.org/resources/information-on-dual-diagnosis>. [July 2012].
- U.S. Department of Health and Human Services. (2010). *Administration on Developmental Disabilities (ADD)*. [Online]. Available: http://www.acf.hhs.gov/opa/fact_sheets/add_factsheet.html. [March 2012].
- Virginia Department of Behavioral Health and Developmental Services. (2011). *Comprehensive State Plan 2012- 2018*. [Online]. Available: <http://www.dbhds.virginia.gov/documents/reports/opd-StatePlan2012thru2018.pdf>. [July 2012].
- Virginia Department of Behavioral Health and Developmental Services. (2012). *Agency Strategic Plan*. [Online]. Available: <http://www.vaperforms.virginia.gov/agencylevel/src/ViewAgency.cfm?agencycode=720>. [July 2012.]

National Resources

Administration on Intellectual and Developmental Disabilities (AIDD)

Office of the Commissioner
U.S. Department of Health and Human Services
370 L'Enfant Promenade, S.W. — Washington, D.C. 20447
<http://www.acf.hhs.gov>

The National Association of the Dually Diagnosed (NADD)

132 Fair Street — Kingston, NY 12401
www.thenadd.org

National Dissemination Center (formerly the National Information Center for Handicapped Children and Youth NICHCY)

1825 Connecticut Ave NW — Washington, DC 20009
nichcy.org

Centers for Disease Control and Prevention

National Center on Birth Defects and Developmental Disabilities
Division of Birth Defects and Developmental Disabilities
1600 Clifton Road MS E-87 — Atlanta, GA 30333
cdcinfo@cdc.gov

Virginia Resources

Partnership for People with Disabilities

Virginia University Center of Excellence
Virginia Commonwealth University
P.O. Box 843020 — Richmond, VA 23284-3020
<http://www.vcu.edu/partnership>

Virginia Board for People with Disabilities

1100 Bank Street, 7th Floor, Washington Office Bldg. — Richmond, VA 23219
<http://www.vaboard.org>

Virginia Department for Aging and Rehabilitative Services

8004 Franklin Farms Drive — Henrico, VA 23229-5019
804-662-7000; Toll Free 800-552-5019
Toll Free TTY: 800-464-9950
<http://www.vadrs.org>

Virginia Department of Behavioral Health and Developmental Services

Office of Developmental Services
P.O. Box 1797 — Richmond, VA 23219
804-786-1746 or 800-371-8977; 804-786-1587 (V/TTY)
<http://www.dbhds.virginia.gov/ODS-default.htm>

Virginia Department of Education

Office of Special Education and Student Services
P.O. Box 2120 — Richmond, VA 23218-2120
http://www.doe.virginia.gov/special_ed/index.shtml

Virginia Department of Health

Child & Adolescent Health, Division of Child & Adolescent Health
109 Governor Street, 8th Floor — Richmond, VA 23219
<http://www.vdh.state.va.us>

Virginia Department of Medical Assistance Service

600 East Broad Street — Richmond, VA 23219
www.dmas.virginia.gov

Virginia Office for Protection and Advocacy

1910 Byrd Avenue, Suite 5 — Richmond, VA 23230
<http://www.vopa.state.va.us>

AUTISM SPECTRUM DISORDER

- Introduction**
- Prevalence**
- Causes and Risk Factors**
- Diagnostic Categories**
- Autism Spectrum Disorder and Co-occurring Mental Health Disorders**
- Early Warning Signs**
- Screening and Assessment**
- General Principles**
- Evidence-based Practices**
- Promising Practices**
- Unproven Practices**
- Vaccines and Autism**
- Activities in Virginia**
- Autism Spectrum Disorder Diagnoses in the Future**
- Conclusion**

Introduction

Autism Spectrum Disorder (ASD) is a life-long developmental disability which is typically diagnosed in childhood. ASD is categorized as a “spectrum” because it encompasses a group of developmental disorders with accompanying characteristics varying in severity. ASD is shown to cause restricted and repetitive patterns of behaviors (e.g., bizarre fixation with specific parts or sensory aspects of an object), impairments in social relatedness (e.g., failure to develop appropriate peer relationships), and impairments in verbal and nonverbal communication (e.g., delay or absence of spoken language) (American Psychiatric Association [APA], 2000). The autism spectrum includes Autistic Disorder, Asperger’s Disorder, Rett’s Disorder, Childhood Disintegrative Disorder, and Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS) (APA, 2000). It is important to note that in May 2013, significant changes to the criteria and categories of ASD will occur with the release of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*. These changes are discussed in *Autism Spectrum Disorder Diagnoses in the Future* later in this section.

Because ASD is a developmental disability, youth diagnosed with ASD require a combination and sequence of interventions and supports that are individually planned and coordinated and are of lifelong or extended duration. Such a combination of services enables individuals with disabilities to be more active, productive, and independent.

Complicating matters further is the fact that youth with ASD may also have diagnosable mental health disorders. Co-occurring mental health disorders may cause significant clinical impairment and place additional burdens upon these children and their families. Unfortunately, it is frequently assumed that behaviors associated with co-occurring mental health disorders are related to the ASD diagnosis. Holding to this assumption can leave mental health issues untreated and exacerbate symptoms.

At its November 9, 2011 meeting, the Commission on Youth recommended that the *Collection’s* section on ASD be revised to include discussion of co-occurring mental health disorders and to specify that ASD is a developmental disorder. Accordingly, this revised section includes additional information about ASD, as well as commonly co-occurring mental health disorders.

Prevalence

ASD, according to current estimates, is more prevalent in the pediatric population than spina bifida, diabetes, cancer, or Down syndrome (Filipek et al., 1999). The Centers for Disease Control (CDC) has been tracking ASD for over a decade through the Autism and Developmental Disabilities Monitoring (ADDM) Network. In 2008, the CDC gathered data to determine the current prevalence rates of ASD. The information discussed in this paragraph is taken from the CDC (2012). The CDC determined that age 8 was a reasonable index age to monitor peak prevalence because previous work has shown that by this age most children with ASD have been identified for services. Using this peak age, the CDC reviewed evaluation records in the 14 sites participating in the ADDM Network. These 14 communities comprised over 8 percent of the U.S. population of 8-year olds in 2008. The CDC estimates 1 in 88 children (11.3 per 1,000) has been identified with ASD. This is a 23 percent increase since the 2009 report and a 78 percent increase since the CDC first reported prevalence rates in 2007. Findings from the 2012 report include the following statistics:

- The number of children identified with ASD varied widely across the 14 ADDM Network sites, from 1 in 47 (21.2 per 1,000) to 1 in 210 (4.8 per 1,000).
- ASD is almost 5 times more common among boys (1 in 54) than among girls (1 in 252).
- The largest increases over time were among Hispanic children (110 percent) and African American children (91 percent).
- There were increases over time among children without intellectual disability, although there were also increases in the estimated prevalence of ASDs at all levels of intellectual ability.
- More children are being diagnosed at earlier ages, a growing number of them by age three, although most children are not diagnosed until after they reach age four.

The CDC has noted that increasing awareness and improvements in the way children are identified, diagnosed, and served in their local communities has likely resulted in increased ASD prevalence. In addition, ASD prevalence was significantly higher in ADDM sites that had access to education sources, compared to sites relying on health sources for case identification (CDC, 2012). It is worth noting that the surveillance areas are not representative of the United States as a whole.

A current controversy is whether rising numbers indicate an upward trend in the actual incidence of the disorder or whether they reflect changes in diagnoses. Based on a detailed time trends analysis of 28 studies published since 1987 indicating prevalence rates of ASD, the conclusion was that most of the increase in incidence is accounted for by both improved identification and by changes in diagnostic criteria and concepts (Fombonne, 2005). However, recent studies suggest that most, but not all, of the increased prevalence observed in children is a result of improved identification and there is speculation that there may be a sizable population of children and adults with undiagnosed ASD (U.S. Department of Health and Human Services Interagency Autism Coordinating Committee [IACC], 2012).

Causes and Risk Factors

ASD affects youth in all racial, ethnic, and social groups. Although the causes of ASD are not yet known, it has been established that ASD is not caused by any psychological factors (National Information Center for Children and Youth with Disabilities [NICHCY], 2001). Much evidence points, however, to a genetic basis for the disorders (Volkmar, Westphal, Gupta & Wiesner, 2008).

Epidemiological findings reveal that ASD is the most strongly genetic developmental disorder, with a heritability factor greater than 90 percent (Bailey et al., 1995). As stated previously, ASD is seen more commonly in boys than girls (ratio of 4:1) and biological siblings of an affected child run a higher risk of having the disorder (APA). Genetic studies are far from congruent, and no model has yet explained the gender disparity and variable phenotype across family datasets (Newschaffer & Curran, 2003). In the recent years, there has been a focus on searching for potential environmental causal factors, including immunizations, heavy metals, infectious agents, and pharmacological agents (Volkmar et al., 2008). For example, non-heritable risk factors, such as chemical exposure and childhood vaccinations, have been widely investigated in recent years as possible causes (Newschaffer & Curran). Pre- and perinatal maternal infections and birth complications associated with ASD have also been reported with some consistency (Newschaffer & Curran). In recent years, there has been increasing focus on a possible association between childhood immunizations and ASD (Newschaffer & Curran). However, there is no conclusive evidence indicating that these factors play any role in the etiology of ASD. This is described in more detail in the *Vaccines and Autism* discussion which follows.

To summarize, as observed by Kabot, Masi and Segal (2003), there is consensus that ASD can be classified as 3 different, but interdependent levels.

These levels are:

1. a neurological disorder related to brain development;
2. a psychological disorder of cognitive and emotional; and
3. a relationship disorder impacting behavioral development, or in which there is a failure of normal socialization.

There is no reason to suppose that there is only one pathway or one specific risk factor; it would appear that several etiological pathways could lead to ASD.

Diagnostic Categories

Each category of ASD has specific diagnostic criteria outlined by the American Psychiatric Association (APA) in its *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR)* (2000). However, there are no clearly established guidelines for measuring the severity of a child's symptoms. In many situations, it is difficult to isolate the characteristics of Autistic Disorder from PDD-NOS (Boyle, as cited by the National Information Center for Children and Youth with Disabilities [NICHCY], 2001). Accordingly, a child may be diagnosed by one practitioner as having Autistic Disorder and by another as having PDD-NOS. Therefore, it is important for practitioners to understand the diagnostic criteria for each category, since intervention will be based on diagnosis.

Table 1 outlines each of the categories of ASD and their distinctive diagnostic features.

Table 1

Categories of Autism Spectrum Disorder (ASD)

Disorder	Description
Autistic Disorder	The most common ASD, it is characterized by impairment in social interaction, communication, and imaginative play before the age of 3 years. Behaviors are stereotyped, repetitive, and limited in interest and range of activities.
Asperger's Disorder	Characterized by impairment in social interactions and the presence of restricted interests and activities. There is no significant general delay in language, although there are qualitative impairments and limited ability to have reciprocal social conversations. Differentiated from Autistic Disorder primarily by the relative preservation of linguistic and cognitive capacities in the first 3 years of life. Cognitive testing usually yields scores in the average to high-average range.
Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS)	Also referred to as <i>Atypical Autism</i> . Diagnosis of PDD-NOS is made when a child does not meet sufficient criteria for a specific diagnosis but there are severe and pervasive impairments in specific behaviors, language, and social abilities.
Rett's Disorder	Defined as a "progressive disorder" characterized by periods of "normal" development followed by loss of previously acquired skills, as well as the purposeful use of hands. Replacement with repetitive hand movements begins between the ages of 1 to 4. So far, this disorder has been identified only in females.
Childhood Disintegrative Disorder	Characterized by "normal" or typical development for at least the first 2 years of age, followed by significant losses in previously acquired skills in the area of cognitive, social, language, and behavioral development.

Source: APA, 2000.

Autism Spectrum Disorder and Co-occurring Mental Health Disorders

While impairment due to the social and cognitive deficits characterizing ASD is well-demonstrated, less well-known is the impact of co-occurring mental health disorders. Accurate reliable diagnosis of co-occurring mental health disorders is critical, due to associated problematic behaviors. When a youth's symptoms can be attributed to the mental health disorder, more targeted intervention is possible (Leyfer et al., 2006).

Recent studies have shown that mental health disorders are common and frequently multiple in children and adolescents with ASD (Simonoff et al., 2008). Frequently, these children and adolescents are diagnosed

with multiple mental health disorders. One study examined the adjusted odds of youth with ASD being diagnosed with a co-occurring mental health disorder (Rosenberg, Kaufman, Law & Law, 2011). This study found that the likelihood of a youth being diagnosed with a co-occurring psychiatric disorder rose significantly with each additional year of life and as autism severity increased. This study also revealed the likelihood of under-diagnosis of potentially treatable co-occurring disorders.

Another study investigated the rates and types of co-occurring disorders in a group of 84 children and adolescents with ASD (Moseley, Tonge, Brereton & Einfeld, 2011). This study found that 42 percent of those youth with ASD had a co-occurring mental health disorder. The disorders included mood disorders, anxiety disorders, adjustment disorders, and behavior disorders. A significant finding from this study was that the rate of co-occurring disorders was between 2 to 4 times of that found among typically developing young people (Moseley, Tonge, Brereton & Einfeld).

A recently conducted study also sought to obtain a clearer picture of the prevalence of co-occurring mental health disorders in youth with ASD. The study was purposefully designed to use a population-representative sample of youth with ASD (Simonoff et al., 2008). The results from this effort revealed that 70 percent of youth with ASD represented by this study had at least one co-occurring mental health disorder (Simonoff et al.). In addition, the study found that having a co-occurring mental health disorder increased the risk of multiple diagnoses, with close to 60 percent of the study population having 2 or more disorders and one-third of the study population having 3 or more disorders in addition to ASD (Simonoff et al.). The prevalence of mental health disorders found to co-occur with ASD is outlined in Table 2.

Table 2

Prevalence of Co-occurring *DSM-IV* Disorders with ASD

Disorder	Prevalence (3 month prevalence rates)
Any Disorder	70.8
Any Main Disorder Attention Deficit Hyper Activity Disorder (ADHD) Oppositional Defiant Disorder/Conduct Disorder (ODD/CD) Emotional Disorders Anxiety Disorders Phobias Mood Disorders	62.8
Any Emotional Disorder Anxiety Disorders Phobias Mood Disorders	44.4
Any Anxiety or Phobic Disorder	41.9
Any Depressive Disorder	1.4
ODD/CD**	30.0
ADHD	28.2
Other Disorders*** Habit Disorders Tourette Syndrome Chronic Tics Trichotillomania	3.9

Source: Simonoff et al., 2008.

* All symptom combinations meeting diagnostic criteria were identified.

** The study noted high rates of ODD but not CD, which is consistent with other study findings.

Another clinical study involving a sample of youth with ASD involved modifying an assessment instrument to reveal whether the youth also met the *DSM-IV* criteria for a co-occurring mental health disorder. The study

sample demonstrated a high prevalence of certain mental health disorders, the most common being specific phobias, a type of anxiety disorder. An estimated 44 percent of children with ASD met the appropriate diagnostic criteria for specific phobias (Leyfer et al., 2006). The second most frequently diagnosed co-occurring mental health disorder was obsessive-compulsive disorder (OCD), which was diagnosed in 37 percent of the study sample (Leyfer et al.). The third most common diagnosis, attention deficit hyperactivity disorder (ADHD), was diagnosed in 31 percent of youth with ASD. This rate increased to nearly 55 percent when including subsyndromal symptoms, meaning those not quite meeting the diagnostic criteria for ADHD (Leyfer et al.). Nearly a quarter of the youth with ASD in this study met lifetime diagnostic criteria for major depressive disorder, with 10 percent meeting full *DSM-IV* criteria and 14 percent just falling short of meeting *DSM-IV* criteria.

According to the *DSM-IV-TR*, ASD coexists with intellectual disability (mental retardation) in approximately 75 percent of those with the disorder (APA, 2000). An estimated half of those with Autistic Disorder, the most common ASD, do not have functional speech (Prizant, 1996). Hyperactivity, attention deficit, obsessive compulsive-type symptoms, self-injurious behavior, tics and affective symptoms are also frequently noted in youth with ASD (Volkmar et al., 1999).

According to the practice parameters published by Volkmar et al. (1999), recent research has also centered on brain abnormalities measured by an EEG (electroencephalogram). While some associations appear to be relatively frequent in youth with ASD, other comorbid conditions appear to be much less common. Studying extensive databases in Israel and Sweden, researchers discovered that ASD and schizophrenia shared a genetic link, representing a heightened risk within families. They found that people who have a schizophrenic sibling are 12 times more likely to have Autistic Disorder than those without a family history of schizophrenia. The same study showed the presence of bipolar disorder in a sibling had a similar pattern of association, but to a lesser degree (American Friends of Tel Aviv University, 2012).

Unfortunately, co-occurring mental health disorders in youth with ASD are difficult to diagnose. This is because communication with the child or adolescent may be impaired; almost half of youth diagnosed with ASD are functionally nonverbal (Leyfer et al., 2006). Moreover, youth with ASD may also have a cognitive difficulty, which makes it difficult for them to describe their mental state. Thus, it is challenging to ascertain whether the youth's difficulties originate from the core features of their ASD or from the attributes of a co-occurring mental health disorder (Leyfer et al.). Another particular challenge to diagnosing co-occurring mental health disorders in ASD is the specific exclusionary criteria contained in the *DSM-IV* (Center for Autism and Related Disabilities at the University of South Florida [CARD-USF], n.d.). A diagnosis of ASD precludes the formation of a formal diagnosis of a number of other mental health disorders, including attention deficit hyperactivity disorder (ADHD), obsessive-compulsive disorder (OCD), and Social Anxiety Disorder. Thus, there are specific challenges to identifying co-occurring mental health disorders because the symptoms may be attributed to the ASD (Simonoff et al., 2008).

Successful early intervention for those diagnosed with ASD includes the identification of co-occurring mental health symptoms in the toddler years (Matson, 2010). Research in this area has shown that toddlers diagnosed with ASD have more symptoms related to tantrum/conduct behavior, inattention/impulsivity, avoidance behavior, anxiety/repetitive behavior, and eating/sleep problems when compared with their same-aged peers without an ASD diagnosis but who were also atypically developing. In older children diagnosed with ASD, findings have been similar.

Current research shows that potentially treatable co-occurring mental health disorders in youth with ASD have likely been under-diagnosed. This may be explained because no assessment instrument has the validity and reliability to deem it a "gold standard" for diagnosing present and lifetime mental health disorders in youth with ASD (Leyfer et al., 2006). Accordingly, it may be prudent to incorporate an assessment for a co-occurring mental health disorders upon diagnosis of an ASD (Simonoff et al., 2008).

Identification and treatment of co-occurring mental health disorders in youth with ASD allows for better outcomes versus only addressing the youth's ASD symptoms (Leyfer et al., 2006). Please refer to the appropriate sections of the *Collection* for additional information on evidence-based and promising practices for the mental health disorders discussed in this section.

Early Warning Signs

The behaviors outlined in the following listing are early warning signs published by the American Academy of Pediatrics (AAP, 2006) to aid parents and professionals with early identification and, consequently, early intervention. These are:

- not turning when the parent says the child's name;
- not turning to look when the parent points, says, "look at..." and not pointing to themselves to show parents an interesting object or event;
- lack of back and forth babbling;
- smiling late; and
- failure to make eye contact with people.

According to the AAP (2006), the following signs warrant immediate attention:

- no babbling or pointing or other gestures by 12 months;
- no single words by 16 months;
- no two-word phrases by 24 months; and
- regression or loss of language or social skills at any age.

Screening and Assessment

The American Academy of Neurology (Filipek et al., 2000), the American Academy of Child and Adolescent Psychiatry (AACAP) (Volkmar et al., 1999) and a consensus panel with representation from multiple professional societies (Filipek et al., 1999) have published specific practice parameters for the assessment and screening of ASD. These publications have made a significant contribution by laying out, for the first time, consensus guidelines for ASD assessment (Ozonoff, Goodlin-Jones & Solomon, 2005). According to these parameters, screening for ASD calls for two different levels of screening.

Level I screening is a developmental surveillance that should be performed on all children. It involves identifying children at-risk for any type of developmental disability and, if the Level I screening raises any cause for concern, the child should then be referred to the next level of screening. Table 3 presents the available evidence-based Level I screening instruments for identifying children at-risk for any type of developmental disability and, in particular, for ASD.

Level II screening of children already identified to be at risk for a developmental disorder involves both a diagnostic evaluation and more in-depth investigation. At this level, a distinction is made between autism and other developmental disabilities, and includes evaluation by autism specialists. The goal is to determine the best means of intervention, based on the child's profile of strengths and weaknesses (Siegel et al., 1998). Table 4 presents the available evidence-based Level II screeners/diagnostic tools for ASD.

Once a child has been recognized during the screening process as being at risk for ASD, a detailed assessment should be completed to establish a diagnosis. There are several considerations important to the assessment process.

- A developmental perspective must be maintained. Since ASD is characterized by an unevenness in development that varies over the lifespan (Ozonoff, Goodlin-Jones & Solomon, 2005), studying a child within a developmental framework provides a benchmark for understanding the severity or characteristics of delays and deviances.
- Evaluating a child with ASD should include obtaining information from multiple sources and contexts, as symptoms of ASD may be dependent on characteristics of the environment (Ozonoff, Goodlin-Jones & Solomon), measures of parent report, teacher report, and child observation across settings, cognitive and adaptive behavior assessments, and clinical judgments may all factor into a comprehensive assessment of ASD (Filipek et al., 1999).
- Assessments of ASD must be multidisciplinary whenever possible. They should incorporate findings from professionals in the fields of psychology, psychiatry, neurology, pediatrics, speech and language (Ozonoff, Goodlin-Jones & Solomon).

Table 3

Level I Screening Instruments

General Developmental Disability	ASD-Specific
Ages and Stages Questionnaire, 3 rd Edition (ASQ; Bricker & Squires, 1999)	Checklist for Autism in Toddlers (CHAT; Baron-Cohen, 1992)
Child Development Inventories (CDIs; Ireton, 1992)	Modified Checklist for Autism in Toddlers (M-CHAT; Robins et al., 2001)
Parents Evaluation of Developmental Status (PEDS; Glascoe, 1998)	Pervasive Developmental Disorder Screening Test II (PDDST-II; Siegel, 2004).
BRIGANCE [®] Screens II (Glascoe, 2005)	Australian Scale for Asperger's Syndrome (ASAS; Garnett & Attwood, 1997)

Source: Filipek et al., 2000.

Table 4

Level II Screening Instruments & Diagnostic Tools

Name of Measure	Type of Measure
Autism Diagnostic Interview-Revised (ADI-R; Lord et al., 1994; Rutter, LeCouteur et al., 2003)	Comprehensive parent-interview with probes for symptoms of autism
Social Communication Questionnaire (SCQ - formerly, Autism Screening Questionnaire – Berument et al., 1999)	Parent-report based on ADI-R; briefer than ADI-R; yes/no format
Autism Spectrum Screening Questionnaire (Ehlers et al., 1999)	Checklist measure for completion by “lay informants”
Autism Diagnostic Observation Schedule (ADOS; Lord et al., 2000; 2002)	Semi-structured interactive assessment; 4 different modules, according to language and developmental levels

Source: Rogers et al., 2005.

General Principles

Serving a child with ASD is determined by the child’s individual needs. A combination of three principles can reduce challenges associated with ASD, lessen disruptive behavior, and provide the child with a degree of independence.

Early Intervention

According to a review published by Simpson, there are 37 intervention strategies identified for ASD (2005). Of these, 4 approaches are scientifically based, 13 are identified as promising, and the remaining 20 are unsupported by any research. While there is no consensus as to which interventions work best, mounting evidence from various diagnosis and intervention research suggests that early detection of ASD is key to improving developmental outcomes (Goin-Kochel & Myers, 2005; Dawson & Osterling, 1997). Early detection leads to early intervention, and for youth with ASD, participation in specialized intervention programs can optimize long-term outcomes (Volkmar et al., 2005). Some young children with ASD who receive early intervention have shown more significant improvements in cognitive, social, and language functioning than older children who undergo the same interventions (Rogers, 1998).

Educational Implications

Early diagnosis and appropriate educational programs are important for youth with ASD (NICHCY, 1998). The Individuals with Disabilities in Education Act (IDEA) (Public Law 94-142, Public Law 99-457, and Public Law 102-119) requires that children with a disability receive a free and appropriate education. Children with ASD may have behavior and communication problems which interfere with learning and therefore will benefit from a structured plan which can be carried out both at home and school (Autism Society of

America, 2002). Children with a disability from birth through the age 3 are also eligible pursuant to Part C of IDEA. This provision was expanded to ensure that all children with a disability receive appropriate early intervention services (Infant and Toddler Connection of Virginia, n.d.).

In Virginia, the Virginia Department of Behavioral Health and Developmental Services (DBHDS) is the lead agency which administers Part C of IDEA. Virginia's statewide early intervention system is called the Infant & Toddler Connection of Virginia. Infant/toddler services can be home-based, center-based, or a combination. The nature of the services is determined based on an assessment of the child and the family priorities. The services provided in response to this plan may include the identification of appropriate assistive technology, intervention for sensory impairments, family counseling, parent training, health services, language services, health intervention, occupational therapy, physical therapy, case management, and transportation to services (Biasini et al., 1999).

Once the child reaches the age of 3, special education programs established by IDEA are then available for the child and family (NICHCY, 2009). The services provided through IDEA to school-aged children are most often provided as home-based, center-based or in naturally occurring environments. An Individualized Education Program (IEP) is developed based on results of the team evaluation and parental input. This plan describes the objectives for improving the child's skills and may include family or parent-focused activities. These services must also be provided in the least restrictive setting possible, but must include a continuum of placements that includes instruction in regular classes, special classes, special schools, home instruction and instruction in hospitals and institutions.

Family-centered Approach

Family involvement is a critical element of the child's educational program. A multi-disciplinary and family-focused approach, where the service providers and the parents work in a collaborative manner to develop appropriate interventions for the child, is considered the most effective method of service delivery for children with ASD and their families (Volkmar et al., 1999). A family-centered approach employs the expertise of the family regarding the strengths and needs of their child.

Evidence-based Practices

For this review, interventions for ASD are described as What Works and What Seems to Work.

Applied Behavior Analysis (ABA)

In his mental health report for children, the U.S. Surgeon General recognized Applied Behavior Analysis (ABA) as the intervention of choice for ASD (Rosenwasser & Axelrod, 2001). ABA, also called *Behavioral Intervention* or *Behavioral Treatment*, has consistently been recognized as one of the most well-researched and effective intervention techniques, especially for young children with an ASD (Lovaas, 1987; Dawson & Osterling, 1997; Rogers, 1998; Smith, Groen & Wynn, 2004). According to Green (1996), ABA can be used effectively to produce comprehensive and lasting improvements in many important skill areas for most children with ASD, regardless of their age. ABA, however, is most beneficial when intervention starts before 3 years of age (Dawson & Osterling; Lovaas & Smith, 2003), and the child undergoes intensive behavior therapy at least 15 hours a week (Dawson & Osterling).

The goal of intervention, as described by Lovaas (1987), is to minimize the child's failures and maximize successes. ABA methods, which are based on scientific principles of behavior to build socially useful repertoires and reduce problematic ones (Cooper et al., 1989). This behavioral analytic view asserts that ASD is a syndrome of behavioral deficits and excesses with a neurological basis, but is also amenable to change in response to specific, carefully programmed, constructive interactions with the environment (Green).

ABA came into focus for children with ASD in 1966, when Lovaas and colleagues demonstrated that principles of learning could be used to teach speech to young children with ASD. In 1989, Lovaas & Smith observed that children with ASD do not readily learn in typical environments, but are often able to learn successfully when given appropriate instructions. Using empirically validated behavior modification procedures, like discrete trial instruction, ABA is an extremely structure-based intervention. The emphasis is on high-intensity reinforcement, using precise teaching techniques. Skills that are prerequisites to language – like attention, cooperation, and imitation – are emphasized. Strong emphasis is also placed on acquiring new behaviors, because the belief is that when children acquire a repertoire of constructive behaviors, there is a lesser likelihood of the occurrence of problem behaviors (Green).

Discrete Trial Teaching or Training (DTT)

DTT, which has its basis in ABA therapy, focuses on the principles of operant learning to intervene with children with ASD. In DTT, children learn appropriate responses to the presence of specific words and environmental stimuli. DTT may also be called the ABC model, whereby every trial or task given to the child to perform consists of an *antecedent* (directive or request to the child to perform an action), *behavior* (response from child), and *consequence* (reaction from therapist). Teaching trials are repeated many times, initially in rapid succession, until the child performs a response readily, without adult-delivered prompts (Green, 1996). A pause to separate trials from each other, called the *inter-trial interval*, is essential. Data is kept on multiple trials, and the child moves on to additional tasks as the old ones are mastered. The child's responses are recorded and evaluated according to specific, objective definitions and criteria. Timing and pacing of teaching sessions, practice opportunities and consequences delivery are designed precisely for each child's learning pace and style to help ensure success (Green). To maximize those successes, emerging skills are practiced and reinforced in many less-structured situations. For some high-functioning children with ASD, certain skills can be taught entirely in relatively unstructured environments from the outset (Green). However, to ensure that these "naturalistic" practices occur frequently, the practice opportunities have to be arranged carefully, and reinforcers given consistently. The overall emphasis is on teaching the child how to learn in a traditional environment and how to act on that environment in ways such that there are consistently positive outcomes for the child, their family, and others (Green; Lovaas, 1987; Lovaas & Smith, 1989).

Pivotal Response Training (PRT)

PRT is a behavioral-based intervention that has gained increasing empirical support. According to Campbell et al., (2008), the development of PRT in part has resulted from findings from the DTT literature. PRT, developed by Koegel, Koegel & McNerney (2001) is based on the theory that, if improvements in functioning can be achieved in the areas that are most disabling to children, i.e., "pivotal" areas, then effects should extend to other areas (Campbell et al.). Pivotal areas of intervention in PRT include teaching children to respond to multiple environmental cues, and increasing motivation, capacity for self-management, and self-initiations. PRT has gained increasing evidence-based support in recent years (Campbell et al.; Sherer & Schreibman, 2005) and is now considered one of the more effective and proven interventions for children with an ASD.

Learning Experience: An Alternative Program (LEAP)

LEAP is an educational program that embraces the educational and therapeutic value of peer-mediated interventions (Kohler et al., 2005). According to Campbell et al. (2008), LEAP provides classroom instruction, parent education, as needed, and the provision of speech and occupational therapy and other services within the classroom setting. The range of activities varies from quiet to active, from small group to larger group, and from child- versus teacher-directed. LEAP instruction is data-driven, individualized, and focused on generalizing learning skills through saturation of learning opportunities throughout the day. Family involvement is highly encouraged in this model and entails providing classroom support and instruction. In addition, families are asked to participate in curriculum development for the teaching of core behavioral principles which increase desirable behaviors and decrease maladaptive behaviors. Peers are also actively involved in the curriculum as intervention agents. According to Campbell et al., through the use of the LEAP curriculum, children on the autism spectrum have shown decreases in autistic symptoms and long-term improvements in educational, cognitive, developmental, and social domains (Hoyson et al., 1984; Strain & Hoyson, 2000).

Pharmacological Interventions

Although pharmacological interventions cannot "cure" ASD, pharmacologic interventions may be considered for maladaptive behaviors, such as aggression, self-injurious behavior, repetitive behaviors, sleep disturbance, anxiety, hyperactivity, inattention, destructive behavior, or other disruptive behaviors (Myers, Johnson & the Council on Children with Disabilities, 2007). After treatable medical causes and environmental factors have been ruled out, medication may be considered when behavioral symptoms cause significant impairment in functioning. Once the diagnosis of the co-occurring disorder is made, the child may be treated with medications typically used to treat these conditions. Modifications of diagnostic criteria may be necessary to account for clinical presentations of mental health disorders in children with developmental disabilities. Neuroleptics (e.g., risperidone), selective serotonin reuptake inhibitors (SSRIs; fluvoxamine & clomipramine), antidepressants (e.g., imipramine), and other mood stabilizers have been tested in different clinical studies with some proven benefits. More rigorous, controlled studies are called for to establish the evidence-base of intervention efficacy (Myers, Johnson & the Council on Children with Disabilities).

These are outlined as What Works in Table 5.

Table 5

Summary of Interventions for ASD

What Works	Description
Applied Behavior Analysis (ABA)	Behavioral intervention aimed at improving cognitive, language, communication, and socialization skills at the level of specific behaviors; characterized by ongoing and objective measurement of behaviors, implementation of individualized curricula, selection and systematic use of reinforcers, use of functional analysis to identify factors that increase or inhibit behaviors, and an emphasis on generalization of learned skills.
Discrete Trial Teaching (DTT)	Behavioral intervention based on principles of operant learning; incorporates units of instruction used to teach and assess acquisition of basic skills; discrete trial incorporates same sequential components regardless of skills taught.
Pivotal Response Training (PRT)	Focus on the most disabling areas of a person's autism. "Pivotal" areas of intervention include teaching children to respond to multiple environmental cues, increasing motivation, increasing capacity for self-management, and increasing self-initiations.
Learning Experiences: An Alternative Program (LEAP)	Peer-mediated interventions in an educational setting with children with autism and typical peer; individualized, data driven, and focused on generalizing learning skills across context through saturation of learning opportunities throughout the day; family involvement is a big part of this intervention.
Pharmacological Interventions	May be considered for maladaptive behaviors and if the behavioral symptoms cause significant impairment in functioning.
What Seems to Work	Description
Educational and Communication Focused Interventions (TEACCH)	TEACCH (Treatment and Education of Autistic and Communication related handicapped CHildren) provides strategies that support the individual throughout the lifespan, facilitates autonomy at all levels of functioning, and accommodates individual needs.
Natural Language Methods	Speech and language pathologists often integrate communication training with the child's behavior program to provide a coordinated opportunity for structured and naturalistic language learning. Instruction in communication is designed to provide a generative tool that will serve many immediate needs throughout the child's life.
Picture Exchange Communication System (PECS)	Helps children with ASD acquire functional communication skills. Children using PECS are taught to give a picture of a desired item to a communication partner in exchange for the item, thus linking communication with an outcome.
Other Behavioral Interventions	Joint attention behavior training may be especially beneficial in young, pre-verbal children. Joint attention behavior training shows promise for teaching children with autism behavioral skills. Social skills groups, social stories, visual cueing, social games, video modeling, scripts, peer-mediated techniques, and play and leisure curricula are also supported by the literature.
Occupational Therapy and Sensory Integration Therapy (SI)	Occupational therapy helps develop self-care skills, such as dressing, using utensils, personal hygiene and academic skills, and shows promise in promoting play skills and establishing routines to improve attention and organization. SI therapy often is used alone or as part of a broader program of occupational therapy for children with ASD. The goal of SI therapy is to correct deficits in neurological processing and integration of sensory information to allow the child to interact with the environment in a more adaptive way.

Source: Commission on Youth Graphic of references listed in text.

Promising Practices

Research findings have shown that the following practices appear to be effective for treating ASD. These are outlined as What Seems to Work in Table 5.

Educational and Communication Focused Interventions

The TEACCH (Treatment and Education of Autistic and Communication related handicapped Children) approach recognizes differences in the rate and nature of development among children (Ferrante, Panerai & Zingale, 2002). Teaching objectives are based on individual developmental patterns. The guiding principles of the TEACCH program are to provide strategies that support the person throughout the lifespan, facilitate autonomy at all levels of functioning, and accommodate individual needs (Ferrante, Panerai & Zingale).

Natural Language Methods

The following information is taken from Families for Early Autism Treatment, Inc. (n.d.). Significant gains for teaching language, such as speech intelligibility, have occurred in recent years. Speech and language pathologists often integrate communication training into the child's behavior program to provide a coordinated opportunity for structured and naturalistic language learning. The chief focus of skill development for children with ASD is communication, because it is the most pervasive area of developmental delay. Instruction in communication skills is designed to provide a generative tool that will serve many immediate needs throughout the child's life.

Picture Exchange Communication System

The following information is taken from Families for Early Autism Treatment, Inc. (n.d.). The Picture Exchange Communication System (PECS) is a communication-training program that helps children with ASD acquire functional communication skills. Children using PECS are taught to give a picture of a desired item to a communication partner in exchange for the item, thus initiating a communicative act for an actual outcome.

Other Behavioral Interventions

Joint attention training uses a behavioral modification approach and may be especially beneficial in young, preverbal children. A recent study demonstrated that joint attention and symbolic play skills could be taught (Myers, Johnson & the Council on Children with Disabilities, 2007). Because joint attention behaviors precede social language development, joint attention behavior training shows promise in teaching behavioral skills (Myers, Johnson & the Council on Children with Disabilities). The successes of social skills groups, social stories, visual cueing, social games, video modeling, scripts, peer-mediated techniques, and play and leisure curricula are supported primarily by descriptive and anecdotal literature, but research-based literature is growing (Myers, Johnson & the Council on Children with Disabilities).

Occupational Therapy and Sensory Integration Therapy

While occupational therapy is helpful in developing self-care skills, such as dressing, using utensils, personal hygiene and academic skills, it also shows promise in promoting play skills and establishing routines which improve attention and organization in children with ASD (Myers, Johnson & the Council on Children with Disabilities, 2007). Sensory integration (SI) therapy may be helpful as part of an overall program that uses desired sensory experiences to reinforce a desired behavior and to assist with transitioning between activities (Myers, Johnson & the Council on Children with Disabilities). While research on the efficacy of occupational therapy in ASD is lacking, SI therapy is often used alone or as part of a broader program of occupational therapy for children with ASD. The goal of SI therapy is to correct deficits in neurological processing and integration of sensory information to allow the child to interact with the environment in a more adaptive way. Studies are being conducted to evaluate its effectiveness.

Unproven Practices

Table 6 lists complementary and alternative intervention approaches for which there is conflicting data on their effectiveness.

Table 6

Unproven Practices for ASD

Auditory integration training	Detoxication; chelation
Facilitated communication	Dietary manipulations, e.g., elimination of gluten, casein
Hyperbaric oxygen	Hippotherapy; dolphin therapy
Secretin	Sensory integration therapy
Vitamin B6 and magnesium	Craniosacral therapy
Dimethylglycine (DMG)	Behavioral optometry
Intravenous immunoglobulin (IVIG)	Steroids
AZT (zidovudine, Retrovir)	Holding therapy
Relationship Development Intervention (RDI)	Music/art therapy
Antifungal medications	

Source: Kallen, R., 2000.

Vaccines and Autism

Concern has been expressed in recent years about vaccines and their role in the development of ASD. It was theorized that a link might exist between Autistic Disorder and the use of thimerosal, a mercury-based preservative once used in the measles-mumps-rubella (MMR) vaccine (National Institute of Mental Health [NIMH], 2007). Although mercury is no longer used in childhood vaccines in the United States, some parents expressed concerns about vaccinations (NIMH). In May 2004, the Institute of Medicine (IOM) released a report which stated that thimerosal had no causal relationship with the development of ASD (NIMH).

In 2008, in response to persisting public concerns, the CDC commenced a study on thimerosal and ASD, using data obtained from U.S. managed care organizations to determine whether exposure to thimerosal in infancy was related to ASD. The study goal was to provide the best available scientific information about whether there is a causal association between exposure to thimerosal and the development of ASD. Study findings showed that prenatal and infant exposure to vaccines containing thimerosal did not increase risk for ASD (Price et al., 2010). Researchers also noted that these results applied to both boys and girls. The outcome noted by the CDC was that thimerosal-containing immunizations did not increase the risk of any of the ASD outcomes (Price et al.). The recommended vaccination course for all children continues to be two doses of MMR vaccine (CDC, 2007b).

Activities in Virginia

In recent years, Virginia has responded to rising concerns about the Commonwealth’s ability to provide high quality services to children diagnosed with ASD. In 2006, the Department of Behavioral Health and Developmental Services (DBHDS), formerly the Department of Mental Health, Mental Retardation and Substance Abuse Services, convened a workgroup to review ways to provide a coordinated response to educating and treating individuals with ASD. The workgroup continued its work in 2007 and developed recommendations to address services and supports, including one to establish a central agency for ASD.

In 2007, the Joint Commission on Health Care (JCHC) convened the Workgroup Regarding the Commonwealth’s Ability to Serve Children and Adults with Autistic Spectrum Disorder (ASD). The workgroup’s objective was to recommend a primary agency for developing, coordinating, and overseeing autism services. This agency, as envisioned, would serve as the primary entity to oversee the provision of services for individuals diagnosed with ASD. The JCHC recommended having the Secretary of Health and Human Resources develop a plan to identify the state agency to be responsible for serving individuals with ASD, including determining if that the agency should serve individuals with only ASD or with all developmental disabilities.

The 2008 General Assembly passed House Joint Resolution 105, directing the Joint Legislative Audit Review Commission (JLARC) to examine services available to Virginians with ASD. JLARC compared services provided to individuals with ASD in Virginia to those provided in other states, assessed availability of ASD training for public safety personnel, and identified best practices and ways to improve delivery of services to Virginians with ASD. Findings from this comprehensive review can be accessed on the JLARC website (Virginia Joint Legislative Audit and Review Commission, 2009).

One recommendation from the JLARC study was:

The Department of Behavioral Health and Developmental Services should create a detailed action plan reflecting the input of relevant stakeholders and the evaluation of options conducted by other State agencies, which specifies how the department will address the issues contained in this report and build a more effective system of care for Virginians with developmental disabilities, including autism spectrum disorders.

The resulting plan can be accessed on the Department's website (Virginia Department of Behavioral Health and Developmental Services, 2010).

In 2011, legislation was passed requiring health insurance plans in businesses employing at least 50 people to offer coverage for ASD for 2 to 6 year-olds (House Bill 2467/Senate Bill 1062). The Governor amended this legislation to license board certified behavior analysts (BCBAs). The legislation, however, did not authorize the Board of Medicine to promulgate regulations to govern the licensure. In 2012, legislation (House Bill 1106) was passed to require the Board of Medicine to license behavior and assistant behavior analysts. The bill also required the Board to convene a workgroup relating to the licensure and practice of applied behavior analysis and contained an emergency clause which requires the Board to promulgate emergency regulations within 280 days of enactment.

Additional legislation was passed by the 2012 General Assembly with the goal of improving delivery of school-based services to youth with ASD (House Bill 325). This legislation required school divisions to ensure that aides assigned to work with a teacher who has primary oversight of students with ASD receive training in student behavior management within 60 days of assignment to such responsibility. School boards may also provide such training to other employees, including transportation employees. The Virginia Board of Education must provide training standards that school divisions may use to fulfill the training requirement. An enactment clause was added requiring the Virginia Board of Education, in consultation with Virginia Commonwealth University, to develop online training that school divisions may use to fulfill the requirements of this legislation. Such training must be made available to local school divisions free of charge.

Autism Spectrum Disorder Diagnoses in the Future

In early 2010, the American Psychiatric Association released draft revisions to its fifth revision of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* and invited comments from both professionals and the public. The *DSM-5* will be published in May 2013 (APA, 2009). The *DSM-5* is expected to affect how ASDs are diagnosed. Among the proposed revisions are:

- changing the name of the diagnostic category to Autism Spectrum Disorders;
- including Asperger's Disorder, Childhood Disintegrative Disorder, and PDDNOS under the diagnosis of Autism Spectrum Disorders, rather than defining them separately, as is now the case;
- removing Rett's Disorder from the *DSM* and from the autism spectrum (APA, 2010, as cited by NICHCY, 2010); and
- merging several social/communication criteria (APA, 2010).

An epidemiological study of 5,000 school-aged children was conducted in Finland to compare the proposed criteria for ASD with existing criteria. Study findings revealed that the *DSM-5* draft criteria may make it more difficult to identify youth with ASD, particularly those with Asperger's Disorder and certain high-functioning youth with ASD (Matilla et al., 2011, as cited by Jabr, 2012). A systemic analysis using computer-generated models was also conducted based on symptom reports from nearly 7,000 youth diagnosed with ASD. This analysis revealed that a model with 2 groups of symptoms, similar to that proposed for inclusion in the *DSM-5*, captured how the symptoms clustered in the children better than the *DSM-IV* criteria (Frazier et al., 2011, as cited by Jabr, 2012). A third assessment using statistical analyses to evaluate the *DSM-5* criteria concluded that the 2-group *DSM-5* model is overall more accurate than the 3-group *DSM-IV* criteria, but still restrictive (Mandy, Charman & Skuse, 2011, as cited by Jabr, 2012). The *DSM-5* Task Force is scheduled to finalize revisions to the *DSM* in 2012 and publicize the final version in May 2013 (Jabr, 2012).

Conclusion

Each child and adolescent with ASD is unique, with differing strengths and needs. New evidence and information on ASD is being published almost daily. Early intervention is the most important element which can influence the outcomes for a child with ASD. Proper assessment is crucial in the diagnosis and service planning for youth with ASD. With appropriate and personalized interventions, effective communication can be achieved and the symptoms of ASD ameliorated.

Sources

- American Academy of Pediatrics (AAP). (2006). *Identifying Infants and Young Children with Developmental Disorders in the Medical Home: An Algorithm for Developmental Surveillance and Screening*. [Online]. Available: <http://aappolicy.aappublications.org/cgi/content/full/pediatrics;118/1/405>. [July 2010].
- American Friends of Tel Aviv University. (2012). Are schizophrenia and autism close relations? *ScienceDaily*. [Online]. Available: <http://www.sciencedaily.com/releases/2012/10/121023124524.htm>.
- American Psychiatric Association (APA). (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.) (*DSM-IV-TR*). Washington, DC: Author.
- American Psychiatric Association (APA). (2009). *DSM-5 publication date moved to May 2013*. [Online]. Available: [www.dsm5.org/Newsroom/Documents/09-65 percent20DSM percent20Timeline.pdf](http://www.dsm5.org/Newsroom/Documents/09-65%20percent20DSM%20percent20Timeline.pdf)
- American Psychiatric Association (APA). (2010). *DSM-5 proposed revisions include new category of autism spectrum disorders*. [Online]. Available: <http://www.dsm5.org/ProposedRevisions/Pages/proposedrevision.aspx?rid=94#>. [March 2012].
- Autism Society of America. (2002). *What is autism?* [Online]. Available: http://www.autism-society.org/site/PageServer?pagename=about_what_is_home. [January 2008]. *Not available July 2010*.
- Bailey, A., LeCouteur, A., Gottesman, I., Bolton, P., Simonoff, E., Yuzda, E., et al. (1995). Autism as a strongly genetic disorder: Evidence from a British twin study. *Psychological Medicine*, 25(1), 67-77.
- Baron-Cohen S., Allen J., & Gillberg, C. (1992). Can autism be detected at 18 months? The needle, the haystack, and the CHAT. *British Journal of Psychiatry*, 161, 839-843.
- Biasini, F., Grupe, L., Huffman, L. & Bray, N. (1999). Mental retardation: A symptom and a syndrome. In S. Netherton, D. Holmes, & C. Walker (Eds.). *Comprehensive Textbook of Child and Adolescent Disorders*. New York: Oxford University Press, in press.
- Berument, S., Rutter, M., Lord, C., et al. (1999) Autism screening questionnaire: diagnostic validity. *British Journal of Psychiatry*, 175, 444-451.
- Campbell, J., Herzinger, C., & James, C. Evidence-based therapies for Autistic Disorder and Pervasive Developmental Disorders. In Steele, R., Elkin, T., & Roberts, M. (2008). *Handbook of Evidence-Based Therapies for Children and Adolescents; Bridging Science and Practice*. Springer Publications.
- Center for Autism and Related Disabilities at the University of South Florida (CARD-USF). (n.d.) *Autism & mental health issues*. [Online]. Available: http://learningcurve.fmhi.usf.edu/docs/CARD_ASD-MH_Brochure_final_092109.pdf. [March 2012].
- Centers for Disease Control (CDC). (2009). Prevalence of Autism Spectrum Disorders – Autism and Developmental Disabilities Monitoring Network, United States, 2006. *Morbidity and Mortality Weekly Report* (MMWR) [Online]. Available: <http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5810a1.htm>. [March 2012].
- Centers for Disease Control (CDC). (2007b). *Measles, Mumps, and Rubella (MMR) vaccine and autism fact sheet*. [Online]. Available: http://www.cdc.gov/od/science/iso/concerns/mmr_autism_factsheet.htm. [July 2010].

- Centers for Disease Control (CDC). (2012). Prevalence of Autism Spectrum Disorders — Autism and Developmental Disabilities Monitoring Network, 14 Sites, United States, 2008. *Surveillance Summaries*. March 30, 2012/61(SS03); 1-19. [Online]. Available: http://www.cdc.gov/mmwr/preview/mmwrhtml/ss6103a1.htm?s_cid=ss6103a1_w. [March 2012].
- Cooper, H. (1989). Synthesis of research on homework. *Educational Leadership*, 47(3) 85-91.
- Dawson, G., & Osterling, J. (1997). Early Intervention in Autism. In M. Guralnick (Ed). *The Effectiveness of Early Intervention*, Chapter 14. Baltimore, MD: Brooke.
- Dyches, T., Wilder, L., Sudweeks, R., Obiakor, F., & Algozzine, B. (2004). Multicultural issues in autism. *Journal of Autism and Developmental Disorders*, 34(2), 211-222.
- Ehlers, S., Gillberg, C., & Wing, L. (1999) A screening questionnaire for Asperger syndrome and other high functioning autism spectrum disorders in school age children. *Journal of Autism and Developmental Disorders*, 29, 129 -141.
- Families for Early Autism Treatment, Inc. [Online]. Available: <http://www.feat.org>. [September 2002]. *Not available July 2010*.
- Ferrante, L., Panerai, A., & Zingale, M. (May 2002). Benefits of the Treatment and Education of Autistic and Communication Handicapped Children (TEACCH) programme as compared with a non-specific approach. *Journal of Intellectual Disability Research*, 46 (4), 318-327.
- Filipek, P., Accardo, P., Baranek, G., Cook, E., Dawson, G., Gordon, B., Gravel, J., Johnson, C., Kallen, R. J., Levy, S., Minshew, N., Prizant, B., Rapin, I., Rogers, S., Stone, W., Teplin, S., Tuchman, R. F., & Volkmar, F. (1999). The screening and diagnosis of autistic spectrum disorders. *Journal of Autism and Developmental Disorders*, 29, 439-484.
- Filipek, P., Accardo, P., Ashwal, S., Baranek, G., Cook, Jr., E., Dawson, G., Gordon, B., Gravel, J., Johnson, C., Kallen, R., Levy, S., Minshew, N., Ozonoff, S., Prizant, B., Rapin, I., Rogers, S., Stone, W., Teplin, S., Tuchman, R., & Volkmar, F. (2000). Practice Parameters: Screening and Diagnosis of Autism; Report of the Quality Standards Subcommittee of the American Academy of Neurology and the Child Neurology Society. *Neurology*, 55, 486-479.
- Fombonne, E. (2005). The changing epidemiology of autism. *Journal of Applied Research in Intellectual Disabilities*, 18(4), 281-294.
- Garnett, M., & Attwood, A. (1997). The Australian scale for Asperger's syndrome. In: Attwood, Tony. *Asperger's Syndrome: A Guide for Parents and Professionals*. London: Jessica Kingsley Publishers.
- Glascoe, F. (1998). *Collaborating with parents: Using parents' evaluation of developmental status to detect and address developmental and behavioral problems*. Nashville, TN: Ellsworth & Vandermeer.
- Glascoe, F. (2005). *Technical Report for the Brigance Screens*. North Billerica, MA: Curriculum Associates Inc.
- Goin-Kochel, R., & Myers, B. (2005). Parental report of early autistic symptoms: Differences in ages of detection and frequencies of characteristics among three autism-spectrum disorders. *Journal on Developmental Disabilities*, 11(2), 21-39.
- Green, G. (1996). Early behavioral intervention for autism: what does research tell us? In Maurice, C., Green, G., & Luce, S. (Eds). *Behavioral Intervention for Young Children with Autism—A Manual for Parents and Professionals*, Chp.3. Austin, Texas: Proed.
- Hoyson, M., Jamieson, B., & Strain, P. (1984). Individualized group instruction of normally developing and autistic-like children: The LEAP curriculum model. *Journal of the Division for Early Childhood*, 8, 157-172.

- Infant & Toddler Connection of Virginia. (n.d.). *Infant & Toddler Connection of Virginia Overview*. [Online]. Available: <http://www.infantva.org/ovw-WhatsPartC.htm>. [June 2010].
- U.S. Department of Health and Human Services Interagency Autism Coordinating Committee (IACC). (2012). IACC Strategic Plan for Autism Spectrum Disorder (ASD) Research—2012 Update. [Online]. Available: <http://iacc.hhs.gov/strategic-plan/2012/index.shtml>.
- Ireton, H. (1992). *Child Development Inventory Manual*. Minneapolis, MN: Behavior Science Systems Inc.
- Jabr, F. (2012). Redefining autism: will new DSM-5 criteria for ASD exclude some people? *Scientific American*. [Online]. Available: <http://www.scientificamerican.com/article.cfm?id=autism-new-criteria>. [March 2012].
- Kabot, S., Masi, W., & Segal, M. (2003). Advances in the diagnosis and treatment of autism spectrum disorders. *Professional Psychology: Research and Practice*, 34(1), 26-33.
- Kallen, R. (2000). *Unproven Treatments*. Autism Biomedical Information Network.
- Koegel, R., Koegel, L., & McNeerney, E. (2001). Pivotal areas in intervention for Autism. *Journal of Clinical Child Psychology*, 30(1), 19-32.
- Leyfer, O.T., Folstein, S.E., Bacalman, S., Davis, N.O., Dinh, E., Morgan, J., Tager-Flusberg, H., Lainhart, J.E. (2006). Comorbid psychiatric disorders in children with autism: interview development and rates of disorders. *Journal of Autism and Developmental Disorders*, 36(7), 849–61.
- Lord, C., & Bailey, A. (2002). Autism Spectrum Disorders. In M. Rutter & E. Taylor (Eds.), *Child and Adolescent Psychiatry: Modern Approaches* (4th ed.). (pp. 636-663). Oxford: Blackwell Publications.
- Lord, C., Risi, S., Lambrecht, L., et al. (2000) The Autism Diagnostic Observation Schedule – Generic: a standard measure of social and communication deficits associated with the spectrum of autism. *Journal of Autism and Developmental Disorders*, 30, 205 -223.
- Lord, C., Rutter, M., & Le Couteur, A. (1994). Autism diagnostic interview-revised: A revised version of a diagnostic interview for caregivers of individuals with possible pervasive developmental disorders. *Journal of Autism and Developmental Disorders*, 24(5), 659-685.
- Lotter, V. (1966). Epidemiology of autistic conditions in young children: I. Prevalence. *Social Psychiatry*, 1, 124-137.
- Lovaas, O. (1987). Behavioral treatment and normal educational and intellectual functioning in young autistic children. *Journal of Consulting and Clinical Psychology*, 55(1), 3-9.
- Lovaas, O., & Smith, T. (2003). Early and intensive behavioral intervention in autism. *Evidence-based psychotherapies for children and adolescents* (pp. 325-340). Guilford Press.
- Matson, Johnny L. (2010, March 23). Autism spectrum disorders and comorbid psychopathology. *SciTopics*. [Online] Available: http://www.scitopics.com/Autism_Spectrum_Disorders_and_Comorbid_Psychopathology.html. [March 2012].
- Minnesota Department of Health (2009). *Thimerosal and childhood vaccines: what you should know*. [Online]. Available: <http://www.health.state.mn.us/divs/idepc/immunize/hcp/thimerosalfs.html>. [July 2010].
- Moseley, D S., Tonge, B.J., Brereton, A.V., & Einfeld, S.L. (2011). Psychiatric comorbidity in adolescents and young adults with autism. *Journal of Mental Health Research in Intellectual Disabilities*, 4(4), 229.
- Myers, S., Johnson, C., and the Council on Children with Disabilities. (2007). Management of children with autism spectrum disorders. *Pediatrics*, 120(5), 1162-1182.

- National Information Center for Children and Youth with Disabilities. (NICHCY). (1998). *Briefing Paper on Autism and PDD (Fact Sheet 20)*. January 1998.
- National Dissemination Center for Children with Disabilities (NICHCY). (2009). *Intellectual disabilities – disability fact sheet number 8*. [Online]. Available: <http://www.nichcy.org/Disabilities/Specific/pages/IntellectualDisability.aspx>. [June 2010].
- National Dissemination Center for Children and Youth with Disabilities. (NICHCY). (2010). *Fact Sheet 1*. [Online]. Available: <http://nichcy.org/disability/specific/autism#ref8>. [March 2012].
- National Information Center for Children and Youth with Disabilities. (NICHCY). (2001). *Fact Sheet 1*.
- National Institute of Mental Health (NIMH). (2007). *Autism Spectrum Disorders: Pervasive Developmental Disorders with Addendum*. January 2007. [Online]. Available: <http://www.nimh.nih.gov/health/publications/autism/nimhautismspectrum.pdf>. [July 2010].
- Newschaffer, C., & Curran, L. (2003). *Autism: An Emerging Public Health Problem-Viewpoint*. [Online]. Available: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1497571/pdf/12941851.pdf>. [July 2010].
- Odom, S., Hanson, M., Blackman, J., & Kaul, S. (2003). *Early Intervention Practices Around the World*. Baltimore, Maryland: Brooke.
- Ozonoff, S., Goodlin-Jones, B., & Solomon, M. (2005). Evidence-based assessment of autism spectrum disorders in children and adolescents. *Journal of Clinical Child and Adolescent Psychology*, 34(3), 523-540.
- Price, C.S., et al. (2010). Prenatal and infant exposure to thimerosal from vaccines and immunoglobulins and risk of autism. *Pediatrics*. 126:656. [Online]. Available: <http://pediatrics.aappublications.org/content/early/2010/09/13/peds.2010-0309.full.pdf>. [March 2012].
- Prizant, B. (1996). Brief report: Communication, Language, Social and Emotional Development. *Journal of Autism and Developmental Disorders*, 26(2).
- Research Autism. (2011). *Mental Health and Autism*. [Online]. Available: http://www.researchautism.net/autism_issues_challenges_problems.ikml?print&ra=50&infolevel=4 [March 2012].
- Robins, D., Fein, D., Barton, M., & Green, J. (2001). The Modified Checklist for Autism in Toddlers: an initial study investigating the early detection of autism and pervasive developmental disorders. *Journal of Autism and Developmental Disorders*, 31, 131–144.
- Rogers, S. (1998). Empirically supported comprehensive treatments for young children with autism. *Journal of Clinical Child Psychology*, 27, 168- 179.
- Rogers, S., & Ozonoff, S. (2005). Annotation: What do we know about sensory dysfunction in autism? A critical review of the empirical evidence. *Journal of Child Psychology and Psychiatry*, 46, 1255–1268.
- Rosenberg, R., Kaufmann, W., Law, J., & Law, P. (2011). Parent Report of Community Psychiatric Comorbid Diagnoses in Autism Spectrum Disorders. *Autism Research and Treatment*, Article ID 405849. [Online]. Available: <http://www.hindawi.com/journals/aurt/2011/405849/>. [March 2012].
- Rosenwasser, B., & Axelrod, S. (2001). The contribution of applied behavior analysis to the education of people with autism. *Behavior Modification*, 25(5), 671-677.
- Rutter, M., Le Couteur, A., & Lord, C. (2003). *ADI-R: The Autism Diagnostic Interview-Revised*. Los Angeles, CA: Western Psychological Services.

- Sherer, M., & Schreibman, L. (2005). Individual behavioral profiles and predictors of treatment effectiveness for children with autism. *Journal of Consulting and Clinical Psychology, 75*, 525-538.
- Siegel, B., Pliner, C., Eschler, J., & Elliott, G. (1998). How children with autism are diagnosed: difficulties in identification of children with multiple developmental delays. *Journal of Developmental Behavioral Pediatrics, 9*(4), 199-204.
- Siegel, B. (2004). *Pervasive Developmental Disorders Screening Test-II (PDDST-II): Early Childhood Screener for Autistic Spectrum Disorders*. San Antonio, TX: Harcourt Assessment Inc.
- Simonoff, E., Pickles, A., Charman, T., Chandler, S., Loucas, T., Baird, G. (2008). Psychiatric disorders in children with autism spectrum disorders: prevalence, comorbidity, and associated factors in a population-derived sample. *Journal of the American Academy of Child and Adolescent Psychiatry, 2008 47*(8), 921–929.
- Simpson, R. (2005). *Autism Spectrum Disorders: Interventions and Treatments for Children and Youth*: Thousand Oaks, CA: Corwin Press.
- Smith, T., Groen, A., & Wynn, J. (2004). Randomized Trial of Intensive Early Intervention for Children with Pervasive Developmental Disorder. *Early intervention: The essential readings* (pp. 153-181). Blackwell Publishing.
- Squires & Bricker. Ages & Stages Questionnaires®: A Parent-Completed Child Monitoring System (3rd ed.). (ASQ-3). Baltimore: Paul H. Brookes Publishing Co., Inc. Copyright © 2009 by Paul H. Brookes Publishing Co., Inc.
- Strain, P., & Hoyson, M. (2000). The need for longitudinal intensive social skill intervention: LEAP follow-up outcomes for children with autism. *Topics in Early Childhood Special Education, 20*, 116-123.
- Virginia Department of Behavioral Health and Developmental Services (DBHDS). (2010). *Establishing a Detailed Action Plan for Serving Individuals with Autism Spectrum Disorders*. [Online]. Available: <http://www.dbhds.virginia.gov/documents/ODS/ods-AutismPlan-Resp-to-JLARC-Nov2010.pdf>. [March 2010].
- Virginia Joint Legislative Audit and Review Commission (JLARC). (2009). Assessment of services for Virginians with autism spectrum disorders. *House Document 8*. [Online]. Available: <http://jlarc.virginia.gov/reports/Rpt388.pdf>. [July 2010].
- Volkmar, F., Cook, E., Jr., Pomeroy, J., Realmuto, G., & Tanguay, P. (1999). *Journal of the American Academy of Child & Adolescent Psychiatry, 38* (12 Suppl), 32S-54S.
- Volkmar, F., Paul, R., Klin, A., & Cohen, D. (2005). *Handbook of Autism and Pervasive Developmental Disorders* (3rd ed.). New Jersey: Wiley.
- Volkmar, F., Westphal, A., Gupta, A., & Wiesner, L. (2008). Medical issues. In K. Chawarska, A. Klin, & F. Volkmar (Eds.) *Autism spectrum disorders in infants and toddlers: Diagnosis, assessment, and treatment*. New York, NY: The Guilford Press.
- Wing, L., & Gould, J. (1979). Severe impairments of social interactions and associated abnormalities in children: epidemiology and classification. *Journal of Autism and Developmental Disorders, 9*, 11-29.

Virginia Resources

Autism Outreach, Inc.

<http://www.autismoutreach.org>

Autism Society of America

Central Virginia Chapter
P.O. Box 29364 – Richmond, VA 23242-0364
<http://www.asacv.org>

Northern Virginia Chapter
P.O. Box 1334 – Vienna, VA 22183-1334
http://www.autism-society.org/site/Clubs?club_id=1200&pg=main

Commonwealth Autism Service

2201 West Broad Street, Suite 107 – Richmond, VA 23220
<http://autismva.org>

Infant & Toddler Connection of Virginia

Virginia Department of Behavioral Health and Developmental Services (DBHDS)
1220 Bank Street, 9th Floor – P.O. Box 1797 – Richmond, VA 23219-1797
<http://www.infantva.org>

Parent Educational Advocacy Training Center (PEATC)

6320 Augusta Drive, Suite 1200 – Springfield, VA 22150
<http://www.peatc.org>

The Radford University Autism Center

Department of Communication Sciences & Disorders
P.O. Box 6961 – Radford, VA 24142
<http://cosd-web.asp.radford.edu/autism.html>

Virginia Autism Council

<http://www.autismtrainingva.org/>

Virginia Autism Project

<http://www.virginiaautismproject.com>

Virginia Autism Resource Center

<http://www.varc.org>

Richmond Office: 4100 Price Club Boulevard – Midlothian, VA 23112
Winchester Office: P.O. Box 2500 – Winchester, VA 22604

Virginia Commonwealth University Autism Center for Excellence (VCU-ACE)

1314 West Main Street – Richmond, VA 23284
<http://www.vcuautismcenter.org/projects/diagnosis.cfm>

Virginia Department for Aging and Rehabilitative Services

8004 Franklin Farms Drive – Henrico, VA 23229-5019
<http://www.vadrs.org>

Virginia Department of Behavioral Health and Developmental Services

Office of Developmental Services
P.O. Box 1797 – Richmond, VA 23219
<http://www.dbhds.virginia.gov/ODS-default.htm>

Virginia Department of Education

Office of Special Education and Student Services
P.O. Box 2120 – Richmond, VA 23218-2120
http://www.doe.virginia.gov/special_ed/index.shtml

Virginia Department of Health

Child & Adolescent Health, Division of Child & Adolescent Health
109 Governor Street, 8th Floor – Richmond, VA 23219
<http://www.vdh.state.va.us>

Virginia Department of Medical Assistance Service

600 East Broad Street – Richmond, VA 23219
www.dmas.virginia.gov

Virginia Institute of Autism

1414 Westwood Road – Charlottesville, VA 22903-5149
<http://www.viaschool.org>

Virginia Joint Legislative Audit and Review Commission

House Document 8, Assessment of services for Virginians with autism spectrum disorders
Available: <http://jlarc.virginia.gov/reports/Rpt388.pdf>.

Virginia Tech Autism Clinic

3110 Prices Fork Road – Blacksburg, VA 24061
<http://www.psyc.vt.edu/outreach/autism>
autism@vt.edu

Organizations/Weblinks**American Academy of Pediatrics**

<http://www.aap.org>

Asperger Syndrome Education Network (ASPEN)

<http://www.aspenj.org>

Association of University Centers on Disabilities

<http://www.aucd.org>

Autism and PDD Support Network

<http://www.autism-pdd.net>

Autism Research Institute (ARI)

4182 Adams Avenue – San Diego, CA 92116
<http://www.Autismresearchinstitute.com>

Autism Society of America

7910 Woodmont Avenue, Suite 300 – Bethesda, MD 20814-3067
<http://www.autism-society.org/site/PageServer>

Autism Speaks

2 Park Avenue, 11th Floor – New York, NY 10016
<http://www.autismspeaks.org>

Centers for Disease Control and Prevention

Autism Information Center
<http://www.cdc.gov/ncbddd/autism/index.html>

Interagency Autism Coordinating Committee

<http://iacc.hhhs.gov>

National Autism Center

<http://www.nationalautismcenter.org>

National Alliance for Autism Research

99 Wall Street, Research Park – Princeton, NJ 08540

National Dissemination Center for Children with Disabilities (NICHCY)

P.O. Box 1492 – Washington, DC 20013-1492

www.nichcy.org

National Institute on Deafness and Other Communication Disorders

31 Center Drive, MSC 2320 – Bethesda, MD 20892-2320

<http://www.nidcd.nih.gov>

National Institute of Child Health and Human Development

<http://www.nichd.nih.gov>

National Institute of Medicine of the National Academies (IOM)

www.iom.edu

National Institute of Mental Health (NIMH)

6001 Executive Blvd., Rm. 8184, MSC 9663 – Bethesda, MD 20892-9663

www.nimh.nih.gov

National Network for Immunization Information (NNii)

<http://www.immunizationinfo.org>

Online Asperger Syndrome Information and Support (OASIS)

<http://www.aspergersyndrome.org/>

Pervasive Developmental Disorders Screening

Test-Stage I (PDDST), Porter Psychiatric Institute

The National Professional Development Center on Autism Spectrum Disorders

<http://autismpdc.fpg.unc.edu>

U.S. Autism & Asperger Association

<http://www.usautism.org>

U.S. Department of Education

U.S. Office of Special Education and Rehabilitative Services

400 Maryland Ave., S.W. – Washington, DC 20202-7100

Individuals with Disabilities Education Act (Idea) 2004 Regulations

IDEA, 2004 News, Information and Resources

<http://idea.ed.gov>

IDEA 2004 Fact Sheet

<http://www.ed.gov/admins/lead/speced/ideafactsheet.html>

U.S. Department of Health and Human Services

The Interagency Autism Coordinating Committee (IACC)

<http://iacc.hhs.gov>

Wrights Law

www.wrightslaw.com

INTELLECTUAL DISABILITY

Introduction

Prevalence

Assessment and Diagnosis

Causes and Risk Factors

Intellectual Disability and Co-occurring Mental Health Disorders

Proven Interventions and Practices

Developmental and Educational Services

Behavioral Techniques

Pharmacological Interventions

Discharge Planning

Other Elements for Consideration

Cultural Factors

Family Involvement

Peer Interaction

Availability of Community Services and Supports

Introduction

Intellectual disability is not a single, isolated disorder. Intellectual disability is a heterogeneous condition that is defined by significantly sub-average intellectual and adaptive functioning and an onset before 18 years of age (American Academy of Child and Adolescent Psychiatry [AACAP], 1999). The American Association of Intellectual and Developmental Disability (AAIDD, 2007) provides a tri-dimensional definition of intellectual disability which is currently the most widely accepted definition. Intellectual disability is characterized by significant limitations in both intellectual functioning (reasoning, learning, problem solving) and adaptive behavior, which covers a range of everyday social and practical skills (AAIDD). As defined by AACAP, adaptive skill areas include communication, self-care, home living, social skills, community use, self-direction, health and safety, functional academics, leisure, and work. This categorization sub-classifies intellectual disability according to the intensity and nature of needed supports. In addition, it emphasizes the need for detailed assessment in all relevant domains, including psychological and emotional functioning (AACAP).

In recent years, there has been an effort to replace the term “mental retardation” with “intellectual disability” (AAIDD, 2007). The Centers for Disease Control have made this change, as has the American Association on Mental Retardation (AAIDD). In addition, the President’s Committee on Mental Retardation has also adopted the change and renamed the committee the President’s Committee for People with Intellectual Disabilities (President’s Committee for People with Intellectual Disabilities [PCPID], 2007). However, mental retardation is still listed as a diagnosis in the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR)* (American Psychiatric Association [APA], 2000).

Virginia has also taken steps to replace the term “mental retardation” with “intellectual disability.” In 2008, the Virginia General Assembly passed legislation to rename Virginia’s Department of Mental Health Mental Retardation and Substance Abuse (DMHMRSAS). The Board and the Office of the Inspector General were renamed to reflect this change. The final version of the bill required that it also be passed by the 2009 General Assembly before becoming effective. The 2009 General Assembly unanimously approved the new name, the Department of Behavioral Health and Developmental Services (DBHDS). This measure was adopted to support the Department’s mission and to move away from the stigma associated with the term “mental retardation.” In 2012, the Virginia General Assembly passed legislation (House Bill 552, Garrett; Senate Bill 387, Martin) eliminating the term “mental retardation” in the *Code of Virginia* and replacing it with “intellectual disability.”

Children with intellectual disability may also have a diagnosable mental health disorder, also known as a dual diagnosis. While most professionals understand dual diagnosis to describe those who suffer from both mental health disorders and substance abuse, the term is also used for those with the double challenge of intellectual disability and a mental health disorder (Hartwell-Walker, 2012). A dual diagnosis of a mental health disorder and intellectual disability may cause significant clinical impairment and place additional burden upon these children and their families. Unfortunately, it is frequently assumed that behaviors associated with co-occurring mental health disorders are related to the intellectual disability. Holding to this assumption can leave mental health issues untreated and exacerbate symptoms.

At its November 9, 2011 meeting, the Commission on Youth recommended that the *Collection's* section on Intellectual Disability be revised to include discussion of co-occurring mental health disorders and specify that intellectual disability is a developmental disability, not a mental health disorder. Accordingly, this revised section includes additional information about intellectual disability, as well as commonly co-occurring mental health disorders.

Prevalence

Estimates of the prevalence of intellectual disability vary, depending on a number of factors including diagnostic criteria, study design, and methods of ascertainment. Intellectual disability affects about 1 to 3 percent of the population, with doctors finding a specific cause in only 25 percent of cases (Penn State Hershey Children's Hospital, 2011). For example, when the diagnosis is based on IQ alone, prevalence is estimated at approximately 3 percent, but when the AAIDD's (2007) tri-dimensional definition is used, the national prevalence rate is estimated at 1 percent (AACAP, 1999). A conservative approximation (using a 1 percent rate) estimates that 73,890 individuals age 6 and over in Virginia have intellectual disability. Intellectual disability is more common in males than females, with a male-to-female ratio of approximately 1.5 to 1 (APA, 2000). Intellectual disability affects about 1 in 10 families in the United States (AAIDD).

The following information is specific to Virginia. Using 2010 Census data and applying national prevalence rates from studies and surveys, the Virginia Department of Behavioral Health and Developmental Services (DBHDS) estimates that approximately 73,890 individuals ages 6 and older in Virginia have an intellectual disability. In Fiscal Year 2011, 14,069 children received developmental services through Infant and Toddler Connection and 6,527 children with intellectual disability received services through Virginia's Community Services Boards (DBHDS, 2011).

Assessment and Diagnosis

A multidisciplinary team, which may include psychologists, psychiatrists, pediatricians and clinical geneticists, typically conducts the assessment for intellectual disability. All assessments should be comprehensive and should include standardized testing of intellectual ability, adaptive behavior, along with detailed family and medical history evaluation (AACAP, 1999).

The *DSM-IV-TR* provides the standard criteria for a diagnosis of intellectual disability, used in diagnosis of both children and adults (APA, 2000). The disorder is characterized by:

1. significantly subaverage intellectual functioning;
2. significant limitations in adaptive functioning in at least 2 of the following areas: communication, self-care, home living, social/interpersonal skills, use of community resources, self-direction, functional academic skills, work, leisure, health, and safety; and
3. onset before the age of 18 (APA).

Intellectual Functioning

Intellectual functioning is typically measured by individually administered cognitive assessment instruments (AACAP, 1999; AAIDD, 2007). According to the AACAP and the *DSM-IV-TR*, clinicians must consider the socio-cultural background and native language of the youth when choosing a cognitive assessment instrument. Ignoring these variables may lead to a falsely positive diagnosis of intellectual disability in youth of linguistic and cultural minorities. For a diagnosis of intellectual disability, the youth must have an IQ that falls below 70 to 75 (APA, 2000). The threshold for intellectual disability is typically set at 70. Experts generally agree that scores of 71 to 75 are consistent with intellectual disability only when significant deficits in adaptive behavior are present and manifested during the developmental period (AACAP). Table 1 outlines the degrees of severity of intellectual disability as set forth by the *DSM-IV-TR* (APA).

Table 1

Degrees of Severity of Intellectual Disability

Severity	Approximate IQ Range
Mild	55 to approximately 70
Moderate	35-40 to approximately 50-55
Severe	20-25 to approximately 35-40
Profound	Below 20-25

Source: APA, 2000.

Adaptive Functioning

Adaptive behavior refers to an individual's effectiveness in functioning at an age and culturally appropriate level. With regard to impairments in adaptive functioning, AAIDD (2007) and the *DSM-IV-TR* (APA, 2000) criteria specify that the child or adolescent must demonstrate significant impairments in at least 2 of 10 areas of functioning for a diagnosis of intellectual disability. These include limitations in communication, self-care, home living, social/interpersonal skills, use of community resources, self-direction, functional academic skills, work, leisure, health, and safety (APA). There are multiple measures which address these 10 areas of adaptive behavior.

Age of Onset

The *DSM-IV-TR* also stipulates that the onset of symptoms occur prior to the age of 18 (APA, 2000). This does not prohibit diagnosis of a person after the age of 18. Rather, there must be documented evidence that the onset of symptoms occurred prior to the age of 18. It is important to note, however, that children under age 2 should not be given a diagnosis of intellectual disability unless the deficits are relatively severe and/or the child has a condition that is highly correlated with intellectual disability, such as Down syndrome (APA). Instead, service providers should acknowledge the cognitive or behavioral deficit as a form of developmental disability and leave room for further diagnosis as the child gets older (Biasini, Grupe, Huffman & Bray, 1992).

Causes and Risk Factors

Knowledge of the causes of intellectual disability in a particular case is important for a number of reasons. For example, the condition may be treatable and/or preventable, and it may be associated with a particular "behavioral phenotype" or increased risk for a medical disorder. However, in 58 to 78 percent of youth with mild intellectual disability, and in 23 to 43 percent of youth with severe intellectual disability, no causation is ascertained with current diagnostic techniques (AACAP, 1999). In other cases, numerous causes of intellectual disability have been identified. In general, the milder the severity of intellectual disability, the more difficult it is to identify the etiology (Jellinek, Patel & Froehle, 2002). Among the identified causes of intellectual disability, those most frequently cited include prenatal causes, malformations of unknown causation, external prenatal causes, perinatal causes and postnatal causes (AACAP).

Intellectual Disability and Co-occurring Mental Health Disorders

Several well-constructed, community-based population studies suggest that 35 to 40 percent of children and adolescents with intellectual disability are likely to have a diagnosable mental health disorder as well (Emerson & Hatton, 2007). Children and adults with intellectual disability and mental health disorders may be one of the most underserved populations in the United States (Fletcher, Loschen, Stavrakaki & First, 2007). This can have a significant impact on a child's coping skills and mental health, and it may be one of the primary factors limiting the functioning, quality of life, and adaptation of intellectual disability to community life (Masi, 1998).

A study was conducted with a large, nationally representative sample of British children with and without intellectual disability to ascertain the relationship between mental health disorders and intellectual disability (Emerson & Hatton, 2007). The results of the study indicated that the prevalence of a wide range of mental health disorders was significantly higher among children with intellectual disability. This study was conducted on a combined sample of 18,415 children and revealed that the prevalence of psychiatric disorders was 36 percent among children with intellectual disability versus 8 percent among children without (Emerson & Patton). This study found the prevalence rates of psychiatric disorders for children and adolescents with intellectual

disabilities to be higher among children with intellectual disabilities for 27 of 28 comparisons and statistically significantly elevated for 20 of the 28 comparisons. Additionally, increased prevalence rates were marked for ADHD and conduct disorders, with the latter accounting for approximately two-thirds of all diagnoses among children with intellectual disability. The study also noted that there was a cumulative risk of exposure to social disadvantage with increased prevalence rates for any mental health disorder, including any conduct disorder and ADHD for children with and without intellectual disability. Social disadvantage may include the adverse impact on education, employment, earnings, and increased expenditures related to disability (World Health Organization, 2011). Children with intellectual disability were at significantly greater risk of exposure to all forms of social disadvantage that were examined.

This study contradicts the previously held belief among physicians that ADHD did not occur in children with intellectual disability. As a result of this belief, treatments for ADHD, including stimulant medications, were rarely used to treat children with intellectual disability and ADHD. However, recent research reveals that as many as 25 to 40 percent of children with intellectual disability also have ADHD—significantly more than in the general population (American Academy of Pediatrics, 2012).

The specific levels of intellectual disability appear to be differentially associated with the rates and types of mental health disorders that may be diagnosed. Specifically, psychopathology in individuals diagnosed with mild intellectual disability is associated with psychiatric disorders, while individuals with a profound level of intellectual disability are associated with behavioral issues (Fletcher, Loschen, Stavrakaki, & First, 2007). For individuals with moderate and severe intellectual disability, behavioral and psychiatric disorders are demonstrated to exist at similar rates (Fletcher, Loschen, Stavrakaki & First). Clinicians are faced with certain challenges and acknowledge increased difficulty in diagnosing mental health disorders in individuals with intellectual disability.

Table 2 lists co-occurring mental health disorders and their prevalence rates.

Table 2

Prevalence of Co-occurring Mental Health/Developmental Disorders among Children and Adolescents with or without Intellectual Disability

Co-occurring Disorder	Point Prevalence Rates by Percentage (Percentage children/adolescents with the disability or disorder at a particular time)	
	With Intellectual Disability	Without Intellectual Disability
Any Psychiatric Disorder	36.0	8.0
Any Emotional Disorder	12.0	3.7
Any Anxiety Disorder	11.4	3.2
Any Depressive Disorder	1.4	0.9
Attention Deficit Hyperactivity Disorder (ADHD)	8.3	0.9
Any Conduct Disorder	20.5	4.3
Autism Spectrum Disorder	8.0	0.3
Tic Disorder	0.8	0.2
Eating Disorder	0.2	0.1
Emotional Disorder & Conduct Disorder	4.4	0.8
Conduct Disorder & ADHD	5.8	0.6
Emotional Disorder & ADHD	1.3	0.1
Emotional Disorder & Conduct Disorder & ADHD	0.8	0.1

Source: Emerson & Hatton, 2007.

An accurate psychiatric diagnostic evaluation and diagnosis provide the foundation for effective treatment planning (AACAP, 1999). Such a psychiatric diagnostic evaluation would be sufficiently comprehensive to

identify the child's disabilities and educational needs. Clinicians diagnosing co-occurring mental health disorders in children and adolescents with a "severe" intellectual disability may have to rely more on information obtained from family and other caregivers, including direct behavioral observations of the child in various settings. In general, the assessment of co-occurring mental health disorders in youth with intellectual disability should include the following, as adapted from AACAP:

1. Comprehensive history obtained from child, parents, teachers and other caregivers across different settings (e.g., home and school,). Such a comprehensive history must include information about presenting symptoms with concrete behavioral examples, review of any psychiatric symptoms (e.g., premorbid and current behavioral and personality patterns), adaptive functioning, self-care, communication, social functioning, past psychiatric diagnoses and treatment history, past and current educational and rehabilitative programs history, review of past and current cognitive assessment results, and multiple perspectives on the child's presenting concerns.
2. Interview of the child that is tailored to the youth's needs and ability levels.
3. Medical review, including developmental and medical history, past treatments and coexisting general medical conditions and their treatment and/or prognosis.
4. Diagnostic formulation that takes into account the youth's developmental level, communication skills, associated impairments, familial and socio-cultural factors, and possible abuse.

A separate diagnostic manual was developed to ensure that individuals with intellectual disabilities who present psychiatric symptoms are accurately diagnosed. In 2007, the National Association for the Dually Diagnosed (NADD) published the *Diagnostic Manual-Intellectual Disability (DM-ID): A Textbook of Diagnosis of Mental Disorders in Persons with Intellectual Disability*. The DM-ID offers a description of each disorder, a summary of the DSM-IV-TR diagnostic criteria, a review of the literature and research, an evaluation of the strength of evidence supporting the literature conclusions, a discussion of the etiology, and adaptations of the diagnostic criteria for the intellectual disability population (Hartwell-Walker, 2012).

There is no single "best" treatment for those youth with a co-occurring mental health disorder (King, State & Maerlender, 2005). An underlying assumption in treating co-occurring disorders in youth with intellectual disability is that most youth experience the same complex interaction of biological, psychological and environmental forces which shape mental health disorders (King, State & Maerlender). It is extremely critical that clinicians serving youth with both an intellectual disability and co-occurring mental health disorder employ a comprehensive, multidimensional and multidisciplinary approach.

Most service providers agree that treatment of dual disorders must include a comprehensive plan comprised of four components (National Association of the Dually Diagnosed [(NADD), n.d.]). The first component includes interdisciplinary evaluation of the youth, as noted in previous paragraphs, in order to obtain an accurate diagnosis and to establish habilitation and treatment needs. The second is a thorough medical and neurological evaluation to identify acute or chronic conditions that need attention. The third component consists of a psychiatric evaluation to determine if medication is appropriate. Finally, follow-up interviews are crucial to help monitor the youth's response to the selected treatment approaches (NADD).

As noted by the NADD, medication is appropriate for many mental health disorders, such as mood disorders and psychotic disorders. Medication treatment should not be a total treatment approach but rather part of a comprehensive bio-psycho-social-developmental treatment approach. Individual, group and/or family psychotherapy may also be included in the treatment plan. Verbal psychotherapies are most appropriate for persons with mild to moderate intellectual disability. Behavior management plans are developed to deal with inappropriate behaviors and to teach adaptive skills. A functional analysis of behavior is conducted to determine the best approaches to use in the behavior plan. Systematic behavior programs may be implemented by individuals in the youth's environment. The dually diagnosed youth may participate in the design of the behavioral program.

Many treatment modalities and interventions have been tried, with varying degrees of effectiveness, with youth with intellectual disability (NADD, n.d.). It is considered best practice to use evidence-based treatments. Please refer to the appropriate sections of the *Collection* for additional information on evidence-based and promising treatments for the mental health disorders discussed in this section.

Proven Interventions

The following paragraphs highlight guiding principles in service design and provision to children and adolescents with intellectual disability, regardless of whether they are diagnosed with a co-occurring mental health disorder. Services should contribute to improving the quality of life of individuals with intellectual disability. According to the AACAP (1999), interventions for children and adolescents with intellectual disability are based on several guiding principles: person-centered planning, appropriate education, family training, community integration and transition planning for adulthood. With appropriate personalized supports over a sustained period, the life functioning of youth with intellectual disability generally will improve. However, intellectual disability is a life-long disability (DBHDS, 2009).

Developmental and Educational Services

The Individuals with Disabilities in Education Act (IDEA) (Public Law 94-142, Public Law 99-457, and Public Law 102-119) requires that children with intellectual disability or related developmental disorders receive a free and appropriate education from the time they are born. The requirement for early intervention was enacted in 1986 to ensure that all children with disabilities from birth through the age of two would receive appropriate early intervention services (Infant and Toddler Connection of Virginia, n.d.). This requirement was later incorporated as Part C of IDEA. Early intervention services are based on an evaluation sufficiently comprehensive to identify both the child's disability and educational needs.

In Virginia, the Virginia Department of Behavioral Health and Developmental Services (DBHDS) is the lead agency which administers Part C of IDEA. Virginia's statewide early intervention system is called the Infant & Toddler Connection of Virginia. Infant and toddler services can be home-based, center-based, or a combination. The nature of the services is determined based on an assessment of the child and the family priorities. The services that are provided in response to this plan may include the identification of appropriate assistive technology, intervention for sensory impairments, family counseling, parent training, health services, language services, health intervention, occupational therapy, physical therapy, case management, and transportation to services (Biasini et al., 1999).

Once the child reaches the age of 3, federal law requires that special education programs established by IDEA be made available for the child and family (National Dissemination Center for Children with Disabilities [NICHCY], 2009). As the child gets older, the emphasis on special education programs shifts to training in daily living skills, as well as academic subjects. Interventions also include medical care for any co-occurring physical conditions, such as seizure disorders, motor handicaps, and sensory impairments, as well as treatment of any co-occurring mental disorders and psychosocial dysfunction.

The services provided through IDEA to preschool children and school-aged children are most often provided as home-based, center-based or in naturally occurring environments. An Individualized Education Program (IEP) is developed based on results of the team evaluation and parental input. This plan describes the objectives for improving the child's skills and may include family or parent-focused activities. These services must also be provided in the least restrictive setting possible, but must include a continuum of placements that includes instruction in regular classes, special classes, special schools, home instruction, and instruction in hospitals and institutions.

Behavioral Techniques

An array of therapeutic techniques can be employed to treat mental health disorders in youth with intellectual disability. Of these, the most widely utilized and investigated have been behavioral interventions psychopharmacological interventions, environmentally mediated interventions, and psychotherapy, including individual, group and family-oriented approaches.

Behavioral interventions, including treatments using applied behavior analysis, have a large evidence base (Toth & King, 2010). Behavioral approaches analyze the cause of the behavior (antecedent) and how it is being reinforced. Techniques such as functional communication training (e.g., learning how to request breaks), noncontingent reinforcement (i.e., on a fixed time schedule) and extinction are used to reduce challenging behaviors (aggression, self-injury, task-avoidance) and to promote positive behaviors. Behavioral techniques target skills, deficits and modifications to the individual's environment and are most effective if applied across multiple settings to promote generalization of skills.

The information discussed in the following paragraphs is taken from King, State & Maerlender (2005). Research conducted over the past 20 years has supported the effectiveness of behavioral therapies in managing many of the challenges faced by in children and adolescents with intellectual disability. Behavioral treatments are designed to provide alternatives to unwanted behaviors. One such treatment is positive behavior support. Positive behavioral support involves the assessment and reengineering of environments so youth with problem behaviors experience reductions in their problem behaviors while increasing social, personal and professional quality in their lives. Positive behavior support is the application of behavior analysis and systems change perspectives within the context of person-center values to the intensely social problems created by any accompanying undesirable or maladaptive behaviors. Positive behavior support has 3 primary features: functional (behavioral) assessment, comprehensive intervention, and lifestyle enhancement. A functional literature review found that positive behavior support appeared to be effective in a majority of cases studied, although no long-term quality of life outcomes were reported.

Pharmacological Interventions

Certain issues related to pharmacology have been recognized exclusively in individuals with intellectual disability and co-occurring mental health disorders. Reports of the prevalence of psychotropic medication use in both adults and children with intellectual disability show that over 1/3 of this population served in residential settings is receiving one psychotropic drug (Toth & King, 2010). There is also a lack of specificity about which psychotropic medications are utilized as well as an “off-label” use for the treatment of challenging behaviors, such as aggression and behavioral disturbance (Toth & King). Clinicians have found that medication is often prescribed to children with intellectual disability for symptom suppression without being integrated into the overall plan (AACAP, 1999). The literature repeatedly advises that medication should not be used for the convenience of caregivers or as a substitute for appropriate services. An additional concern is that follow-up behavioral data is infrequently collected and providers often fail to monitor for side effects. This is especially important in children and adolescents with intellectual disability, because these patients may be unable to report symptoms adequately.

It is important to note that the same rules for utilizing pharmacological interventions for children with a diagnosed mental health disorder apply to youth with intellectual disability (Toth & King, 2010). The effects of medication on children with intellectual disability are similar to that expected for the general population (King, State & Maerlender, 2005).

While psychotropic drugs are not often used with children with intellectual disability, they are most often prescribed in children or adolescents who exhibit disruptive behavior, including self-injury, stereotyped behaviors (e.g., hand or finger twisting, or complex whole body movements) and aggression (AACAP, 1999). Recent research suggests that atypical antipsychotics may be a better first choice than typical antipsychotics because of the lower risk of side effects (Rifkin, 2004). This must be considered in light of the fact that there are no studies that address the use of antipsychotics in children or adolescents who are aggressive and psychotic (Rifkin). It is important to note that no professional body has published drug guidelines for patients with intellectual disability. Thus, thorough psychosocial assessment is critical for youth with intellectual disability (Rifkin). Moreover, medications should be prescribed as they would be for the general psychiatric population, with special attention paid to possible behavioral effects and to the child or adolescent’s ability to reliably report possibly dangerous side effects (Silka & Hauser, 1997).

One area that may be regarded as an exception is the treatment of ADHD. Several investigators have demonstrated that stimulants are efficacious in the treatment of accompanying hyperactivity to a degree that matches youth not diagnosed with intellectual disability (King, State & Maerlender, 2005). However, this has been noted more frequently for youth with mild to moderate impairment, rather than for youth with great cognitive disability (King, State & Maerlender).

Discharge Planning

As indicated by Silka & Hauser (1997), appropriate discharge planning is crucial for children with intellectual disability and co-occurring mental health disorders receiving acute or short-term inpatient treatment. Ideally, discharge planning, including plans for outpatient follow-up and the provision of any additional services, should commence early in the process. Early and continual contact with all community supports, including family, school personnel and outpatient therapists, is imperative.

Silka & Hauser (1997) outline three questions to be addressed by the treatment team:

1. What are the objectives?
2. Who is responsible for which service (case manager, family, agency, client, and others)?
3. What are the minimal discharge criteria?

Other Elements for Consideration

Cultural Factors

Any assessment of adaptive behavior focuses on how well children can function and maintain themselves independently and how well they meet the personal and social demands outlined for them by their cultures. Because various cultures may hold their own views regarding the level of functioning/skills expected of children of certain ages, clinicians must be culturally sensitive in diagnosing children with co-occurring mental health disorders and intellectual disability. In addition, the sociocultural background and native language of the child should be considered in assessing intelligence and level of impairment (AACAP, 1999).

Family Involvement

Service providers must make every effort to include the family in all aspects of planning and service delivery for children and adolescents with intellectual disability and co-occurring mental health disorders. They must consider the level of knowledge and understanding of the family regarding the disability of the child, and they must also be sure that the family is sufficiently informed of all service options. If professionals fail to acknowledge parents as partners in the process, they run the risk of alienating them, resulting in a lack of interest or participation in necessary services. Thus, the knowledge and expertise that families already possess about their child and their child's syndrome should be valued (Hodapp, DesJardin & Ricci, 2003). Families of children with less common genetic syndromes become the experts on their child's disorder, frequently being the only ones with experience or knowledge of a particular syndrome (Fidler & Hatton, as cited by Hodapp, DesJardin & Ricci).

Peer Interaction

Successful peer interactions can have significant benefits for youth with intellectual disability. Through social interactions, children and adolescents can learn and practice social skills, develop peer relationships, and receive needed support. Research has shown that increased social competence can positively affect academic achievement and quality of life (Carter & Hughs, 2005; Goldstein et al., 2002; Hartup, 1999, as cited by Toth & King, 2010). A recommended approach for youth with an intellectual disability combines such support-based approaches with skills-based strategies.

Availability of Community Services and Supports

The Arc (formerly the Association for Retarded Citizens), a non-profit organization which supports persons with intellectual disability, has reported that approximately 285,034 children and adults nationwide are on waiting lists for such essential supports and services as service coordination, housing, employment, in-home supports, early intervention, transportation, and respite care (The Arc, 2010). A report by the DBHDS (2009) shows that service availability for children with intellectual disability is also a serious concern in Virginia. In the 2010-2016 Comprehensive State Plan, the DBHDS reported that 1,564 children and adolescents were on the waiting list for intellectual disability services.

In Virginia, individuals with an intellectual disability may be eligible to receive services from Virginia's Medicaid Waivers. The following information about Virginia's Medicaid Waivers is taken from the Virginia Department of Medical Assistance Services (2010). Medicaid Waivers are partnerships between the family support system and Medicaid providers to provide services that allow individuals with intellectual disability to live in their communities rather than reside and receive services in an institution. Virginia has developed the Intellectual Disability Waiver (formerly the Mental Retardation Waiver) to provide home and community-based services to individuals under 6 years of age who are "at developmental risk," and to individuals above 7 years of age diagnosed with intellectual disability who:

1. qualify for institutional care in an Intermediate Care Facility for Individuals with Mental Retardation (ICF/MR);
2. are at imminent risk of ICF/MR placement, and
3. require home and community-based services to live in the community rather than living in an ICF/MR.

Virginia also administers the Day Support Waiver, which provides services to individuals with intellectual disability who are on the waitlist for the Intellectual Disability Waiver. Services are not as comprehensive as those offered through the Intellectual Disability Waiver in that they provide day support, pre-vocational services and supported employment to recipients on the waitlist.

Unfortunately, for both the Intellectual Disability and Day Support Waivers, there are long waiting lists of persons who have already applied. As with all Medicaid-funded services, there are also financial eligibility criteria.

Research indicates that lack of services can exacerbate the problems of youth with intellectual disability, as it may allow for an increase in the severity of the disability or learning delays (The Arc, 2010). Furthermore, lack of services may also lead to greater dependence, isolation and a decrease in self-esteem and productivity. Consequently, providers and policy makers must make every effort to identify these children and provide them with necessary services to ensure that they become productive members of society.

Sources

American Academy of Child and Adolescent Psychiatry (AACAP). (1999). *Summary of the practice parameters for the assessment and treatment of children of children, adolescents, and adults with mental retardation and comorbid mental disorders*, 38 (12), 1606-1610.

American Academy of Pediatrics. (2011). *ADHD: What Every Parent Needs to Know*. [Online]. Available: <http://www.healthychildren.org/English/health-issues/conditions/developmental-disabilities/pages/Intellectual-Disability.aspx>. [July 2012].

American Association on Intellectual and Developmental Disabilities. *Welcome to AAIDD*. (2007). [Online]. Available: http://www.aamr.org/About_AAIDD/name.shtml. [December 2007]. *Not Available February 2010*.

American Psychiatric Association (APA). (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.) (*DSM-IV-TR*). Washington, DC: Author.

Benson, B. (1992). *Teaching Anger Management to Persons with Mental Retardation*. Worthington, OH: IDS Publications Corporation.

Biasini, F., Grupe, L., Huffman, L., & Bray, N. (1999). Mental retardation: A symptom and a syndrome. In S. Netherton, D. Holmes, & C. Walker (Eds.). *Comprehensive Textbook of Child and Adolescent Disorders*. New York: Oxford University Press, in press.

Developmental Disabilities Assistance and Bill of Rights Act Amendments of 1994, P.L. 103-230, Section 101(a)(1).

Emerson, E., & Hatton, C. (2007). Mental health of children and adolescents with intellectual disabilities in Britain. *The British Journal of Psychiatry*, 191, 493-499.

Feinstein, C., & Reiss, A. (1996). Psychiatric disorder in mentally retarded children and adolescents: The challenges of meaningful diagnosis. *Child and Adolescent Psychiatric Clinics of North America*, 5, 827-52.

Fletcher, R., Loschen, E., Stavrakaki, C., & First, M. (Eds.). (2007). *Diagnostic Manual -- Intellectual Disability (DM-ID): A Clinical Guide for Diagnosis of Mental Disorders in Persons with Intellectual Disability*. Kingston, NY: NADD Press.

Fombonne, E. (1997). Epidemiology of autism and related conditions. In Volkmar, F.R., (ed.), *Autism and Pervasive Developmental Disorders*. England: Cambridge University Press, 32-63.

Gale Research. (1998). *Gale Encyclopedia of Childhood and Adolescence*. Mental Retardation.

Harris, J. (1995). *Developmental Neuropsychiatry, Vols. 1-2*. New York: Oxford University Press.

- Hartwell-Walker, M. (2012). The Diagnostic Manual for the Mentally Ill and Intellectually Disabled. *Psych Central*. [Online]. Available: <http://psychcentral.com/lib/2008/diagnostic-manual-intellectual-disability-dm-id-a-textbook-of-diagnosis-of-mental-disorders-in-persons-with-intellectual-disability>. [July 2012].
- Hodapp, R., DesJardin, J., & Ricci, L. (2003). Genetic syndromes of mental retardation: Should they matter for the early interventionist? *Infants & Young Children*, 16 (2), 152-160.
- Hollins, S., Sinason, V., & Thompson, S. (1994). Individual, group, and family psychotherapy. In Bouras, N. (ed.), *Mental Health in Mental Retardation*. New York: Cambridge University Press, 233-43.
- Infant & Toddler Connection of Virginia. (n.d.). *Infant & Toddler Connection of Virginia Overview*. [Online]. Available: <http://www.infantva.org/ovw-WhatsPartC.htm>. [June 2010].
- Jellinek, M., Patel, B., & Froehle, M. (Eds.). (2002). *Bright Futures in Practice: Mental health – Volume 1, Practice Guide*. Arlington, VA: National Center for Education in Maternal and Child Health.
- King, B., State, M., & Maerlender, A. (2005). Mental retardation. In Klykylo, W. & Kay, J. (eds.), *Clinical Child Psychiatry*. Ohio. John Wiley & Sons, 391-413.
- Masi, G. (1998). Psychiatric illness in mentally retarded adolescents: Clinical features. *Adolescence*, 33, 425-35.
- National Dissemination Center for Children with Disabilities (NICHCY). (2009). *Intellectual disabilities – disability fact sheet number 8*. [Online]. Available: <http://www.nichcy.org/Disabilities/Specific/pages/IntellectualDisability.aspx>. [June 2010].
- Penn State Hershey Medical Center. (2011). *Intellectual disability*. [Online]. Available: <http://pennstatehershey.adam.com/content.aspx?productid=117&pid=1&gid=001523>. [February 2013].
- Prader-Willi Association (2010). *What is Prader-Willi syndrome?* [Online]. Available: <http://www.pwsausa.org/syndrome/index.htm>. [June 2010].
- President's Committee for People with Intellectual Disabilities. *Fact Sheet*. (2007). [Online]. Available: http://www.acf.hhs.gov/programs/pcpid/pcpid_fact.html. [December 2007].
- Reid, A. (1993). Schizophrenic and paranoid syndromes in persons with mental retardation: Assessment and diagnosis. In: *Mental Health Aspects of Mental Retardation*, Fletcher RJ, Dosen A, eds. New York: Lexington Books, 98-110.
- Reiss, S. (1994). *Handbook of Challenging Behavior: Mental Health Aspects of Mental Retardation*. Worthington, OH: IDS Publishing.
- Reiss, S., & Benson, B. (1985). Psychosocial correlates of depression in mentally retarded adults: Minimal social support and stigmatization. *American Journal of Mental Deficiency*, 89, 331-37.
- Richardson, S., Koller, H., & Katz, M. (1985). Continuities and change in behavior disturbance: A follow-up study of mildly retarded young people. *American Journal of Psychiatry*, 55, 220-29.
- Rifkin, A. (2004). The use of antipsychotics for patients with mental retardation. *Psychiatric Times*, 34.
- Sattler, J. (1992). *Assessment of Children* (3rd ed.). San Diego: Jerome M. Sattler, Publisher, Inc.
- Silka, V., & Hauser, M. (1997). Psychiatric assessment of the person with mental retardation. *Psychiatric Annals*, 27(3).
- Sparrow, S., Balla, D., & Cicchetti, D. (1984). *Vineland Adaptive Behavior Scales*. Circle Pines, MN: American Guidance Service.

Szymanski, L., & Kiernan, W. (1983). Multiple family group therapy with developmentally disabled adolescents and young adults. *International Journal of Group Psychotherapy*, 33, 521-34.

The Arc. (2010). *National Stop the Wait Campaign*. [Online]. Available: <http://www.stopthewait.org/index.aspx>. [June 2010].

The National Association of the Dually Diagnosed (NADD). (n.d.) *Information on Dual Diagnosis*. [Online]. Available: <http://thenadd.org/resources/information-on-dual-diagnosis>. [July 2012].

Toth, K. & King, B. (2010). Intellectual disability (mental retardation). In Dulcan, M. (ed.), *Dulcan's Textbook of Child and Adolescent Psychiatry*. Washington, D.C., American Psychiatric Publishing Inc., 151-171.

World Health Organization. (2001). *World report on disability*. [Online]. Available: http://whqlibdoc.who.int/publications/2011/9789240685215_eng.pdf. [February 2013].

Virginia Department of Behavioral Health and Developmental Services (VDBHDS). (2009). *Comprehensive State Plan: 2008-2014*. [Online]. Available: <http://www.dbhds.virginia.gov/documents/reports/opd-StatePlan2010thru2016.pdf>. [June 2010].

Virginia Department of Behavioral Health and Developmental Services. (2011). *Comprehensive State Plan 2012 – 2018*. [Online]. Available: <http://www.dbhds.virginia.gov/documents/reports/opd-StatePlan2012thru2018.pdf>. [August 2012].

Virginia Department of Medical Assistance Services. (2010, February). *Virginia Medicaid and long term care services*. Presentation to the Virginia General Assembly House Appropriations Committee, Richmond, VA.

Organizations/Weblinks - National

American Association of Intellectual and Development Disabilities (formerly American Association on Mental Retardation)
4444 North Capitol Street, NW, Suite 846 - Washington, DC 22001-1512
<http://www.aaid.org>

Council for Exceptional Children

Division on Developmental Disabilities
1110 North Glebe Road, Suite 300 - Arlington, VA 22201-5704
<http://www.dddcec.org>

National Down Syndrome Society (NDSS)

666 Broadway, Eighth Floor - New York, NY 10012-2317
<http://www.ndss.org>

National Fragile X Foundation

P.O. Box 190488 - San Francisco, CA 94119
<http://www.fragilex.org>

National Dissemination Center for Children and Youth with Disabilities (NICHCY)

P.O. Box 1492 - Washington, DC 20013
<http://www.nichcy.org>

National Organization on Fetal Alcohol Syndrome

900 17th Street, NW, Suite 910 - Washington, DC 20006

The Arc of the United States (formerly Association for Retarded Citizens)

1010 Wayne Avenue, Suite 650 - Silver Spring, MD 20910
<http://www.thearc.org>

U.S. Department of Education

U.S. Office of Special Education and Rehabilitative Services
400 Maryland Ave., S.W. - Washington, DC 20202-7100

Individuals with Disabilities Education Act (IDEA)

Regulations, News, Information and Resources
<http://idea.ed.gov>

IDEA 2004 Fact Sheet

<http://www.ed.gov/admins/lead/speced/ideafactsheet.html>

U.S. Department of Health and Human Services

Administration for Children and Families
Administration on Developmental Disabilities
Mail Stop HHH 300-F - 370 L'Enfant Promenade, SW - Washington, DC 20447

Virginia Resources**Partnership for People with Disabilities at Virginia Commonwealth University**

700 East Franklin Street, 10th Floor - Richmond, VA 23284
<http://www.vcu.edu/partnership>

Support for Consumer-Run Mental Health Programs in Virginia

<http://www.vocalsupportcenter.org/valinks.htm>

The ARC of Virginia

2025 East Main Street, Suite 120 - Richmond, VA 23223
<http://www.arcofva.org>

Virginia Board for People with Disabilities

Washington Building
1100 Bank Street, 7th Floor - Richmond, VA 23219
<http://www.vaboard.org>

Virginia Department of Behavioral Health and Developmental Services

Office of Developmental Services
P.O. Box 1797 - Richmond, VA 23219
<http://www.dbhds.virginia.gov/ODS-default.htm>

Virginia Department of Education**Office of Special Education**

P.O. Box 2120, Richmond, VA 23218
http://www.doe.virginia.gov/special_ed/index.shtml

Virginia Office for Protection and Advocacy

<http://www.vopa.state.va.us>

Richmond Office
1910 Byrd Avenue, Suite 5 - Richmond, VA 23230

Virginia Beach Office
287 Independence Boulevard - Virginia Beach, VA 23462

Books/Clinical Guides

Fletcher, R., Loschen, E., Stavrakaki, C., & First, M. (Eds.). (2007). *Diagnostic Manual -- Intellectual Disability (DM-ID): A Textbook of Diagnosis of Mental Disorders in Persons with Intellectual Disability*. Kingston, NY: NADD Press.

Fletcher, R., Loschen, E., Stavrakaki, C., & First, M. (Eds.). (2007). *Diagnostic Manual -- Intellectual Disability (DM-ID): A Clinical Guide for Diagnosis of Mental Disorders in Persons with Intellectual Disability*. Kingston, NY: NADD Press.

GENERAL DESCRIPTION OF PROVIDERS

See also “Providers Licensed in Virginia” section.

Psychiatrist

A medical doctor whose education includes a medical degree and at least four additional years of study and training. Psychiatrists are licensed as physicians by their states. Psychiatrists who pass the national examination administered by the American Board of Psychiatry and Neurology become board certified in psychiatry. Psychiatrists provide medical/psychiatric evaluation and treatment for emotional and behavioral problems and psychiatric disorders. As physicians, psychiatrists can prescribe and monitor medications.

Child Psychiatrist

A licensed physician who is a fully trained psychiatrist and who has two additional years of advanced training beyond general psychiatry in work with children, adolescents, and families. Child and adolescent psychiatrists who pass the national examination administered by the American Board of Psychiatry and Neurology become board certified in child and adolescent psychiatry. Child and adolescent psychiatrists provide medical/psychiatric evaluation and a full range of treatment interventions for emotional and behavioral problems and psychiatric disorders. As physicians, child and adolescent psychiatrists can prescribe and monitor medications.

Psychologist

A mental health professional with an advanced degree in psychology. Some psychologists possess a Master's Degree (M.S.) in psychology while others have a Doctoral Degree (Ph.D., Psy.D., or Ed.D.) in clinical, educational, counseling, developmental or research psychology. Psychologists are licensed in most states. Psychologists can provide psychological evaluation and treatment for emotional and behavioral problems and disorders. Psychologists can also provide psychological testing and assessments, but are unable to prescribe medications.

Child Psychologist

A licensed psychologist who specializes in providing psychological services to infants, toddlers, children, and adolescents. A child psychologist is specifically trained to diagnose and treat the psychological, cognitive, emotional, developmental, behavioral, and family problems of children.

Primary Care Physician

A physician, such as a family physician or internist, who has completed medical school, is licensed by a medical board, and is able to prescribe medications. Although a primary care physician is trained to spot mental health problems and often prescribes medications, the primary care physician does not specialize in mental health treatment.

Pediatrician

A primary care physician who focuses on the care of children from birth to 21 years of age and who specializes in preventive health maintenance for healthy children and medical care for those who are seriously or chronically ill. Pediatricians are also increasingly involved with the prevention, early detection, and management of behavioral, developmental, and functional social problems that affect children and adolescents.

Psychiatric Clinical Nurse Specialist

A registered nurse with a Master's Degree in psychiatric mental health nursing who is licensed by the state to provide care, counseling, and therapy to persons with psychological, emotional, and behavioral needs. An accreditation as an Advanced Practicing Registered Nurse (APRN) by an appropriate credentialing body in order for third party reimbursement to be received.

Physician Assistant

A professional who is licensed to practice under the supervision of a physician and who may perform physical examinations, diagnose illnesses and, in most states, write prescriptions. The education program required for licensure is shorter in duration than medical school.

Nurse Practitioner

A nurse who has completed advanced training and who may perform physical examinations, take medical histories, counsel patients, and prescribe certain medications. Nurse practitioners hold national certification in an area of specialty (family practice, psychiatry, pediatrics, etc.), and are licensed through nursing boards. In Virginia, nurse practitioners work under the supervision of licensed physicians.

Occupational Therapist

A professional who has received training in helping people recover and gain or regain skills to promote normal growth and development.

Licensed Clinical Social Worker (L.C.S.W.)

A professional who has earned a degree in social work and has been licensed to provide counseling/therapy to individuals with emotional, psychological, and/or behavioral needs. Some social workers have a bachelor's degree (B.A., B.S.W., or B.S.); however most social workers have earned a Master's Degree (M.S. or M.S.W.). In most states, social workers can take an examination to be licensed as clinical social workers. Social workers provide counseling/therapy to individuals with emotional, psychological, and/or behavioral needs.

Licensed Professional Counselor (L.P.C.)

A professional with a Master's (M.A. or M.S.) or Doctoral Degree who has been licensed to provide counseling to individuals with psychological, emotional, and behavioral needs. L.P.C.'s must obtain supervised clinical experience and must pass a state licensing exam. L.P.C.'s are regulated by federal and state laws, as well as their own code of ethics as developed by various national organizations such as the American Counseling Association. The L.P.C. can be found in private practice, counseling centers, group practices, family service centers, health maintenance organizations (HMOs), hospitals, and government agencies.

Sources

American Academy of Child & Adolescent Psychiatry (AACAP). (2004). *Where to Find Help for Your Child*. [Online]. Available: http://www.aacap.org/cs/root/facts_for_families/where_to_find_help_for_your_child. [September 2010].

National Mental Health Consumers' Self-Help Clearinghouse, Technical Assistance Guide Systems Advocacy. [Online]. Available: http://www.mhselfhelp.org/tehasst/view.php?tehasst_id=13. [September 2010].

P ROVIDERS LICENSED IN VIRGINIA

Mental Health professionals in Virginia are regulated by:

- the Board of Counseling;
- the Board of Psychology;
- the Board of Medicine;
- the Board of Social Work; or
- the Board of Nursing.

Professionals regulated by the Board of Counseling

Certified Substance Abuse Counselors (C.S.A.C.)

Professionals who are certified to perform the substance abuse treatment functions, which generally include screening, intake, orientation, assessment, recovery, and relapse prevention planning, substance abuse treatment, and case management. However, these activities must be conducted under the supervision of a degree-licensed substance abuse treatment practitioner. C.S.A.C.s may also be responsible for supervising certified substance abuse counseling assistants.

Degree held: B.A., along with additional coursework and supervised experience in substance abuse treatment.

Where found: Inpatient substance abuse treatment centers, community services boards, private outpatient mental health, and substance abuse clinics.

Certified Substance Abuse Counseling Assistants

Professionals who are certified to perform the substance abuse treatment functions of orientation, implementation of substance abuse treatment plans, case management, substance abuse or dependence crisis intervention, record keeping, and consultation with other professionals. Certified substance abuse counseling assistants may participate in recovery group discussions, but cannot engage in counseling with either individuals or groups or engage in independent or autonomous practice. They act under the supervision of a licensed substance abuse treatment practitioner or a C.S.A.C.

Degree held: High school diploma or equivalent, along with additional coursework and supervised experience in substance abuse treatment.

Where found: Inpatient substance abuse treatment centers, community services boards, private outpatient mental health, and substance abuse clinics.

Licensed Professional Counselors (L.P.C.)

This is a specific legal license that a psychotherapist, usually at the Master's level of training, can get. Educational and experiential standards to achieve the L.P.C. license are lower than the requirements for Psychologist or Psychiatrist licensure. Not all counselors are L.P.C.s.

Degree held: M.A. or M.S., along with coursework and a supervised residency in counseling and psychotherapy.

Where found: Residential treatment centers, community services boards, private outpatient mental health, and substance abuse clinics.

Professionals regulated by the Board of Counseling *(continued)*

Licensed Substance Abuse Treatment Practitioners

Professionals who are licensed to provide advanced substance abuse treatment and independent, direct and unsupervised treatment to such individuals or groups of individuals, and to plan, evaluate, supervise, and direct substance abuse treatment provided by others.

Degree held: M.A. or M.S., along with additional coursework and a supervised residency in substance abuse treatment.

Where found: Inpatient substance abuse treatment centers, community services boards, private outpatient mental health, and substance abuse clinics.

Marriage and Family Therapists

Persons trained in the assessment and treatment of cognitive, affective, or behavioral, mental and emotional disorders within the context of marriage and family systems through the application of therapeutic and family systems theories and techniques.

Degree held: M.A. or M.S., additional coursework and a supervised residency in marriage and family counseling.

Where found: Community services boards, private outpatient mental health and substance abuse clinics, private practice.

Professionals regulated by the Board of Psychology

Certified Sex Offender Treatment Providers

These are psychologists who specialize in providing sex offender treatment services.

Degree held: M.A., Ph.D., Psy.D., M.D., with additional coursework and supervision in sex offender treatment.

Where found: Residential treatment centers, therapeutic group homes, community services boards, private outpatient mental health clinics.

Clinical Psychologists

These are psychologists who specialize in the practice of psychotherapy in individual, family, marital, and group settings.

Degree held: Ph.D., Psy.D.

Where found: Psychiatric hospitals, residential treatment centers, community services boards, private outpatient mental health and substance abuse clinics, private practice.

School Psychologists

These are psychologists who are specifically licensed to practice in a school setting.

Degree held: M.A. with an endorsement in psychology.

Where found: Public and private schools, special education residential schools, special education day schools, therapeutic day treatment centers.

Professionals regulated by the Board of Medicine

Psychiatrists

These are medical doctors or physicians. Psychiatrists are experts in the use of medications to treat mental disorders and also experts in the diagnosis and treatment of mental health disorders.

Degree held: M.D., as well as completion of a multi-year residency in psychiatry (treatment of mental illness), usually in a hospital setting and under supervision of senior psychiatrists.

Where found: Hospitals (regular and psychiatric), community services boards, private outpatient mental health clinics, private practice.

Professionals regulated by the Board of Social Work

Licensed Clinical Social Worker (L.C.S.W.)

These are social workers who, by education and experience, are professionally qualified at the autonomous practice level to provide direct diagnostic, preventive, and treatment services that may include psychotherapy and counseling for mental disorders, substance abuse, marriage and family dysfunction, and problems caused by social and psychological stress or health impairment.

Degree held: M.S.W. or D.S.W., along with supervised experience in a treatment setting.

Where found: Local social service agencies, hospitals (both regular and psychiatric), residential treatment centers, group homes, community services boards, private outpatient mental health and substance abuse clinics.

Licensed Social Workers

These are persons who are trained to provide diagnostic, preventive, and treatment services, but on a supervised rather than independent basis.

Degree held: B.A. or M.S.W., along with supervised experience in a treatment setting.

Where found: Local social service agencies, hospitals (both regular and psychiatric), residential treatment centers, group homes, community services boards, private outpatient mental health, and substance abuse clinics.

Professionals Regulated by the Board of Nursing

Psychiatric Clinical Nurse Specialist

A registered nurse with a Master's Degree in psychiatric mental health nursing who is licensed by the state to provide care, counseling, and therapy to persons with psychological, emotional and behavioral needs. An accreditation as an Advanced Practicing Registered Nurse (A.P.R.N.) by an appropriate credentialing body is necessary for this provider to receive third party reimbursement.

Degree held: R.N. and Master's Degree in Psychiatric/Mental Health Nursing

Where found: Psychiatric hospitals, community services boards, private outpatient mental health clinics, and private practice.

Professionals Regulated by the Board of Nursing and the Board of Medicine

Nurse Practitioner

Nurse practitioners engage in the practice of medicine in collaboration and under the medical direction and supervision of a licensed physician. "Medical direction" means the collaborative development of a written protocol between the nurse practitioners and the physician. Nurse practitioners with prescriptive authority may prescribe within the scope of a written practice agreement in Virginia is regulated by the Board of Nursing and the Board of Medicine under a Committee of the Joint Boards. Nurse practitioners hold national certification in an area of specialty (family practice, psychiatry, pediatrics, etc.).

Degree held: R.N. and Master's Degree in Nursing with Nurse Practitioner Concentration and certification from a national board.

Where found: Psychiatric hospitals, community services boards, private outpatient mental health clinics, and private practice.

T ERMS USED IN

VIRGINIA'S MENTAL HEALTH DELIVERY SYSTEM

504 Plan – An individualized plan developed for a student with a disability that specifies what accommodations and/or services they will receive in school to "level the playing field" so that they may derive as much benefit from their public educational program as their nondisabled peers. The plan follows from the requirements of Section 504 of the Rehabilitation Act of 1973, and also applies to extracurricular activities and non-student situations such as employment. Section 504 applies to all public entities receiving federal monies or federal financial assistance.

Acetylcholine – Often abbreviated *Ach*, this chemical compound is one of many neurotransmitters in both nervous systems.

Acute – Refers to an intense illness or affliction of abrupt onset.

Adaptive – An individual's effectiveness in functioning at an age-appropriate level.

ADIS-C/P – Anxiety Disorders Interview Schedule for DSM-IV: Child and Parent Version.

Adjustment Disorder – A disorder which occurs when a child experiences emotional and behavioral symptoms of depression and/or anxiety that is clearly in response to an identifiable stressor or stressors. The diagnosis of Adjustment Disorder is most appropriate when the child is experiencing distress above the normal amount that might be expected in response to stressor(s) and/or when the stressor(s) cause school grades to drop or impede daily activities. See "*Adjustment Disorders*" section.

Advanced Practice Registered Nurse (APRN) – A registered nurse who has earned either a Master's or Doctoral Degree in order to specialize in psychiatric nursing. An APRN can provide the full range of psychiatric care services to individuals, families, groups, and communities, function as psychotherapists, and in most states they have the authority to prescribe medications. Psychiatric-mental health nurses in advanced practice are qualified to practice independently. Some APRNs practice consultation/liaison nursing, delivering direct mental health services to physically ill patients or consultation to staff in general medical settings. See "*General Description of Providers*" and "*Providers Licensed in Virginia*" sections.

Affective Disorder – A mental disorder not caused by detectable organic abnormalities of the brain characterized by a consistent, pervasive alteration in mood, and affecting thoughts, emotions, and behaviors.

Age Appropriate – At the right level for the chronological (actual) age of the child.

Anecdotal Evidence – An informal account of evidence, often in the form of hearsay. Used in contrast to scientific evidence, especially evidence-based medicine.

Anhedonia – Inability to experience pleasure from activities and play.

Anticonvulsant – Drug designed to prevent the seizures or convulsions typical of epilepsy or other convulsant disorders, but also used for bipolar disorder.

Anxiolytic – Any drug used in the treatment of anxiety.

Anxiety Disorder – Disorder characterized by worries or fears that become exacerbated to the point of causing significant impairment in the child's functioning. When their fears do not fade and begin to interfere with the child or adolescent's daily life and activities, an anxiety disorder may be present, and parents should promptly seek the evaluation of their child or teen by a physician. See "*Anxiety Disorders*" section.

Anorexia Nervosa – Eating disorder characterized by low body weight (less than 85 percent of normal weight for height and age), a distorted body image, and an intense fear of gaining weight. See “*Maladaptive Behaviors, Eating Disorders*” section.

Anti-depressants – Medications used in the treatment of depression, as well as other psychiatric disorders.

Antipsychotics – Medications commonly used in medical and psychiatric practices to treat positive psychotic symptoms (e.g., hallucinations, bizarre behavior, delusions) regardless of diagnostic category. There are two classes of antipsychotics: typical antipsychotics (neuroleptics) and newer agents’ atypical antipsychotics (e.g., risperdone and clzapine) with fewer side effects.

Asperger’s Syndrome – A disorder on the autism spectrum characterized by problems in development of social skills and behavior and is commonly recognized after the age of three. The *DSM-IV* classification defines Asperger’s on the basis of the presence of qualitative impairments in social interaction like those observed in autism, but without the significant delay in language or cognitive behavior. See “*Autism Spectrum Disorders*” section.

Assessment – A professional review of the child and family’s needs conducted when they first seek services from a caregiver. It typically includes a review of physical and mental health, intelligence, school performance, family situation, and behavior in the community. The assessment identifies the strengths of the child and family. Together, the service provider and family decide what kind of treatment and supports, if any, are needed.

Assistive Technology – Any item, piece of equipment or product system, whether acquired commercially off the shelf, modified, or customized, which is used to increase, maintain, or improve the functional capabilities of children with disabilities.

Attention Deficit Hyperactivity Disorder (ADHD) – Behavior disorder, usually first diagnosed in childhood that is characterized by inattention, impulsivity and, in some cases, hyperactivity. See “*Behavior Disorders, Attention Deficit Hyperactivity Disorder*” section.

At Risk of Serious Emotional Disturbance (SED) – Children through the age of seven are considered at risk of developing serious emotional disturbances if they meet at least one of the following criteria:

- 1) The child exhibits behavior or maturity which is significantly different from most children of that age and which is not primarily the result of developmental disabilities or mental retardation; or
- 2) Parents, or persons responsible for the child’s care, have predisposing factors themselves that could result in the child developing serious emotional or behavioral problems (e.g., inadequate parenting skills, substance abuse, mental illness, or other emotional difficulties); or
- 3) The child has experienced physical or psychological stressors that have put him or her at risk for serious emotional or behavioral problems (e.g., living in poverty, parental neglect, physical or emotional abuse).

See also “*Serious Emotional Disturbance*” definition.

Autism – A lifelong developmental disability that typically appears during the first three years of life. A child with autism appears to live in his/her own world, showing little interest in others, and a lack of social awareness. Autistic children often have problems in communication, avoid eye contact, and may show limited attachment to others. No known factors in the psychological environment of a child have been shown to cause autism. See “*Autism Spectrum Disorders*” section.

Autonomic Nervous System Activation – The autonomic nervous system controls involuntary actions, such as heartbeat and the widening or narrowing of blood vessels.

Autosomal Dominant Disorder – A disorder caused by a dominant mutant gene on an autosome, i.e., genetic defect. See “*Habit Disorders*” section.

Behavior Therapy – A form of psychotherapy in which a therapist analyzes a person’s problematic behavior in terms of what reinforces or punishes that behavior. The behavioral therapist will systematically alter the reinforcers or punishers to get the person to change their behaviors. Behavior therapy has been adapted over

the years to create Cognitive Behavioral Therapy (CBT), which looks at the role of both thinking (cognition) and behavior in the context of human problems.

Behavioral Classroom Management (BCM) – Teacher-implemented behavior modification strategies including reward programs, point systems, and time-outs.

Behavior Intervention Plan (BIP) – A formalized plan that targets specific behaviors for alteration and that follows a functional behavioral assessment. Usually appended to a student's individualized educational plan, a public school must attempt such a plan before changing a student's placement to a more restrictive environment (unless there is an emergency situation). The plan is supposed to be based on positive inducements, if possible. A behavior intervention plan should also include the environmental or proactive changes the staff will make to decrease the likelihood of the undesirable behavior or symptom.

Behavioral Health Authorities (BHAs) – Agencies functioning in the same capacity and operating under the same requirements as community services boards.

Behavioral Parent Training (BPT) – Technique for teaching management and discipline skills which extends treatment from the therapist's office to the home

Beta-blocker – Agent inhibiting the action of beta-adrenergic receptors, which modulate cardiac functions, respiratory functions, and the dilation of blood vessels. Beta-blockers are of value in the treatment of hypertension, cardiac arrhythmias, and migraine. In psychiatry, they are used in the treatment of aggression and violence, anxiety-related tremors and lithium-induced tremors, social phobias, panic states, and alcohol withdrawal.

Binge Eating Disorder (BED) – Disorder resembling bulimia nervosa and which is characterized by episodes of uncontrolled eating. It differs from bulimia, however, in that its sufferers do not purge their bodies of the excess food via vomiting, laxative abuse, or diuretic abuse. *See "Maladaptive Behaviors, Eating Disorders" section.*

Biofeedback – A technique for controlling bodily functions usually thought to be involuntary (not under conscious control). The procedure utilizes electronic equipment to monitor continuously some feature of physiological response (e.g., heart rate, breathing, or muscle tension) and convert the measurements into signals which a person can easily perceive.

Biochemical Treatment – Treatment including such biochemicals as vitamins, minerals, and amino acids which is a complement, rather than an alternative, to traditional drug therapies.

Biological Factors – Genetic and neurological components in the context of mental health disorders.

Bipolar Disorder – A mood disorder causing a child's moods to swing between states of depression (low mood and energy) and mania (heightened elevated, ecstatic mood, and energy). *See "Pediatric Bipolar Disorder".*

Body Image – One's sense of the self and one's body.

Borderline Personality Disorder (BPD) – Pattern of behavior characterized by impulsive acts, intense but chaotic relationships with others, identity problems, and emotional instability.

Broadband Tool – A general screening tool, opposite of narrowband tool, which targets a specific disorder.

Bulimia Nervosa – Pattern of behavior in which the individual eats excessive quantities of food and then purges the body by using laxatives, enemas, or diuretics, vomiting, and/or exercising. *See "Maladaptive Behaviors, Eating Disorders" section.*

Case Management – Service that assists children and their families in identifying and accessing services that meet their individual needs. The primary purpose of case management is to ensure that the needed services are delivered in an effective and efficient manner. The activities of a case manager may include identifying and reaching out to individuals in need of assistance, assessing needs and planning services, linking the individual

to supports and services, coordinating services with other providers, monitoring service delivery, and advocating for these children in response to their changing needs. Case management services are typically provided by community services boards, private clinics, and social services agencies.

Case Manager – Health care professional who works directly with clients, coordinates various activities, and acts as the clients' primary contact with other members of their treatment teams. Case managers are often social workers.

Catatonia – A cluster of motor features, including rigid posture, fixed staring, and stupor, which manifest in a variety of mental health disorders.

Causal Relationship – Experimental research determines that one variable truly causes change(s) in another variable.

Certified Sex Offender Treatment Provider – Psychologist specializing in providing sex offender treatment services.

Type of degree held: M.A., Ph.D., Psy.D., M.D., with additional coursework and supervision in sex offender treatment.

Where they can be found: Residential treatment centers, therapeutic group homes, community services boards, private outpatient mental health clinics.

See “General Description of Providers” and “Providers Licensed in Virginia” sections.

Certified Substance Abuse Counseling Assistant – A professional certified to perform the substance abuse treatment functions of orientation, implementation of substance abuse treatment plans, case management, substance abuse or dependence crisis intervention, record keeping, and consultation with other professionals. A certified substance abuse counseling assistant may participate in recovery group discussions, but cannot engage in counseling with either individuals or groups or engage in independent or autonomous practice. They act under the supervision of a licensed substance abuse treatment practitioner or a CSAC.

Type of degree held: High School Diploma or equivalent, along with additional coursework and supervised experience in substance abuse treatment.

Where they can be found: Inpatient substance abuse treatment centers, community services boards, and private outpatient mental health and substance abuse clinics.

See “General Description of Providers” and “Providers Licensed in Virginia” sections.

Certified Substance Abuse Counselor (CSAC) – A professional certified to perform the substance abuse treatment functions, which generally include screening, intake, orientation, assessment, recovery and relapse prevention planning, substance abuse treatment, and case management. However, these activities must be conducted under the supervision of a licensed substance abuse treatment practitioner. A CSAC may also be responsible for supervising certified substance abuse counseling assistants.

Type of degree held: B.A., along with additional coursework and supervised experience in substance abuse treatment.

Where they can be found: Inpatient substance abuse treatment centers, community services boards, and private outpatient mental health and substance abuse clinics.

See “General Description of Providers” and “Providers Licensed in Virginia” sections.

Chelation Therapy – Administration of chelating agents to remove heavy metals from the body.

Children's Advocacy Center – A model for investigation and intervention in child abuse cases. A facility-based, child-friendly, multidisciplinary approach to the investigation, treatment, and prevention of child abuse cases is utilized.

Child and Adolescent Psychiatrist – Licensed physician (M.D. or D.O.) specializing in the evaluation, diagnosis, and treatment of mental disorders in children and adolescents. Their medical and psychiatric training with children and adolescents prepares them to treat children and adolescents either individually, as part of and involving the family unit, and/or in a group setting. Child and adolescent psychiatrists can prescribe medications, if needed. *See “General Description of Providers” and “Providers Licensed in Virginia” sections.*

Chronic – A term used to describe long-term persistence. In some mental health disorders, *chronic* is specified as persisting for six months or longer.

Clinical Psychologist – A psychologist specializing in the practice of psychotherapy in individual, family, marital, and group settings.

Type of degree held: Ph.D., Psy.D.

Where they can be found: Psychiatric hospitals, residential treatment centers, community services boards, private outpatient mental health and substance abuse clinics, private practice.

See “General Description of Providers” and “Providers Licensed in Virginia” sections.

Clinical Trials/Studies – Research studies designed to test how well new medical approaches work and to answer scientific questions about better ways to prevent, screen for, diagnose or treat a disease. They may also compare a new treatment to a treatment that is already available. Every clinical trial has a protocol, or action plan; the plan describes the trial’s goal and how it will be conducted. An independent committee of physicians, statistician, and members of the community must approve and monitor the protocol and ensure that risks are worth the potential benefits.

Cognitive Behavioral Therapy (CBT) – A form of psychotherapy that helps people learn to change inappropriate or negative thought patterns and behaviors associated with their illness. The goal is to recognize negative thoughts or mind-sets (mental processes such as perceiving, remembering, reasoning, decision making, and problem solving) and replace them with positive thoughts, which will lead to more appropriate and beneficial behavior. For instance, Cognitive Behavioral Therapy tries to replace thoughts that lead to low self-esteem (“I can’t do anything right.”) with positive expectations (“I can do this correctly.”).

Cognitive Impairment – Poor mental function which affects the ability to think, concentrate, formulate ideas, reason, and remember. It is distinct from a learning disability insofar as it may have been acquired later in life as a result of an accident or illness.

Community-based Care – Care and supports rendered outside the institutional setting. Treatment is provided where the child lives, works, and plays. It may be a school or home.

Community Policy and Management Teams (CPMTs) – These are teams that operate under the Comprehensive Services Act to coordinate agency efforts, manage available funds, and see that eligible youths and their families get the assistance they need. The CPMTs coordinate long-range, community-wide planning which ensures the development of resources and services needed by children and families in their community. CPMTs establish policies governing referrals and reviews of children and families to the Family Assessment and Planning Teams (FAPTs). Each CPMT establishes and appoints one or more FAPT based on the needs of the community. CPMTs also authorize and monitor the use of funds by each FAPT. The CPMT includes a representative from the following community agencies: Community Services Board, Juvenile Court Services Unit, Department of Health, Department of Social Services, and the local school division. The team also includes a parent representative and a private provider organization representative for children or family services, if such organizations are located within the locality.

Community Services Boards (CSBs) – These agencies serve as the single point of entry into the publicly-funded mental health system. They provide comprehensive mental health, developmental, and substance abuse services. There are 39 CSBs throughout the Commonwealth. Because these agencies are affiliated with local governments, there is tremendous variation in the number and types of services offered by each. However, CSBs usually provide certain core services: crisis intervention services, local inpatient services, outpatient services, case management, day support, residential services, and early intervention services.

Comorbidity – A condition in which a child is diagnosed with more than one disorder at the same time.

Complex Trauma – Child’s experiences of multiple traumatic events that occur within the caregiving system, where safety and stability would be expected.

Comprehensive Services Act for At-Risk Youth and Families (CSA) – Virginia law creating a collaborative system in which state and local agencies work together and draw on the same pool of funds to plan and provide services for at-risk youth. The purpose of the act is to provide high quality, child centered, family

focused, cost effective, community-based services to high-risk youth and their families. In each community, local teams decide how to do this. There are two primary teams that operate under the CSA are the Family Assessment and Planning Teams (FAPTs) and Community Policy and Management Teams (CPMTs).

Conduct Disorder (CD) – Children with CD exhibit persistent and critical patterns of misbehavior. These children may indulge in frequent temper-tantrums like children with oppositional defiant disorder; however, they also violate the rights of others (Center for the Advancement of Children’s Mental Health at Columbia University, 2000). Disordered behaviors include aggression towards people or animals, destruction of property, deceitfulness, theft or serious violation of rules (Murphy, et al., 2001). See “*Behavior Disorders, Oppositional Defiant & Conduct Disorders*” section.

Consolidated Omnibus Budget Reconciliation Act (COBRA) – Federal legislation requiring employers to allow former employees to continue their insurance coverage up to 18 months (three years for divorced or separated spouse and children). The insured must reimburse the employer for the cost of the coverage, plus up to 5 percent in administrative fees.

Contamination Obsessions – Compulsion characterized by intrusive thoughts about catching a disease from touching a surface, which leads to compulsive grooming or hand-washing.

Contingency Management Strategies – Strategies employ reward systems which are designed to provide reinforcements to increase desired behaviors, e.g., following directions, attentiveness, or turn-taking.

Continuum of Care – Term that implies a progression of services that a child would move through, probably one at a time. The more up-to-date idea is one of comprehensive services. See “Systems of Care and Wraparound Services” definition.

Contraindicated – To indicate the inadvisability of a medical treatment.

Co-occurring Disorder (COD) – Refers to co-occurring substance-related and mental disorders. Clients said to have COD have one or more substance-related disorders as well as one or more mental disorders. The definition of a person with COD (individual-level definition) must be distinguished from a person who requires COD services (service definition). At the individual level, COD exist .when at least one disorder of each type can be established independent of the other and is not simply a cluster of symptoms resulting from [a single] disorder. (CSAT, 2005, p. 3).

Coprolalia – Vocal tic activity that usually involves loud grunting, but may also include word shouting, with the words sometimes being obscenities. See “*Habit Disorders*” section.

Cortex – The outer layer of the vertebrate cerebrum which controls voluntary motor and visual functions. This part of the brain plays a key role in memory, attention, perceptual awareness, thought, language and consciousness. *Also referred to as cerebral cortex.*

Cortisol – Hormone often associated with stress.

Counseling – A service that incorporates care consultation, evaluation, and outpatient treatment to those experiencing concerns about their mental health.

Court Service Units (CSU) – Local agencies operated by the Department of Juvenile Justice which serve as gatekeepers for children and families served by the local Juvenile and Domestic Relations Court. These units are responsible for handling petitions, intakes, investigations and reports, custody investigations, and probation supervision.

CREB – Gene linked to alcohol addiction, as well as anxiety-like behaviors.

Crisis Intervention (Emergency) Services – 24-hour services that may be provided in either residential or nonresidential settings. They are short term interventions designed for children and adolescents who are basically well-functioning but experience periodic crisis, or who have problems that are more serious and are prone to acute episodes which require special services. The underlying goal of these services is to assist the

child and family in resolving the situation so that inpatient hospitalization is unnecessary. Nonresidential crisis services include telephone hotlines, walk-in crisis intervention services, mobile crisis outreach services, and intensive home-based interventions. Residential services include runaway shelters, crisis stabilization units, and temporary placements in programs such as therapeutic foster care and crisis group homes. Treatment typically includes evaluation and assessment, crisis intervention and stabilization, and follow-up planning. To the extent possible, families are included in all phases of the treatment. These programs are typically provided by community services boards, private clinics and providers, and psychiatric hospitals.

Cultural Competence – Sensitivity and responsiveness to cultural differences. Caregivers are aware of the impact of their own culture and possess skills that help them provide services that are culturally appropriate in responding to people's unique cultural differences, such as race and ethnicity, national origin, religion, age, gender, sexual orientation, or physical disability. They adapt their skills to fit a family's values and customs.

Cycling – A repeated, sequential event which can cycle from up to down or vice versa. May be used in reference to mood swings.

Cyclothymic Disorder – Mild form of bipolar disorder which is a chronic mood disorder causing emotional ups and downs.

Daily Report Card – One strategy of behavioral classroom management, which provides feedback to parents and/or the therapist about target behaviors and bridges efforts from therapy to home-based interventions.

Day Treatment Services – See *“Therapeutic Day Treatment” definition.*

Day Support Waiver – Services provided to individuals in Virginia who are on the waitlist for Intellectual Waiver. Services may include day support, pre-vocational services and supported employment.

Delusion – A fixed false belief that is resistant to reason or confrontation with actual fact.

Department of Behavioral Health and Development Services (DBHDS) – Formerly the Department of Mental Health, Mental Retardation and Substance Abuse Services (DMHMRSAS), the Department's name was changed by the 2008 Virginia General Assembly

Depression – A depressive disorder characterized by extreme feelings of sadness, lack of self-worth, and dejection. See *“Depression and Dysthymia” section.*

Developmental Disabilities – A group of conditions caused by an impairment in physical, learning, language, or behavior areas. These conditions begin during the developmental period, may impact day-to-day functioning, and usually last throughout a person's lifetime.

Diagnostic and Statistical Manual of Mental Disorders Revised (DSM-IV) – Official manual listing psychiatric and psychological disorders, published by the American Psychiatric Association in 1994 and recognized by the insurance industry as the primary authority for the diagnosis of mental disorders.

Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR) – Revision of the fourth edition of the manual published by the American Psychiatric Association in 2000, replacing the *DSM-IV*.

Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition – Revision of the fourth edition, text revision, of the manual published by the American Psychiatric Association. The DSM-5 will replace the DSM-IV and is scheduled for release in May 2013.

Diagnostic Assessment – A formal process by which a problem or problems are identified and/or measured.

Dialectical Behavioral Therapy (DBT) – A cognitive-behavioral treatment approach with two key characteristics: a behavioral, problem-solving focus blended with acceptance-based strategies, and an emphasis on dialectical processes. "Dialectical" refers to the issues involved in treating patients with multiple disorders and to the type of thought processes and behavioral styles used in the treatment strategies. DBT

emphasizes balancing behavioral change, problem-solving, and emotional regulation with validation, mindfulness, and acceptance of patients.

Dietary Supplement – A product taken by mouth that contains an ingredient intended to supplement the diet. Ingredients may include, but are not limited to, vitamins, minerals, herbs or other botanicals, amino acids, and substances such as enzymes, organ tissues, glandulars, etc. Dietary supplements are placed in a special category under the general umbrella of foods, not drugs.

Disassociation – Detachment of mind from emotion.

Discharge Plan – Document which identifies relevant features of admission including diagnosis, clinical course while admitted, and results of relevant investigations. Additionally, lists required elements for the ongoing treatment and medical care and maintenance of the patient which are to occur post-discharge.

Disruptive Disorders – These disorders are the most common reasons children are referred for mental health evaluations and treatment. Disruptive disorders include mental health problems with a focus on behaviors that both identify emotional problems and create interpersonal and social problems for children and adolescents in the course of their development. Conduct disorder and oppositional defiant disorder are two classes of disruptive disorders. Attention deficit hyperactivity disorder is also considered a disruptive disorder. See *“Behavior Disorders, Oppositional Defiant & Conduct Disorders”* section.

Dopamine – A neurotransmitter formed in the brain by the decarboxylation of dopa and essential to the normal functioning of the central nervous system.

Double-blind Study – A study in which neither the researchers nor the participants know the treatment each participant has received, the goal being to more nearly guarantee an objective conclusion.

Dual Diagnosis – A term typically used to describe those individuals who suffer from both mental health disorders and substance abuse. This term is also used to describe the double challenges faced by individuals diagnosed with both a developmental disability and a mental health disorder. In either context, a dual diagnosis may cause significant clinical impairment and places an additional burden upon these youth and their families.

Dysfunction – Abnormal or impaired functioning, especially of a bodily system or social group.

Dyslexia – Inability or difficulty in reading, including word-blindness and a tendency to reverse letters and words in reading and writing.

Dysthymia – Mood disorder that often resembles a less severe, yet more chronic form of major depression. However, persons with dysthymia may also experience major depressive episodes at times. See *“Depression and Dysthymia”* section.

Early Intervention Services – Services intended to improve functioning or change behavior in children identified as experiencing problems, symptoms, or behaviors. The goal is to improve the child’s behaviors in order to prevent a future need for more extensive treatment. This approach also includes infant and toddler intervention, which provides family-centered, community-based early intervention services designed to meet the developmental needs of infants and toddlers and their families to enhance the child’s development and to prevent or minimize the potential for developmental delays. These types of services are most often provided by social service agencies, community services boards, pediatricians and nurses in health clinics, and schools.

Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) – Early and Periodic Screening, Diagnosis, and Treatment, Medicaid’s comprehensive and preventive child health program for individuals under the age of 21. The EPSDT program covers screening and diagnostic services to determine physical or mental defects in recipients and health care, treatment, and other measures to correct or ameliorate any defects and chronic conditions discovered. Services include health and developmental history screening, immunization, nutritional status assessment, vision and hearing testing, dental services for children three years and older, and visual treatment including eyeglasses.

Eating Disorders – Refers to a variety of disorders characterized by abnormal eating behaviors, which are serious mental health disorders and can be life threatening. See *“Maladaptive Behaviors, Eating Disorders” section.*

Echolalia – The involuntary parrot-like repetition (echoing) of a word or phrase just spoken by another person. Echolalia is a feature of schizophrenia (especially the catatonic form), Tourette syndrome, and some other disorders.

Echopraxia – The involuntary imitation of the movements of another person. Echopraxia is a feature of schizophrenia (especially the catatonic form), Tourette syndrome, and some other neurologic diseases.

Efficacious – Producing, or capable of producing, a desired effect.

Efficacy – Studies are directed at establishing how well a particular intervention works in the environment and under the conditions in which treatment is typically offered.

Electroconvulsive Therapy (ECT) – A treatment method usually reserved for very severe or psychotic depressions or manic states that often are not responsive to medication treatment. A low-voltage alternating electric current is sent to the brain on an anesthetized patient to induce a convulsion or seizure, which has a therapeutic effect.

Emergency Services – See *“Crisis Intervention Services” definition.*

Empirical – Capable of being verified or disproved by observation or experiment.

Episodic – Reflecting a series of episodes.

Ethnopharmacology – Treatment acknowledging racial and ethnic variation in pharmacokinetics, Asians and Hispanic children with schizophrenia may require lower doses of antipsychotics than Caucasians to achieve the same blood levels. Although knowledge in this area is scant, cultural patterns should be considered in prescription practices.

Etiology – A process that describes how a problem or diagnosis developed to its current condition. It typically answers the question “how did the child get that way?”

Evidence-based – Programs that have undergone scientific evaluation and are proven to be effective. See *“Evidence-based Treatment Section.”*

Executive Functioning – Describes the cognitive system that helps connect past experiences. Executive function governs the ability to do abstract thinking, role acquisition, and initiating both appropriate and inappropriate behaviors.

Exposure Therapy – A form of psychotherapy in which a patient is deliberately exposed to the problem or event that triggers psychological problems under controlled conditions. The patient is then taught techniques to avoid performing the compulsive rituals or to work through the trauma.

Family Access to Medical Insurance Security (FAMIS) – Virginia’s Title XXI Plan that helps families provide health insurance to their children.

Family Assessment and Planning Teams (FAPTs) – Local teams which operate through the Virginia Comprehensive Services Act. The purpose of the team is to assess the strengths and needs of troubled youths and families who are approved for referral to the team and identify and determine the services that are necessary to meet these unique needs. They are responsible for developing an individual family services plan (IFSP) for youths and families reviewed by the team that provides for appropriate and cost-effective services, and for monitoring the child’s progress under this plan. Members of the team include parents as well as staff from local agencies including the community services board, court service unit, Department of Social Services, Department of Health, schools, and private providers. Children and adolescents may be referred to the FAPT teams from any of these agencies, and they receive services based on available funding.

Family Preservation Services – See *“Home-Based Services” definition.*

Family Support Services – Services that are designed to assist families in dealing with the pressures and demands of raising children with severe emotional disturbance. A variety of services are provided to assist families in achieving balanced lives, including respite care, family self-help, support, advocacy, and assistance with financial or family survival needs (food, housing, transportation, home maintenance). Family support services may also include providing caregivers with the necessary education, information, and referrals to ensure that they are informed decision-makers. These services are typically provided by social service agencies, community services boards, and private agencies and organizations.

Familial – Tending to occur in more members of a family than expected by chance alone.

Family Systems Therapy – A form of psychotherapy that focuses on how a child interacts with his/her most important social environment, the family. The underlying premise of the therapy is that the child’s problems are best understood by observing how they fit into the larger scheme of relationships among the members of the family group.

Fetal Alcohol Syndrome – Condition affecting the children of mothers who consume large quantities of alcohol during pregnancy; it can involve cognitive delays, attention difficulties, and physical and emotional disability. Deficits range from mild to severe, including growth retardation, brain damage, mental retardation, anomalies of the face, and heart failure.

Free Appropriate Public Education (FAPE) – A statutory requirement of the Individuals with Disabilities Act that specifies that children and youth with disabilities receive a public education appropriate to their needs, at no cost to their families.

Functional Family Therapy (FFT) – A family-based prevention and intervention program that combines and integrates established clinical therapy, empirically supported principles, and extensive clinical experience.

Generalized Anxiety Disorder (GAD) – Mental disorder characterized by chronic, excessive worry and fear that seems to have no real cause. Children or adolescents with generalized anxiety disorder often worry a lot about things such as future events, past behaviors, social acceptance, family matters, their personal abilities, and/or school performance. See *“Anxiety Disorders” section.*

Gliadin – Wheat gluten.

Global Trauma – Trauma affecting many individuals, e.g., earthquake, war.

Group Homes – See *“Therapeutic Group Homes” definition.*

Habit Disorders – Several related disorders linked by the presence of repetitive and relatively stable behaviors that seem to occur beyond the awareness of the person performing the behavior. See *“Habit Disorders” section.*

Habit Reversal Therapy – Includes awareness training, competing response training and social support. See *“Habit Disorders” section.*

Halfway Houses – See *“Therapeutic Group Homes” definition.*

Hallucinations – A strong perception of an event or object when no such situation is present; may occur in any of the senses (i.e., visual, auditory, gustatory, olfactory, or tactile).

Health Maintenance Organization (HMO) – A medical care organization organized to deliver and finance health care services through a network of participating providers. An HMO provides comprehensive health care services to its members for a fixed prepaid premium. A primary care physician must provide or authorize all services provided to members. Members must use in-network physicians.

Heritability – Measure of the degree to which the variance in the distribution of a phenotype is due to genetic causes or non-genetic factors.

Home-Based Services (Family Preservation Services) – Services typically provided in the residence of an individual who is at risk of being moved into an out-of-home placement or who is being transitioned back into the home from an out-of-home placement. The treatments are family-focused, and involve working within the home environment to preserve the family structure. The services may include crisis treatment, intensive case management, individual and family counseling, skill building (life, communication, and parenting), 24-hour emergency response, and assisting in obtaining and coordinating needed services, resources, and supports. Services vary based on the goals of the program and the needs of the family. The services tend to be of short duration (1 to 3 months) but highly intensive (5 to 20 hours per week). They are usually provided only when other interventions have proven unsuccessful. They are typically offered through child welfare agencies, community services boards, mental health centers, hospitals, juvenile justice agencies, or private providers.

Hypersexuality – Being excessively interested or involved in sexual activity.

Hypersomnia – Excessive sleepiness.

Hypervigilance – Watchfulness or awareness of one's surroundings over and above what is normal.

Hypoxia – Lack of oxygen supply.

Incidence – Measure of events as they happen over a period of time. It usually refers only to the number of new cases, particularly of chronic diseases.

Ideation – The capacity for or the act of forming or entertaining ideas.

Independent Living Services – Programs specifically designed to help adolescents make the transition to living independently as an adult. They provide training in daily living skills (financial, medical, housing, transportation) as well as vocational and job training. They are offered by therapeutic group homes, residential treatment centers, day treatment programs, community services boards, and private clinics.

Individual Trauma – Trauma specific to one individual, e.g., assault.

Individualized Educational Program (IEP) – Plan developed by parents, teachers, school administrators, and the student to meet the unique educational needs of a student with a disability. It should contain specific objectives and goals that are based upon the student's current level of educational performance in a variety of areas. It should also describe the services that are to be provided by the school system within the context of the educational program.

Individuals with Disabilities Act (IDEA) – Federal law mandating that a free and appropriate public education be available to all school-age children with disabilities. Also known as Public Law 105-17.

Inpatient Hospitalization – Services provided on a 24-hour basis in a hospital setting and the most restrictive placement that a child can receive. It tends to be reserved for children with difficult and ongoing problems. Hospitals use a variety of interventions, including individual, group, and family therapy, medication management, and behavior modification.

Institute for Mental Disease (IMD) – Residential facility with more than 16 beds which specializes in psychiatric care.

Intellectual Disability – A developmental disability characterized both by a significantly below-average score on a test of mental ability or intelligence and by limitations in the ability to function in areas of daily life, such as communication, self-care, and getting along in social situations and school activities. See "*Intellectual Disability*" section.

Intellectual Disability Waiver – A medical waiver that provides home and community-based services to individuals under 6 years of age who are ‘at developmental risk’ and to individuals above 7 years of age diagnosed with an intellectual disability.

Interpersonal Rejection Sensitivity – Heightened sensitivity.

Intervention – Action(s) intended to modify a negative state, e.g., pain or suffering, destructive behavior, with the goal of improving it.

Intensive Outpatient Therapy (IOP) – A form of partial hospitalization that is more intense than regular once-per-week outpatient therapy and less intense than full inpatient hospitalization. Patients come for therapy, which is often conducted in a group setting, several days per week for several hours at a time. This type of treatment is typically shorter in duration than full partial hospitalization programs.

Intermediate Care Facility (ICF) – An intermediate care facility is an institution furnished health-related care and services to individuals who do not require the degree of care provided by hospitals or skilled nursing facilities as defined under Title XIX (Medicaid) of the Social Security Act.

Intermediate Care Facilities for Persons with Mental Retardation (ICF/MR) – Facilities providing a community-based residential setting for individuals with mental retardation who also have severe medical needs. They offer rehabilitative services designed to maximize independence and enhance the resident's quality of life. They provide residential care, skilled nursing, and specialized training, and may include training programs in language, self-care, independent living, socialization, academic skills, and motor development. While ICF/MRs most often serve adults, adolescents can sometimes be placed in these programs.

Interpersonal Therapy – A form of psychotherapy that focuses on improving interpersonal skills by exploring the relationships that the child or adolescent has with others. The therapist actively teaches the youth to evaluate their interactions with others and to become aware of self-isolation and social difficulties. The therapist offers advice and helps the youth make decisions about the best way to interact with other people.

Intrusive Aversive Therapy – A formal behavior management technique designed to reduce or eliminate severely maladaptive, violent, or self-injurious behavior by using negative stimuli when problem behaviors are exhibited. It does not include verbal therapies, seclusion, physical or mechanical restraints used in conformity with the applicable human rights regulations, or psychotropic medications.

Juvenile Correctional Centers (JCCs) – Secure residential facilities operated by the Virginia Department of Juvenile Justice. Juvenile offenders are committed to JCCs by the Juvenile and Domestic Relations District Courts and Circuit Courts for rehabilitation and confinement. These facilities provide programs to address the treatment, disciplinary, medical, and recreational needs of the juveniles.

Juvenile Firesetting – Deliberate destruction of property by juveniles through fire, which sometimes results in casualties. See “*Maladaptive Behaviors, Juvenile Firesetting*” section.

Juvenile Sex Offender – Juvenile perpetrating sex offense(s) by committing any sexual act against the victims’ will, without consent, or in an aggressive, exploitive, or threatening manner. See “*Juvenile Offending*” section.

Labile Moods/Mood Lability – Describes emotional instability.

Lesch-Nyhan Disease (LND) – a rare and devastating genetic disorder characterized by severe dystonia (over-activity of a specific group of muscles), spasticity, speech impairment, renal disease, varying degrees of cognitive deficit, and the characteristic symptom, compulsive self-injury.

Licensed Clinical Social Worker (LCSW) – A social worker who, by education and experience, is professionally qualified at the autonomous practice level to provide direct diagnostic, preventive and treatment services that may include psychotherapy and counseling for mental disorders, substance abuse, marriage and family dysfunction, and problems caused by social and psychological stress or health impairment.

Type of degree held: M.S.W. or D.S.W., along with supervised experience in a treatment setting.

Where they can be found: Local social service agencies, hospitals (both regular and psychiatric), residential treatment centers, group homes, community services boards, and private outpatient mental health, and substance abuse clinics.

See “General Description of Providers” and “Providers Licensed in Virginia” sections.

Licensed Professional Counselor (LPC) – The specific legal license that a psychotherapist, usually at the Master’s level of training, can get. Educational and experiential standards to achieve the LPC license are lower than the requirements for Psychologist or Psychiatrist licensure. Not all counselors are LPCs.

Type of degree held: M.A. or M.S., along with coursework and a supervised residency in counseling and psychotherapy.

Where they can be found: Residential treatment centers, community services boards, private outpatient mental health and substance abuse clinics.

See “General Description of Providers” and “Providers Licensed in Virginia” sections.

Licensed Social Worker (LSW) – These are persons who are trained to provide diagnostic, preventive and treatment services, but on a supervised rather than independent basis.

Type of degree held: B.A. or M.S.W., along with supervised experience in a treatment setting.

Where they can be found: Local social service agencies, hospitals (both regular and psychiatric), residential treatment centers, group homes, community services boards, private outpatient mental health, and substance abuse clinics.

See “General Description of Providers” and “Providers Licensed in Virginia” sections.

Licensed Substance Abuse Treatment Practitioner – Professionals who are licensed to provide advanced substance abuse treatment and independent, direct and unsupervised treatment to such individuals or groups of individuals, and to plan, evaluate, supervise, and direct substance abuse treatment provided by others.

Type of degree held: M.A. or M.S., along with additional coursework and a supervised residency in substance abuse treatment.

Where they can be found: Inpatient substance abuse treatment centers, community services boards, private outpatient mental health, and substance abuse clinics.

See “General Description of Providers” and “Providers Licensed in Virginia” sections.

License/licensure – Permission granted to an individual or organization by a competent authority, usually public to engage lawfully in a practice, occupation, or activity. Licensure is the process by which the license is granted. It is usually granted based on examination and/or proof of education rather than on measures of performance. A license is usually permanent, but may be conditioned on annual payment of a fee, proof of continuing education, or proof of competence.

Major Depression Disorder – One or more major depressive episodes without a history of mania. See “Depression and Dysthymia” section.

Mandated – Designation provided to children receiving funding under the Virginia Comprehensive Services Act. State and local governments are required by law to appropriate sufficient funds for services for these youth. Children and adolescents who fall within this category are generally those who receive individualized services from the education and foster care systems.

Limbic System – A group of interconnected brain structures, common to all mammals, which support a variety of functions, including emotion, motivation, behavior, and smell.

Mania – A distinct period of abnormally and persistently elevated, expansive, or irritable mood. See “Depression and Dysthymia” section.

Marriage and Family Therapist – Person trained in the assessment and treatment of cognitive, affective, or behavioral mental and emotional disorders within the context of marriage and family systems through the application of therapeutic and family systems theories and techniques.

Type of degree held: M.A. or M.S., additional coursework and a supervised residency in marriage and family counseling.

Where they can be found: Community services boards, private outpatient mental health and substance abuse clinics.

See “*General Description of Providers*” and “*Providers Licensed in Virginia*” sections.

Massed Negative Practice – One of the most frequently used behavioral therapy techniques in the treatment of children with tic disorder in which the individual is asked to deliberately perform the tic movement for specified periods of time interspersed with brief periods of rest.

Medicaid – Federal program (Title XIX of the Social Security Act) that pays for health services for certain categories of people who are poor, elderly, blind, disabled, children under the age of 19, pregnant women, and caretaker relatives of children under the age of 18 and who meet financial eligibility criteria.

Mental Retardation – See “*Intellectual Disability*” definition.

Mentorship Services – Individuals who serve as role models and caring adult support figures outside of the immediate family, and often serve a protective role in the lives of at-risk youth. They can be citizen volunteers or paid paraprofessionals. Their primary role is to assist the youth’s development of social support and social skills, competencies and confidence, and to provide school support. Some specific activities include crisis intervention and problem solving, academic assistance, vocational support and recreation, and most importantly, developing a supportive and helpful relationship with the child. This is accomplished through regularly scheduled contact, which is often daily. These types of services may be provided by community services boards, social service agencies, private clinics, and volunteer agencies.

Methadone Detoxification and Maintenance – Services that combine outpatient treatment with the administering of methadone as a substitute narcotic drug, in decreasing doses, until the individual reaches a drug-free state. These treatments usually do not last longer than 180 days. They are typically provided by substance abuse treatment centers.

Modality – A therapeutic treatment or agent.

Mood Disorders – Category of mental health problems including all types of depression and bipolar disorder. See “*Depression and Dysthymia*” section.

Mood Stabilizer – Psychiatric medication used in the treatment of bipolar disorder to suppress swings between mania and depression.

Multidimensional Family Therapy (MDFT) – an outpatient, family-based treatment for teenagers with serious substance abuse issues. This approach views drug use in terms of network of influences (individual, family, peer, community) and encourages treatment across settings in multiple ways. Sessions may be held in a clinic, home, court, school, or other community locations. See “*Substance Use Disorders*” section.

Multimodal – Having or involving several modes, modalities, or approaches.

Multisystemic Therapy (MST) – An integrative, family-based treatment with focus on improving psychosocial functioning for youth and families so that the need for out-of-home placements is reduced or eliminated.

Narrowband Tool – A screening tool specific to the disorder.

Neurobiology – The branch of biology that deals with the anatomy and physiology and pathology of the nervous system.

Neuroimaging – Use of various techniques to either directly or indirectly image the structure, function/pharmacology of the brain, e.g., MRIs.

Neuroleptic Medication – A term that refers to the effects of antipsychotic drugs on a patient, especially on cognition and behavior. Neuroleptic drugs may produce a state of apathy, lack of initiative, and limited range of emotion. In psychotic patients, neuroleptic drugs cause a reduction in confusion and agitation.

Neuropsychiatry – Branch of medicine dealing with mental disorders attributable to diseases of the nervous system.

Neurotransmitters – In the brain, these chemicals transfer messages from one nerve cell to another and affect mood.

Non-mandated – Designation given to youths who are referred for services under the Virginia Comprehensive Services Act for which the Commonwealth is not required to provide complete funding. Children and adolescents who fall into this category are generally referred for treatment by the juvenile justice or mental health systems.

Non-Suicidal Self-Injurious Behavior (NSIB) – Deliberate, direct destruction or alteration of body tissue without conscious suicidal intent, but resulting in injury severe enough for tissue damage to occur. See *“Maladaptive Behaviors, Non-Suicidal Self-Injurious Behavior”* section.

Norepinephrine – A hormone that regulates blood pressure by causing blood vessels to narrow and the heart to beat faster.

Nucleus accumbens – Collection of neurons within the striatum; the key structure of the brain responsible for reward, motivation and addiction. Dependent drugs, such as cocaine and nicotine, trigger the release of dopamine from its shell.

Obsessive-compulsive disorder (OCD) – Anxiety disorder in which a person has an unreasonable thought, fear, or worry that he/she tries to manage through a ritualized activity to reduce the anxiety. Frequently occurring disturbing thoughts or images are called obsessions, and the rituals performed to try to prevent or dispel them are called compulsions. See *“Anxiety Disorders”* section.

Office of Juvenile Justice and Delinquency Prevention (OJJDP) – Federal agency within the U.S. Department of Justice which coordinates and provides resources to state and communities pertaining to juvenile justice system.

Operant Conditioning – Process of behavior modification in which the likelihood of a specific behavior is increased or decreased through positive or negative reinforcement each time the behavior is exhibited, so that the subject comes to associate the pleasure or displeasure of the reinforcement with the behavior.

Oppositional Defiant Disorder (ODD) – An enduring pattern of uncooperative, defiant, and hostile behavior to authority figures that does not involve major antisocial violations. See *“Behavior Disorders, Oppositional Defiant & Conduct Disorders”* section.

Outpatient Psychiatric Services – Services provided to individuals, groups, or families on an hourly schedule. Outpatient services are the most frequently used treatment method for children, and may either be provided for a short term (6 to 12 sessions) or a longer duration (a year or longer). Services are generally provided on a weekly basis, if not more often, depending on the individual needs of the child and family. However, under managed care and most insurance plans, brief therapy is likely to be mandated. It is the least restrictive form of service for children and families, and it is provided in a number of settings, including community services boards, outpatient psychiatry departments of hospitals, and private offices. It is most often provided by psychiatrists, psychologists, social workers, and counselors. Treatment efforts may include diagnosis and evaluation, intake and screening, counseling, psychotherapy, behavior management, psychological testing and assessment, and medication management. These services are typically offered in community services boards, private clinics and offices, and outpatient psychiatry departments of hospitals.

Paraphilia – A medical or behavioral science term for what is also referred to as a sexual deviation, sexual anomaly, sexual perversion or a disorder of sexual preference. It is the repeated, intense sexual arousal to unconventional and socially deviant stimuli.

Parent – A parent, a guardian, or a person acting as a parent in the absence of a parental guardian. The term "parent" also means a surrogate parent appointed pursuant to Virginia statute.

Partial Hospitalization – A form of therapeutic day treatment that is based in a psychiatric hospital. It provides the use of a psychiatric hospital setting during the day, with children returning to their home each night. It is frequently used for those children who are being released from a psychiatric hospital and must transition back into the community and the school system. It is also used to assist youths at risk of inpatient hospitalization. *See also "Therapeutic Day Treatment" definition.*

Pathological – Altered or caused by mental health disorder.

Peripheral Serotonin Receptors – Surrounding the peripheral nervous system.

Pervasive Developmental Disorders (PDD) – These disorders can usually be identified in the early years of a child's life. Children with PDD have difficulty in areas of development or use of functional skills such as language, communication, socialization, and motor behaviors. Examples of PDD include:

- autism (autistic disorder)
- Asperger's disorder
- Rett's disorder
- childhood disintegrative disorder (also called disintegrative psychosis)

See "Autism Spectrum Disorders" section.

Phallometric – Assessment to measure sexual attraction.

Pharmacology – The study of the nature, actions, and uses of drugs.

Phasic Disorder – Reacting rapidly and strongly to a stimulus but quickly adapting and having a short period of excitation.

Phobia – An uncontrollable, irrational, and persistent fear of a specific object, situation, or activity.

Physiological Responses – Related to hormonal and metabolic changes in the body which follow stimuli/stimulus.

Placebo – A pharmacologically inert substance (such as saline solution or a starch tablet) that produces an effect similar to what would be expected of a pharmacologically active substance (such as an antibiotic).

Plan of Care – Treatment plan designed for each child or family. The caregiver(s) develop(s) the plan with the family. The plan identifies the child and family's strengths and needs. It establishes goals and details appropriate treatment and services to meet his or her special needs.

Positive Behavior Support – Re-directive therapy which is applicable to home and school environment where the goal is to help the youth strengthen communication, social, and self-management skills.

Post-traumatic Stress Disorder (PTSD) – A debilitating condition that often follows a terrifying physical or emotional event causing the person who survived the event to have persistent, frightening thoughts and memories, or flashbacks, of the ordeal. Persons with PTSD often feel chronically, emotionally numb.

Practice Guidelines – American Academy of Child and Adolescent Psychiatry (AACAP) practice guidelines which prescribe treatments and include resources and tools to assist practitioners and provide evidence-based recommendations for the assessment and treatment of psychiatric disorders.

Prader-Willi Syndrome (PWS) – An uncommon inherited disorder characterized by mental retardation, decreased muscle tone, short stature, and an insatiable appetite which can lead to life-threatening obesity.

Premonitory Urge – Commonly used to describe early, minor symptoms that precede a major health problem.

Premorbid – Preceding the occurrence of disease.

Prognosis – The expected outcome, or course of a disease, including the patient's chance of recovery.

Prevalence – The number of cases of disease, infected persons, or persons with some other attribute, present at a particular time and in relation to the size of the population from which drawn. It can be a measurement of morbidity at a moment in time.

Prevention Services – Services that promote families, communities, and systems working together to reduce the incidence of mental illness, mental retardation, other developmental disabilities, and substance abuse disorders. Emphasis is on the enhancement of protective factors and reduction of risk factors. Activities may include information dissemination, prevention education, and problem identification and referral. Services are most often provided by social service agencies, community services boards, pediatricians, and nurses in health clinics, and schools.

Private Inpatient Units – Privately-owned hospitals which offer inpatient psychiatric and/or substance abuse services to children and adolescents with severe, acute disturbances. They are licensed as hospitals under state regulations.

Private Providers – Mental health professionals who provide services in private offices or within the context of private mental health centers. The services that they provide are not publicly-funded and therefore treatments are usually paid for either through private insurance, Medicaid, or the FAMIS program, or through contracts with public agencies.

Private Residential Units – Privately-owned residential facilities that provide intensive treatment services to children and adolescents with emotional or mental disorders. They are somewhat less restrictive than private inpatient units, but still tend to be highly structured and secure, and should be reserved for children and adolescents in crisis. However, the level of security and restrictiveness tend to vary across facilities.

Psychiatric Diagnosis – Utilizing results from mental and physical examinations and possibly other types of tests to help determine whether an individual has a mental health disorder.

Psychiatric Social Worker – A core mental health professional, who has earned the Master's of Social Work degree, and is trained to appreciate and emphasize the impact of environmental factors on mental disorders. See *“General Description of Providers”* and *“Providers Licensed in Virginia”* sections.

Psychiatrist – A medical doctor or physician. Psychiatrists are experts in the use of medications to treat mental disorders and also experts in the diagnosis and treatment of mental illnesses.

Type of degree held: M.D., as well as completion of a multi-year residency in psychiatry (treatment of mental illness), usually in a hospital setting and under supervision of senior psychiatrists.

Where they can be found: Hospitals (regular and psychiatric), community services boards, private outpatient mental health clinics, private practice.

See *“General Description of Providers”* and *“Providers Licensed in Virginia”* sections.

Psychodynamic – Related to a method of verbal communication used to help a person find relief from emotional pain.

Psychoeducational Services – The process of providing information to parents, children, and teachers about the features of the child's diagnosis, the most effective management strategies, and the services available to provide the necessary treatment.

Psychological Evaluation – A clinical examination conducted by a mental health professional that is used to determine the nature of a child's psychological difficulties. It often includes an analysis of components of the child's life such as his/her development, behavior, education, medical history, and family and social relationships. An evaluation usually requires several hours to complete and is often best performed over several sessions, including sessions for the child and parents separately and together. In addition, a full evaluation usually requires the collection of information from a variety of outside sources, such as the school, child's pediatrician, psychological testing, and social service agencies.

Psychological Factors – Emotional and experiential components associated with physical disturbances and biological factors.

Psychopathology – The science that studies mental diseases.

Psychopharmacology – Use of medication to treat mental disorders. These medications work to control the symptoms of mental illness by correcting or compensating for some malfunction in the body. Medications do not cure mental illness.

Psychosis – A disruption of thinking that impairs an individual's reality contact and social perception. It is frequently associated with the diagnosis of schizophrenia.

Psychosocial – Involving aspects of social and psychological behavior.

Psychosocial treatments – Services that focus on the relationship between psychological, environmental, and social factors. They include certain forms of psychotherapy as well as social and vocational training, and are intended to provide support, education, and guidance to people with mental illnesses and their families. A psychiatrist, psychologist, social worker, or counselor typically provides these psychosocial therapies. The therapist and a psychiatrist may work together as the psychiatrist prescribes medications and the therapist monitors the consumer's progress. The number, frequency, and type of psychotherapy sessions a consumer has should be based on his or her individual treatment needs.

Psychostimulant – A drug having antidepressant or mood-elevating properties.

Psychotherapy – An intervention that involves regularly scheduled sessions between the patient and a mental health professional such as a psychiatrist, psychologist, psychiatric social worker, or psychiatric nurse. Licensed Clinical Social Workers and Advanced Practice Psychiatric Nurses may also provide psychotherapy. The goal of this treatment is to help consumers understand why they are acting and thinking in ways that are troubling or dangerous to themselves or others so they have more control over their behaviors and can correct them. It is commonly used in the treatment of children and youth with emotional and behavioral problems, either in conjunction with or in place of prescribed medications. This form of therapy varies with regard to theoretical approach, with the most prevalent of these being the psychodynamic, behavioral, cognitive-behavioral, interpersonal, supportive, and family systemic approaches.

Psychotropic Medications – Prescribed drugs that reduce the symptoms of biologically-based psychological disorders. They are most often prescribed for the following diagnoses: schizophrenia, bipolar disorder, depression, anxiety disorders, obsessive-compulsive disorder, and panic disorder. *See also "Psychopharmacology" definition.*

Purging – Children with bulimia nervosa engage in a destructive pattern of ridding their bodies of the excess calories (to control their weight) by vomiting, abusing laxatives or diuretics, taking enemas, and/or exercising obsessively - a process called purging. *See "Maladaptive Behaviors, Eating Disorders" section.*

Pyromaniac – An individual having an irresistible impulse to start fires.

Randomized Trial – A clinical trial in which the participants are assigned randomly (by chance alone) to different treatments.

Reactive Attachment Disorder of Infancy or Early Childhood (RAD) – A complex psychiatric illness that is characterized by serious problems in emotional attachments to others and usually presents by age 5.

Regression – Partial or symbolic return to earlier patterns of reacting or thinking. Manifested in a wide variety of circumstances such as normal sleep, play, physical illness, and in many mental disorders.

Reinforcement – The strengthening of a response by reward or avoidance of punishment. This process is central in operant conditioning.

Residential Services – Services which provide overnight care in conjunction with intensive treatment or training programs. They are typically provided in psychiatric hospitals, residential treatment centers (RTCs), and therapeutic foster homes.

Residential Treatment Center (RTC) – 24-hour facilities providing short-term intermediate care, crisis stabilization, and intensive mental health treatment programs. They are not licensed as hospitals and serve as an alternative to inpatient psychiatric hospitalization. The settings vary, with some highly structured like psychiatric hospitals, while others are similar to group homes or halfway houses. They also vary in the range of services they offer, as some offer a full range of treatment services while others are more limited or specialized. While these facilities were originally designed to serve as long-stay institutions, under managed care they are serving youth for periods as brief as one month, serving only as a source for intensive evaluation and stabilization.

Respite Care – A type of family support service. Parents are given relief from childcare by either placing the child with another family or bringing a caretaker into the home for a few days. This service is usually provided on a planned basis under circumstances in which either there has been a prolonged crisis in which the child has exhausted the family resources, or there has been another family crisis, such as illness or death of another family member. This service may be provided by community services boards, social service agencies, or private clinics.

Risk or Risk Factor – Term used to quantify the likelihood that something will occur. A risk factor is something, which either increases or decreases an individual's risk of developing a disorder or disease. However, it does not mean that, if exposed, an individual will definitely contract a particular disease.

Satiation – the practice of repetitively lighting and extinguishing fire. See *“Maladaptive Behaviors, Juvenile Firesetting”* section.

Schizoaffective – Diagnosis describing a mental health disorder characterized by recurring, alternating episodes of elevated or depressed moods with distorted perceptions.

Schizophrenia – A severe, chronic, and disabling disturbance of the brain that causes distorted thinking, strange feelings, and unusual behavior and use of language and words. See *“Early-onset Schizophrenia”* section.

School Psychologists – Psychologists licensed to practice in a school setting.

Type of degree held: M.A. with an endorsement in psychology or Ph.D.

Where they can be found: Public and private schools, special education residential schools, special education day schools, therapeutic day treatment centers. See *“General Description of Providers”* and *“Providers Licensed in Virginia”* sections.

School-based Services – Any program, intervention, or strategy applied in a school setting that was specifically designed to influence students' emotional, behavioral, or social functioning. See *“School-based Mental Health Services”* section.

Screening Tool – A brief assessment, which is valid and reliable, that is used to identify symptoms or other problems.

Secure Treatment Service – Provision of services for people with mental disorders or serious mental health problems who, based on clinical assessment, require treatment in a closed setting to ensure the safety of the person, the staff and the community. Three levels of treatment are provided: acute inpatient secure treatment, extended secure treatment, and high-security treatment.

Sedatives – A group of drugs used to produce sedation (calmness). Sedatives include sleeping pills and anti-anxiety drugs.

Serotonin Reuptake Inhibitors (SRIs) – SRIs are not synonymous with selective serotonin reuptake inhibitors (SSRIs), as that term is usually used to describe the class of antidepressants of the same name, and because SRIs, unlike SSRIs, can be either selective or non-selective in their action. For example, cocaine, which non-

selectively inhibits the reuptake of serotonin, norepinephrine, and dopamine, can be called an SRI but cannot be called an SSRI.

Selective Serotonin Reuptake Inhibitors (SSRIs) – A commonly prescribed class of drugs for treating depression. SSRIs work by stopping the reuptake of serotonin, an action that allows more serotonin to be available to be taken up by other nerves.

Self-Help and Support Groups – Groups designed for people and families dealing with life difficulties such as mental illness or substance abuse. Typically, they are not led by a professional therapist; however, these groups may be therapeutic because members give each other ongoing support. They provide support to both the child and the family, as they learn that others have problems similar to theirs and share in their experiences and coping mechanisms.

Self-Harm – Also known as self-injury, self-inflicted violence, self-injurious behavior or self-mutilation, self-harm is a deliberate, intentional injury to one's own body that causes tissue damage or leaves marks for more than a few minutes which is done to cope with an overwhelming or distressing situation. See "*Maladaptive Behaviors, Self-Injury*" section.

Self-Injury (SI) – The repetitive, deliberate infliction of harm to one's own body. See "*Maladaptive Behaviors, Self-Injury*" section.

Self-Report Measure – When a person is asked to report his or her own behavior or mental contents.

Separation Anxiety Disorder (SAD) – Excessive worry and fear about being apart from family members or individuals to whom a child is most attached. Children with separation anxiety disorder fear being lost from their family or fear something bad happening to a family member if they separated from them.

Serious Emotional Disturbance (SED) – Serious emotional disturbance in children ages birth through 17 is defined as a serious mental health problem that can be diagnosed under the *DSM-IV*, or the child must exhibit all of the following:

- Problems in personality development and social functioning that have been exhibited over at least one-year's time;
- Problems that are significantly disabling based upon the social functioning of most children that age;
- Problems that have become more disabling over time; and
- Service needs that require significant intervention by more than one agency.

Serotonin – A chemical that transmits nerve impulses in the brain (neurotransmitter) causes blood vessels to narrow at sites of bleeding and stimulates smooth muscle movement in the intestines. Changes in the serotonin levels in the brain can alter the mood.

Serotonin and Norepinephrine Reuptake Inhibitors (SNRIs) – Commonly prescribed class of drugs for treating depression, which work by inhibiting the reuptake of serotonin and norepinephrine, an action that allows serotonin and norepinephrine to be available to be taken up by other nerves.

Serum (lithium level) – The clear liquid that can be separated from clotted blood.

Social Factors – Influences in a child's social environment which maintain the disorder, e.g., family, friends, school.

Social History – When children and adolescents become involved with the juvenile justice system, a social history is performed by personnel of the Court Service Unit. The social history describes the social adjustment of the person before the court, which is used to help the court to select the most appropriate disposition for the case. The social history is also used by the court service unit to develop appropriate services for the juvenile and the family. A social history may also be conducted by other health care providers for purposes of conducting a mental health evaluation.

Social Modeling – Tool which integrates the cognitive modeling approach (which stresses how beliefs are formed and drive behavior) with social studies (which stress how relationships and informal practices drive behavior). The intent of social modeling in treatment is to present positive models for change.

Somatization – Process of experiencing mental and emotional stress, which manifest as physical symptoms.

Special Education – Specially designed instruction, which adapts, as appropriate, to the needs of a disabled child. Such education must ensure access for the child to the general curriculum, so that he or she can meet the educational standards that apply to all children. This education is to be provided at no cost to the parents and is implemented under the guidelines of the Individuals with Disabilities Act (IDEA), which requires school to identify children with disabilities in need of special education.

Special Education Day Schools – A form of therapeutic day treatment. These are schools that are specially designed to meet the needs of children with severe behavior disorders who are unable to function adaptively in the regular school system. The programs allow for collaboration between teachers and mental health professionals, and provide low student-teacher ratios and additional family services with the ultimate goal of returning the child to the regular school setting.

Spectrum – A condition that is not limited to a specific set of values, but which can vary infinitely within a continuum.

Standards of Learning (SOLs) – The outline of the basic knowledge and skills that Virginia’s public school students will be taught in grades K-12 in the four academic subjects of English, math, science, and social studies.

State Mental Health Facilities – State-run facilities providing a range of psychiatric, psychological, rehabilitative, nursing, support, and other necessary services for children and adolescents with significant and acute psychiatric concerns. The Commonwealth Center for the Treatment of Children and Adolescents is Virginia’s psychiatric facility for children and adolescents.

Stuttering – Speech characterized by abnormal hesitations, prolongations, and repetitions which are developmentally inappropriate for the age or mental ability of the speaker.

Subjective Responses – Not objective. Instead, these arise from conditions within the brain or sensory organs and are not directly caused by external stimuli.

Substance Abuse Medical Detoxification – A form of inpatient services in which doctors and other medical personnel use medication to eliminate or reduce effects of alcohol or other drugs in the patient’s body. These services are available in local hospitals or other emergency care facilities.

Suicidality – Suicidal thinking and behavior.

Suicidal Behavior – Actions taken by one who is considering or preparing to cause their own death. See *“Youth Suicide” section*.

Suicidal Ideation – Thoughts of suicide or wanting to take one’s life. See *“Youth Suicide” section*.

Suicide – The intentional taking of one’s own life. See *“Youth Suicide” section*.

Suicide Attempt – An act focused on taking one’s life that is unsuccessful in causing death. See *“Youth Suicide” section*.

Supportive Therapy – Psychotherapy focusing on the management and resolution of current difficulties and life decisions using the individual’s strengths and available resources.

Symptom – A reported feeling or specific observable physical sign of a patient’s condition that indicates a physical or mental abnormality.

Syndrome – A grouping of signs and symptoms, based on their frequent co-occurrence, that may suggest a common underlying pathogenesis, course, familial pattern, or treatment selection.

System of Care – A method of delivering mental health services that helps children and adolescents with mental health problems and their families get the full range of services in or near their homes and communities. These services must be tailored to each individual child's physical, emotional, social, and educational needs. In systems of care, local organizations work in teams to provide these services.

Tardive Dyskinesia – An involuntary movement disorder caused by the long-term use of neuroleptic drugs.

Temporary Assistance for Needy Families (TANF) – A block grant program designed to move recipients into work and turning welfare into a program of temporary assistance. TANF replaced the national welfare program known as Aid to Families with Dependent Children (AFDC) and the related programs known as the Job Opportunities and Basic Skills Training (JOBS) program and the Emergency Assistance (EA) program. TANF recipients are usually eligible for full Medicaid benefits and include children younger than 18 (or expected to graduate from high school by age 19). One of the child's parents must be dead, absent, disabled or unemployed.

The Arc – Formerly the Association for Retarded Citizens, a non-profit organization which supports persons with intellectual disability.

Therapeutic Camp Services – A special form of therapeutic group care in which youth and staff live together in a wilderness environment. The nature of the living situation requires that participants demonstrate responsible and independent behavior in order to take care of the basic necessities of living, including food and shelter. The primary emphasis of the treatment is the encouragement of each participant to be a contributing member of the group. The goal of this form of treatment is to build skills in dealing with immediate situations of both a social and nonsocial nature.

Therapeutic Day Treatment – An outpatient treatment program that serves children with diagnoses that range from severe emotional disturbance to developmental delay. These services provide an integrated set of psychoeducational activities, counseling, and family treatments which involve the young person for several hours each day. Services typically include special education, individual and group counseling, family counseling and training, crisis intervention, skill building, behavior modification, and recreational therapy. However, the nature of these programs may vary widely due to factors such as setting, the population being served, the intensity of treatment, the theoretical approach, and the treatment components. The integration of this broad range of services is designed to strengthen both individual and family functioning and to prevent a more restrictive placement of the child. The child is able to receive the benefits of a structured setting while being able to return home at night and continue involvement with family and peers. These services may be offered in regular school settings, special education day schools, community services boards, and hospitals. Currently, Medicaid is the only third party source that routinely covers this service.

Therapeutic Group Homes – Facilities which provide emotionally and behaviorally disturbed youth with an environment to learn social and psychological skills. These homes are located in the community, and residents attend the local schools. In Virginia, a group home is defined as a community-based, home-like single dwelling, or its acceptable equivalent, other than the private home of the operator, and serves up to 12 residents. An array of services is provided, such as individual psychotherapy, group therapy, and/or behavior modification. Vocational training and work experiences are typically included as part of the treatment program for adolescents. The amount of structure incorporated into the program varies based on the level of need of the youths served.

Therapeutic Intervention – Interventions based on an in-depth and extensive evaluation of the problem with clear and specific goals.

Tic – An involuntary, sudden, rapid, recurrent, nonrhythmic, stereotyped motor movement or vocalization. See "*Habit Disorders*" section.

Tic Disorder – A type of habit disorder that may be classified as a vocal tic, a motor tic, a simple tic or a complex tic. See "*Habit Disorders*" section.

Title IV-E – The Federal Social Security Act authorizing financial assistance for foster children and for families receiving adoption assistance.

Title V – Title V of the Social Security Act, which became the Maternal and Child Health Services Block Grant in 1981.

Title XVIII – Social Security Act Pertaining to Medicare.

Title XIX – Medicaid's federally aided, state-operated and administered program which provides medical benefits for certain indigent or low-income persons in need of health and medical care. Authorized by Title XIX of the Social Security Act.

Title XXI – The State Children's Health Insurance Program (SCHIP) that authorizes states to provide health insurance coverage to uninsured children up to 200 percent of the federal poverty level (FPL). States may provide this coverage by expanding Medicaid or by expanding or creating a state children's health insurance program. FAMIS is Virginia's SCHIP program.

Tourette's Disorder – Disorder characterized by multiple motor tics and at least one vocal tic. A tic is a sudden, rapid movement of some of the muscles in the body that occurs over and over and does not serve any purpose. See "*Habit Disorders*" section.

Transactional Medical Assistance – Provides short-term Medicaid coverage for people who lose assistance when they secure a job that does not provide health benefits.

Transitional Services - Services which help children leave the system that provides help for children and move into adulthood and the adult service system. Help includes mental health care, independent living services, supported housing, vocational services, and a range of other support services.

Trauma – Any injury, physical or emotional.

Traumatic Event – An occurrence which threatens injury, death or the physical body of a child or adolescent, while also causing shock, terror or helplessness.

Treatment Foster Care – Also known as Therapeutic Foster Care, it is the least restrictive form of residential treatment, placing children in private homes with specially trained foster parents. It is typically provided to children and adolescents with emotional or behavioral disturbances. The intent of these programs is to provide treatment within a family context. Children are placed with foster parents who have been carefully selected to work with children with special needs. These parents receive education and training to assist in working effectively with the child, including topics such as active listening, behavioral management and programming, and age-appropriate behavioral expectations. These parents become part of a support structure that exists among the foster parents and case managers work in close connection with the child and family. During this placement, efforts are made to provide the biological family with counseling, support, and other types of assistance so that the child can be returned to the home as quickly as possible. Programs tend to differ in approach, structure, intensity and type of training. Most serve youth from birth to 18 years, with most youth entering during early adolescence.

Tricyclic anti-depressants (TCA) – Drugs used in the treatment of clinical depression. Tricyclic refers to the presence of three rings in the chemical structure of these drugs.

Typology – Study or systematic classification of types that have common characteristics or traits.

Unproven Treatment – One that has little or no scientific evidence supporting its efficacy.

Variability – Range of possible outcomes of a given situation.

Virginia Independence Program (VIP) – Virginia's Welfare Reform program.

Virginia Initiative for Work not Welfare (VIEW) – Work component of Temporary Assistance for Needy Families (TANF) program.

White Matter Hyperintensities – White matter is the communication system of the brain.

Wraparound Services – Child- and family-driven services and supports which are community-based. Services address the child's needs in the home, school, and community, and are developed through collaboration between the child, family, and all of the service providers who provide support to the child. The underlying purpose is to provide services that follow the child as he/she interacts in different environments in the community. The organizations involved in collaboration can include mental health, education, juvenile justice, and child welfare. Case management is usually necessary to coordinate services.

Sources

The Virginia Commission on Youth used the following sources to compile the Reference Chart:

Administration for Children and Families. [Online]. Available:
<http://nccanch.acf.hhs.gov/profess/conferences/cbconference/fourteenth/presentations/40.cfm>. [August 2005].

American Academy of Child & Adolescent Psychiatry (AACAP). (1999). [Online]. Available:
<http://www.aacap.org>. [October 2010].

American Academy of Child & Adolescent Psychiatry (AACAP). (2000). *Summary of the Practice Parameters for the Assessment and Treatment of Children and Adolescents with Schizophrenia*. [Online]. Available:
<http://www.aacap.org/galleries/PracticeParameters/Schiz.pdf>. [December 2007].

C COMMONLY-USED ACRONYMS AND ABBREVIATIONS

AAA – Area Agency on Aging
 AACAP – American Academy of Child & Adolescent Psychiatry
 AAIDD – American Association on Intellectual and Developmental Disabilities
 AAP – American Academy of Pediatrics
 ABA – Applied Behavior Analysis
 ACT – Assertive Community Treatment
 AD – Autistic Disorder
 ADA – American Dietetic Association
 ADA – Americans with Disabilities Act
 ADD – Attention Deficit Disorder
 ADDM – Autism and Developmental Disabilities Monitoring
 ADHD – Attention Deficit Hyperactivity Disorder
 ADIS-C – Anxiety Disorders Interview Schedule for Children
 AFDC – Aid to Families with Dependent Children
 ALF – Assisted Living Facility
 ALOS – Average Length of Stay
 AN – Anorexia Nervosa
 ANRED – Anorexia Nervosa and Related Eating Disorders
 APA – American Psychiatric Association *or*
 APA – American Psychological Association
 Arc (The) – formerly Association for Retarded Citizens
 ART – Aggression Replacement Therapy
 AS – Asperger’s Disorder
 ASAS – Australian Scale for Asperger’s Syndrome
 ASD – Autism Spectrum Disorder *or*
 ASD – Acute Stress Disorder
 ASFA – Adoption and Safe Families Act of 1997
 ASQ – Ages and Stages Questionnaire
 AZT – Zidovudine, Retrovir
 BCM – Behavioral Classroom Management
 BED – Binge Eating Disorder
 BES – Binge Eating Scale
 BH-MCO – Behavioral Health Managed Care Organization
 BHA – Behavioral Health Authority
 BHO – Behavioral Health Organization
 BHRS – Behavioral Health Rehabilitative Services
 BIP – Behavior Intervention Plan
 BMI – Body Mass Index
 BN – Bulimia Nervosa
 BPD – Borderline Personality Disorder *or*
 BPD – Bipolar Disorder
 BPD-NOS – Bipolar Disorder Not Otherwise Specified
 BPI – Behavioral Peer Intervention
 BPT – Behavioral Parent Training

BT – Behavioral Therapy
 BULIT- R – Bulimia Test-Revised
 CAPS-CA – Clinician-Administered PTSD Scale for Children and Adolescents
 CASA – Court Appointed Special Advocate
 CBC – Community-based Care
 CBT – Cognitive Behavioral Therapy
 CD – Conduct Disorder
 CDC – Centers for Disease Control and Prevention
 CDIs – Child Development Inventories
 CFI – Children’s Firesetting Inventory
 CHADD – Children and Adults with Attention Deficit Disorders
 CHAT – Checklist for Autism in Toddlers
 CHINS – Child in Need of Services
 CHINSup – Child in Need of Supervision
 CMHC – Community Mental Health Center
 CMS – Centers for Medicare and Medicaid Services
 COBRA – Consolidated Omnibus Budget Reconciliation Act
 COLA – Cost of Living Adjustment
 COS – Childhood-onset Schizophrenia
 COY – Virginia Commission on Youth
 CPMT – Community Policy and Management Team (Virginia)
 CPS - Child Protective Services
 CSA – Comprehensive Services Act for At-Risk Youth and Families (Virginia)
 CSAC – Certified Substance Abuse Counselor
 CSB – Community Services Board (Virginia)
 CSU – Court Services Unit
 CSOTP – Certified Sex Offender Treatment Provider
 CT – Computer Tomography
 DARE – Drug Abuse Resistance Education
 DARS – Virginia Department for Aging and Rehabilitative Services
 DBD – Disruptive Behavioral Disorder
 DBD-NOS – Disruptive Behavioral Disorder Not Otherwise Specified
 DBHDS – Virginia Department of Behavioral Health and Developmental Services (formerly DMHMRSAS)
 DBT – Dialectical Behavioral Therapy
 DCE – Virginia Department of Correctional Education
 DCJS – Virginia Department of Criminal Justice Services
 DCSE – Virginia Child Support Enforcement
 DD – Developmental Disability *or*
 DD – Dually Diagnosed
 DHP – Virginia Department of Health Professions

DISC – Diagnostic Interview Schedule for Children
 DJJ – Virginia Department of Juvenile Justice
 DMAS – Virginia Department of Medical Assistance Services
 DMG – Dimethylglycine
 DOC – Virginia Department of Corrections
 DOE – Virginia Department of Education
 DRC – Daily Report Card
 DSH – Deliberate Self-harm
 DSM-IV-TR – *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision*
 DSM-5 – *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*
 DSS – Virginia Department of Social Services
 DTT – Discrete Trial Teaching
 DUI – Driving Under the Influence
 EA – Emergency Assistance
 EAP – Employee Assistance Program
 EAT – Eating Attitudes Test
 ECT – Electroconvulsive Therapy
 ED – Emotional Disturbance
 EDDS – Eating Disorder Diagnostic Scale
 EDE – Eating Disorder Examination
 EDED-Q – Eating Disorder Examination Questionnaire
 EDI-3 – Eating Disorder Inventory - Revised
 EDNOS – Eating Disorders Not Otherwise Specified
 EEG – Electroencephalogram
 EI – Eating Inventory
 EOS – Early-onset Schizophrenia
 EPSDT – Early and Periodic Screening, Diagnosis, and Treatment
 ERP – Exposure and Response Prevention
 ESL – English as a Second Language
 FAMIS – Family Access and Medical Insurance Security Plan, Virginia’s Title XXI Plan
 FAMIS CPU – Application-processing unit for FAMIS (Virginia)
 FAPE – Free Appropriate Public Education
 FAPT – Family Assessment and Planning Team
 FAS – Fetal Alcohol Syndrome
 FBI – Federal Bureau of Investigation
 FC – Foster Care
 FCT – Family Centered Treatment
 FDA – Food and Drug Administration
 FEMA – Federal Emergency Management Agency
 FFT – Functional Family Therapy
 FIA-C – Fire Incident Analysis for Children
 FIA-P – Fire Incident Analysis for Parents
 FPL – Federal Poverty Level
 FRI – Firesetting Risk Inventory
 GAD – Generalized Anxiety Disorder
 GOSAP – Governor’s Office for Substance Abuse Prevention (Virginia)
 HRT – Habit Reversal Therapy
 HCBS – Home and Community Based Services

HIPAA – Health Insurance Portability and Accountability Act
 HMO – Health Maintenance Organization
 I&R – Information and Referral
 ICF – Intermediate Care Facility
 ICPC – Interstate Compact for the Placement of Children
 ICM – Intensive Case Manager
 ICPC – Interstate Compact for the Placement of Children
 ID – Intellectual Disability
 IDEA – Individuals with Disabilities Education Act
 IDEA – Interview for the Diagnosis of Eating Disorders
 IEP – Individualized Educational Program
 IFSP – Individualized Family Service Plan
 IOP – Intensive Outpatient Therapy
 IPT – Interpersonal Psychotherapy
 IQ – Intelligence Quotient
 ISP – Individualized Service Plan
 IVIG – Intravenous Immunoglobulin
 JCC – Juvenile Correctional Center
 JCHC – Virginia Joint Commission on Health Care
 JFNAP – Juvenile Firesetter Needs Assessment Protocol
 JLARC – Joint Legislative Audit and Review Commission
 K-SADS – Schedule for Affective Disorders and Schizophrenia, Children’s Version
 LCSW – Licensed Clinical Social Worker
 LEAP – Learning Experiences: an Alternative Program
 LPC – Licensed Professional Counselor
 M-CHAT – Modified Checklist for autism in Toddlers
 MAEDS – Multiaxial Assessment of Eating Disorder Symptoms
 MCO – Managed Care Organization
 MDD – Major Depressive Disorder
 MDD – Major Depressive Disorder
 MDFT – Multidimensional Family Therapy
 MECA – Mental Disorders in Children and Adolescents
 MHA – Mental Health America
 MI – Medically Indigent
 MMR – Measles-Mumps-Rubella
 MR – Mental Retardation (*See ID.*)
 MRI – Magnetic Resonance Imaging
 MSW – Master of Social Work
 MST – Multisystemic Therapy
 MTFC – Multidimensional Treatment Foster Care
 NAMI – National Alliance for the Mentally Ill
 NCLB – No Child Left Behind
 NCMHJJ – National Center for Mental Health and Juvenile Justice
 NCSBY – National Center on Sexual Behavior of Youth
 NCTSN – National Child Traumatic Stress Network
 NES – Night Eating Syndrome
 NICHCY – National Dissemination Center for Children with Disabilities

NIDA – National Institute of Drug Abuse
 NIMH – National Institute of Mental Health
 NOS – Not Otherwise Specified
 NSIB – Non-suicidal Self-injurious Behavior
 OCD – Obsessive-compulsive Disorder
 ODD – Oppositional Defiant Disorder
 OJJDP – Office of Juvenile Justice and Delinquency Prevention
 PACCT – Parents and Children Coping Together
 PACT – Program of Assertive Community Treatment
 PBD – Pediatric Bipolar Disorder
 PAIMI – Protection and Advocacy for Individuals with Mental Illnesses Act
 Part C – Part C of the Individuals with Disabilities Education Act (IDEA)
 PCP – Primary Care Provider
 PCPID – President’s Committee for People with Intellectual Disabilities
 PDD – Autism Spectrum Disorder
 PDD-NOS – Autism Spectrum Disorder Not Otherwise Specified
 PDDST-II – Autism Spectrum Disorder Screening Test-II
 PEATC – Parent Educational Advocacy Training Center (Virginia)
 PECS – Picture Exchange Communication System
 PEDS – Parents Evaluation of Developmental Status
 PITS – Psychiatric Institute Trichotillomania Scale
 PMT – Parent Management Training
 POS – Point of Service
 PPO – Preferred Provider Organization
 PRT – Pivotal Response Training
 PTSD – Posttraumatic Stress Disorder
 PRWORA – Personal Responsibility and Work Opportunity Reconciliation Act of 1996
 RAD – Reactive Attachment Disorder of Infancy or Early Childhood
 RCF – Residential Care Facility
 RDI – Relationship Development Intervention
 RTC – Residential Treatment Center *or*
 RTC – Randomized Controlled Trial
 SAD – Separation Anxiety Disorder
 SAM – Society for Adolescent Medicine
 SAMHSA – Substance Abuse and Mental Health Services Administration
 SCARED – Screen for Children’s Anxiety and Related Disorders
 SCAS – Spence Children’s Anxiety Scale
 SCHIP – The State Children’s Health Insurance Program, Title XXI of the Social Security Act, created by the Balanced Budget Act of 1997. (See *FAMIS*.)
 SED – Serious Emotional Disturbance
 SEDS – Stirling Eating Disorder Scale
 SHAB – School Health Advisory Board
 SI – Self-injury *or*
 SI – Sensory Integration
 SNAP – Supplemental Nutrition Assistance Program
 SOC – Systems of Care (Virginia)
 SOLs – Standards of Learning (Virginia)
 SP – Skin Picking
 SP – Specific Phobias
 SPED – Special Education
 SRED – Sleep-related Eating Disorders
 SRIs – Serotonin Reuptake Inhibitors
 SSBG – Social Service Block Grant
 SSDI – Social Security Disability Insurance
 SSI – Supplemental Security Income
 SSRIs – Selective Serotonin Reuptake Inhibitors
 STD – Sexually Transmitted Disease
 SW – Social Worker
 TADS – Treatment for Adolescents with Depression Study
 TANF – Temporary Assistance for Needy Families
 TD – Tic Disorder
 TDO – Temporary Detention Order
 TEACCH – Treatment and Education of Autistic and Related Communication-handicapped Children
 TF-CBT – Trauma-focused Cognitive Behavioral Therapy
 TSC – Trichotillomania Scale for Children
 TMA – Transactional Medical Assistance
 TS – Tourette Syndrome
 TTM – Trichotillomania
 USFA – U.S. Fire Administration
 VALHSO – Virginia Association of Local Human Services Officials
 VDFP – Virginia Department of Fire Programs
 VDH – Virginia Department of Health
 VHCA – Virginia Health Care Association
 VIEW – Virginia Initiative for Work Not Welfare (Work component of Temporary Assistance for Needy Families [TANF] program)
 VIP – Virginia Independence Program
 VISSTA – Virginia Institute for Social Services Training Activities (Virginia Commonwealth University)
 VJCCCA – Virginia Juvenile Community Crime Control Act
 VOPA – Virginia Office for Protection and Advocacy
 YGTSS – Yale Global Tic Severity Scale
 WIC – Supplemental Nutrition Program for Women, Infants, and Children
 WTW – Welfare to Work

ADVISORY GROUP MEMBERSHIP

UPDATE OF *COLLECTION OF EVIDENCE-BASED PRACTICES FOR CHILDREN AND ADOLESCENTS WITH MENTAL HEALTH TREATMENT NEEDS*

Wayne H. Barry, M.Ed.

Office of Student Services
Virginia Department of Education
Richmond

Lisa Beitz, L.C.S.W.

Children's Services Coordinator
Hanover Community Services Board
Mechanicsville

Janet L. Bessmer, Ph.D.

Comprehensive Services Act Utilization Review
Manager
Fairfax County Government

Rebecca Bowers-Lanier, Ed.D.

Legislative Consultant
Macaulay & Burtch, P.C.
Richmond

William Butler, L.C.S.W.

Clinical Services Coordinator
Virginia Beach Mental Health, Mental Retardation,
and Substance Abuse Services
Virginia Beach

D. Rebecca China

CSA Coordinator
City of Richmond

Robert Cohen, Ph.D.

Executive Director
Virginia Treatment Center for Children
Virginia Commonwealth University Medical Center
Department of Psychiatry
Richmond

Pamela Fitzgerald Cooper

Acting Adoption Director
Virginia Department of Social Services
Richmond

Betty Etzler, Ph.D., L.C.S.W.

Virginia State Director
Family Preservation Services, Inc.
Christiansburg

Pamela Fisher, R.N., M.S.N.

Office of Mental Health Services
Virginia Department of Behavioral Health and
Developmental Services
Richmond

Stacie Fisher, R.N., M.S.

Senior Utilization Management Consultant
Virginia Office of Comprehensive Services for At-
Risk Youth and Families
Richmond

Janet Fuller-Holden

Virginia State Director
Institute for Family Centered Services
Chesapeake

Richard A. Gergely

Director of Social Work and Support Services
Fairfax County Public Schools

Natalee Geye

Parent Representative
Suffolk

Catherine Hancock, M.S., G.P.R.N., B.C.

Mental Health Policy Analyst
Virginia Department of Medical Assistance Services
Richmond

Vicki Hardy-Murrell, R.N., B.S.N.

Project Coordinator
Center for Family Involvement
Partnership for People with Disabilities/VCU
Richmond

Malcolm V. King, M.S., C.S.A.C.

Adolescent Substance Abuse Treatment Coordinator
Virginia Department of Behavioral Health and
Developmental Services
Richmond

Jeanne Knieriemen

Executive Director
The Lead Center, Ltd.
Hopewell

Martha Kurgans, L.C.S.W.

Women's Services Coordinator/Program Specialist
Office of Child and Family Services
Virginia Department of Behavioral Health and
Developmental Services
Richmond

Art Mayer, L.C.S.W., C.S.O.T.P.
Sex Offender / Substance Abuse Program
Supervisor
Behavioral Services Unit
Virginia Department of Juvenile Justice
Richmond

Brian L. Meyer, Ph.D.
Hunter Holmes McGuire VA Medical Center
Richmond

Thomas Ollendick, Ph.D.
Director of the Child Study Center
University Distinguished Professor of Psychology
Virginia Tech University
Blacksburg

William E. Painter, Jr.
Senior Director, Organizational Development
Institute for Family Centered Services
Chesapeake

Susan Pauley
Virginia Service Integration Program COSIG
Coordinator
Virginia Department of Behavioral Health and
Developmental Services
Richmond

Steven Peed, Ph.D.
Director, Behavioral Health Services
Virginia Department of Juvenile Justice
Richmond

Karen Purcell, M.L.S., M.A.
Executive Director
Capital Area Health Education Center
Richmond

Don Roe, Ph.D.
Commonwealth Center for Children & Adolescents
1355 Richmond Avenue
Staunton

Christina Sloan, M.P.H.
Youth Suicide Prevention Manager
Division of Injury and Violence Prevention
Virginia Department of Health
Richmond

Aradhana Bela Sood, M.D., F.A.A.C.A.P
Associate Professor of Psychiatry and Pediatrics
Chair, Child and Adolescent Psychiatry
Medical Director, Virginia Treatment Center for
Children
Virginia Commonwealth University Medical Center
Richmond

Janet Sorlin-Davis
Office of Director, Intervention and Prevention
Services
Department of Special Services
Fairfax County Public Schools

Michael A. Southam-Gerow, Ph.D.
Assistant Professor
Department of Psychology
Virginia Commonwealth University
Richmond

Terry R. Tinsley
Director of Clinical Services
Youth for Tomorrow
Bristow

Dennis Waite, Ph.D.
Waite Consulting LLC
Richmond

Patty Williford
Blue Ridge Behavioral Healthcare
Roanoke

Therese Wolf
Foster Care Policy Specialist
Permanency Unit
Division of Family Services
Virginia Department of Social Services
Richmond

Appendix B

SENATE JOINT RESOLUTION NO. 99

Directing the Virginia Commission on Youth, or its successor in interest, to coordinate the collection and dissemination of empirically-based information on treatment modalities and practices recognized as effective for the treatment of children, including juvenile offenders, with mental health treatment needs, symptoms and disorders.

WHEREAS, each year the Commonwealth of Virginia and its localities, through the Comprehensive Services Act for At-Risk Youth and Families (CSA), spend millions of dollars to purchase services to address the emotional and behavioral problems of children and youth in Virginia; and

WHEREAS, there is no system in the Commonwealth to measure the quality or effectiveness of care received by these children and youth; and

WHEREAS, the Joint Legislative Audit and Review Commission, in its Review of the Comprehensive Services Act, Senate Document No. 26 (1998), reported that linking program and participant outcomes could provide "a meaningful tool to assess whether providers are producing the type of results required given the nature of the children they receive"; and

WHEREAS, with the exception of composite data that are reflected on the Office of Comprehensive Services' web site, which includes elements such as demographics, referral source, expenditures and number of children served through the Family Assessment and Planning Team (FAPT) process, data on individual children are not collected; and

WHEREAS, professionals and communities could benefit from information on treatment modalities and practices recognized as effective for the treatment of children with mental health treatment needs, symptoms and disorders; and

WHEREAS, to collect information on outcomes requires the development of an extensive and integrated information management system and longitudinal data collection, both of which require considerable resources; and

WHEREAS, the collection of empirically sound research on the treatment modalities and practices that have proven most effective for children and adolescents would serve as the initial step in evaluation efforts; and

WHEREAS, this research as collected could be used as a foundation for the future collection of client-specific information; and

WHEREAS, such information could be shared with entities involved in efforts to develop a policy and plan for children's improved access to mental health services, including the identification of effective models for replication; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Virginia Commission on Youth, or its successor in interest, be directed to coordinate the collection and dissemination of empirically-based information on treatment modalities and practices recognized as effective for the treatment of children, including juvenile offenders, with mental health treatment needs, symptoms and disorders.

An advisory committee comprised of state and local representatives from the Virginia Department of Mental Health, Mental Retardation and Substance Abuse Services, Virginia Department of Social Services, Virginia Department of Medical Assistance Services, Virginia Department of Juvenile Justice, Virginia Department of Education, Virginia Department of Health, Virginia Office of Comprehensive Services, private providers and parent representatives shall assist and guide the effort of the entity directed to collect and disseminate the aforementioned information.

All agencies of the Commonwealth shall provide assistance to the entity directed to collect and disseminate such information, upon request.

The Virginia Commission on Youth, or its successor in interest, shall submit a copy of the information directed to be collected and disseminated concerning effective treatment modalities and practices for treating children, including juvenile offenders, with mental health treatment needs, symptoms, and disorders to the General Assembly through the Senate Committee on Education and Health, the Senate Committee on Rehabilitation and Social Services, the House Committee on Health, Welfare and Institutions, and to the Division of Legislative Services, no later than November 30, 2002.

SENATE JOINT RESOLUTION NO. 358

Directing the Virginia Commission on Youth, or its successor in interest, to make empirically based information concerning effective treatment modalities and practices for children available through the Internet. Report.

WHEREAS, upon the recommendations of the Virginia Commission on Youth's Study of Children and Youth with Serious Emotional Disturbances Requiring Out-of-Home Placement, House Joint Resolution No. 119 (2000), and the Committee Studying Treatment Options for Offenders with Mental Illness or Substance Abuse Disorders, Senate Joint Resolution No. 440 (2001), the Virginia Commission on Youth was directed to study treatment options for offenders with mental illness or substance abuse disorders, pursuant to Senate Joint Resolution No. 99 (2002); and

WHEREAS, Senate Joint Resolution No. 99 (2002) also directed the Virginia Commission on Youth to coordinate the collection and dissemination of empirically based information that identifies effective treatment modalities and practices for children, including juvenile offenders with mental health treatment needs, symptoms, and disorders; and

WHEREAS, to accomplish its work, the Commission appointed representatives to a special study committee, the SJR 99 Advisory Group, to study effective treatment modalities for children with mental disorders, and the Advisory Group met four times to receive public comment from consumers, family members, advocates, criminal justice professionals, treatment providers, academic faculty, and other experts; and

WHEREAS, in addition to the SJR 99 Advisory Group, the Commission convened a smaller clinical group, which met seven times to provide specialized expertise and guidance on the substantive aspects of the collection of evidence based treatment modalities for children and adolescents with mental health treatment needs; and

WHEREAS, the members of the SJR 99 Advisory Group and Clinical Group have acquired considerable expertise in the treatment needs of children with mental health disorders, and noted that nationally and in Virginia, increased attention has been given to children's mental health and the development of systems of care for children with serious emotional disorders; and

WHEREAS, family members, practitioners, and researchers have become increasingly aware that mental health services are an important and necessary support for young children and their families who experience mental, emotional, or behavioral challenges; and

WHEREAS, child and adolescent mental health has emerged as a distinct area for service delivery, drawing on the philosophies and practices that characterize other childhood fields, such as early intervention; and

WHEREAS, according to estimates by the Virginia Department of Mental Health, Mental Retardation, and Substance Abuse Services, each year more than 75,000 children experience the disabling symptoms of serious mental illness or emotional disturbance; and

WHEREAS, there has been a mounting interest in evaluating and developing empirically supported treatments for children in response to the noted prevalence of these problems with children; and

WHEREAS, the Commonwealth and its localities spend a substantial amount of money each year to provide mental health and substance abuse treatment services to children and adolescents, and the lack of information regarding the effectiveness of such services results in failed treatments and wasted resources; and

WHEREAS, over the past 30 years, there has been a movement calling for improvement in the "quality of evidence" in studies that claim to benefit children; and

WHEREAS, current emphasis on evidence-based practices for mental health treatments indicates that such practices promote effective use of resources, improve the clinician's knowledge, and allow for the identification of health care methods that have been evaluated for effectiveness; and

WHEREAS, increased awareness of mental health issues, the demand for the best medical treatment at affordable prices, and emphasis on evidence based practices are reasonable and justifiable consumer responses that may provide cost savings; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the Virginia Commission on Youth, or its successor in interest, be directed to make empirically based information concerning effective treatment modalities and practices for children available through the Internet. The Commission shall seek the assistance of the SJR 99 Advisory Group, the Secretary of Health and Human Resources, the Secretary of Public Safety, and the Secretary of Education in posting, maintaining, and biennially updating this information. Such information shall include effective, empirically based, treatment modalities and practices for children, including juvenile offenders with mental health treatment needs, symptoms, and disorders; and, be it

RESOLVED FURTHER, That agencies of the Secretariat of Health and Human Resources that deliver services to children, the Department of Education, and the Department of Juvenile Justice shall also post this information on their respective websites, provide for the dissemination of the information in as efficient and cost-effective manner as possible, and ensure access to the information by consumers, family members, advocates, mental health policy makers, and other interested persons.

The Virginia Commission on Youth, or its successor in interest, shall submit to the Division of Legislative Automated Systems an executive summary and report of its progress in meeting the directives of this resolution no later than the first day of the 2004 Regular Session of the General Assembly. The executive summary and report shall be submitted as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents and reports and shall be posted on the General Assembly's website.