CHAPTER

10

Nursing Considerations for the Child in the Community

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Sometimes Lani's asthma attacks really frighten me because she struggles so hard to breathe. She has a lot of trouble with asthma in the summertime with all the heat. I'm afraid to let her play outside with her friends for fear that she will have another attack. I'd really like to know how to keep Lani's asthma under control. —Mother of Lani, 8 years old

LEARNING OUTCOMES

After reading this chapter, you will be able to do the following:

10.1 Discuss the community healthcare settings where nurses provide health services to children.

10.2 Compare the roles of the nurse in each identified healthcare setting.

10.3 Assemble a list of family support services that might be available in a community.

10.4 Develop a nursing care plan for a child in the school setting who has short-term mobility limitations.

10.5 Examine five ways in which nurses assist families in the home healthcare setting.

10.6 Summarize the special developmental needs of children to consider in disaster preparedness planning.

KEY TERMS

Community assessment, 241
Decontamination, 244
Disaster, 243
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Epidemiologist, 242
Medically fragile, 232
Morbidity, 242
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Children receive most of their health care in community settings. Depending on the community, healthcare resources, and age of the child, this care may be provided in a variety of settings. When providing health care to the child and family, it is important for the nurse to assess the family's strengths, be aware of community resources, and help families manage the complex health care that is often provided in the home.

COMMUNITY-BASED HEALTH CARE

Health plans and healthcare providers continue to explore options to provide safe, high-quality care in the community with fewer hospitalizations or shorter stays when hospitalization is needed. Patterns of healthcare delivery have changed due to technologic developments and efforts to reduce healthcare costs. For example:

- Surgery and invasive diagnostic procedures are performed in outpatient settings.
- Short-stay or observation units in hospital settings reduce the number of hospital admissions.
- Long-term intravenous antibiotic therapy can be provided in the home.
- Pediatric hospice and palliative care services occur in the home setting.

The trend in out-of-hospital care has significantly increased for children with chronic health conditions and advanced disease states. Families are often willing to care for their child who is **medically fragile** (having significant health conditions that require skilled nursing, with or without medical equipment, to support vital functions) in the home because of their desire to have the child integrated into the family and community. Technologic advances, such as portable medical equipment, enable families to provide complex healthcare services in the home and other community settings, and such care in the community is less costly. Home care services and other support services have been developed to support these families.

Pediatric health care in the community occurs along a continuum that covers the entire child healthcare system. This continuum is reflected in the Bindler-Ball Continuum of Pediatric Health (Bindler & Ball, 2007), including health promotion and health maintenance services, care for chronic conditions, acute illnesses and injuries, and end-of-life care (see Chapter 1 ). Health care for individual children is improved when there is continuity of care and communication between healthcare settings.

The nurse working with families in a community setting uses knowledge of how the larger environment influences the child's health and development and the family's functioning and integrates that information into the nursing care plan. To work effectively in the community, the nurse needs to gain experience and skills in:

- Conducting a child and family assessment and collaborating with the family to plan, implement, and evaluate healthcare strategies that fit the family's economic, cultural, and social situation
- Working with community agencies (schools, faith-based groups, and other community-based resources) to assess, plan strategies, and implement and evaluate approaches addressed to the healthcare needs of the community's children

COMMUNITY HEALTHCARE SETTINGS

Children receive most of their health care (health promotion and episodic health care for acute illnesses and injuries) in community settings. Depending on the community, healthcare resources, and age of the child, care may be received in all or only a few of the following settings:

- A healthcare center or a physician's office is the usual site for **primary care**, the range of services that includes health promotion, health maintenance, episodic acute care, and health management of children with chronic conditions.

- A public health clinic may provide health promotion and health maintenance services. A homeless shelter may also have the capacity to offer such services.
- A hospital outpatient center may provide specialized services to children with chronic conditions or the full range of services offered in a health center.
- Schools usually provide health promotion and health maintenance services, plus first aid and emergency care as needed. School-based health centers exist in some schools to provide health care, counseling, health education, and care for acute conditions. Some school settings also offer preschool and after-school childcare services.
- Childcare centers provide first aid for emergencies and some health promotion services.
- The home is now a site for acute care of minor conditions and for chronic and complex health conditions, including end-of-life care when the child's family is supported by home health services.

A nurse may serve as a community health nurse, home health nurse, school nurse, pediatric nurse in an office setting, and nurse practitioner or advanced practice nurse in these settings. The nurse in any of the above settings has an important role in promoting the health and safety of the child, being a leader in setting policies in the center, and using the nursing process to help families meet the healthcare needs of their children. The nurse may assume the role of direct care provider, educator, advocate, or planner.

Nursing Roles in an Office or Health Center Setting

The nursing process is used when providing care for children in the health center. The range of assessment responsibilities may vary by setting and the preparation and experience of the nurse (Figure 10–1 ●). Specific functions of the pediatric nurse in this setting include the following:

- Identifying children in need of urgent care or isolation
- Performing nursing assessments, including the health history, vital signs, growth and development, nutritional status, immunization status, family strengths and challenges
- Conducting physical examinations
- Performing age-appropriate screening tests to detect health problems such as vision or hearing loss, anemia, and lead poisoning to ensure that the child has access to all needed health services (see Chapters 7, 8, and 9)
- Assisting with health examinations, diagnostic tests, and procedures
- Developing nursing diagnoses and implementing a plan of care
- Providing immunizations (see Chapter 16)
- Providing information about procedures and offering reassurance
- Providing patient education for health promotion or management of the health condition

● **Figure 10–1** Nurses carefully assess children in the office setting who present with an acute care illness to identify how serious the child's illness is. Monitor the child for symptom changes during the visit. Gather information about the child's illness and identify the education needed for the family to care for the child at home.

- Linking families with community resources
- Ensuring a safe healthcare setting and adherence to infection control guidelines (See the *Clinical Skills Manual* SKILLS for infection control methods.)
- Participating in the health center's performance improvement program to identify ways to enhance services provided to children and their families

An important goal is to develop a positive relationship with the child and family so that optimal health care is provided. This relationship is strengthened over time during future healthcare visits.

Providing Telephone Advice

Some nurses in the office or healthcare setting provide telephone advice to families. They need extensive knowledge of pediatrics and excellent communication skills to listen and interpret the information given by the caller. Nurses use protocols or published manuals approved by the health facility to guide the advice given to parents, such as specific care to provide at home or the need for an urgent healthcare visit. The call information is documented in the child's medical record.

Clinical Tip

Developing a relationship with the child and family in a community setting is equally as important as it is in the hospital. The initial interaction often sets the stage for a long-term relationship with the family that returns to the same setting for health care over many years. Remember to put aside the stressors you may be feeling before you approach the child and family. Take a few moments to play with the infant or child and to comment on a positive attribute of the child to the parents. This should help reduce the parents', and perhaps the child's, stress level, which helps set the stage for a long-term partnership with the child and family.

Identifying Severely Ill and Injured Children

Each child with an episodic illness or injury presenting to the health center must be assessed on arrival to determine the urgency of care needed. Quickly assess for changes in mental status, airway patency, labored breathing, or poor circulation to identify a child who needs immediate medical attention. The child with an urgent condition must be monitored frequently to detect any worsening of condition and need for emergency care.

Emergency Response Planning

The nurse collaborates with all health professionals and the office manager to prepare and develop an emergency response plan for the health center, in case a child presents with an emergency condition. The nurse teaches office staff to recognize a child needing immediate assessment by the nurse. The nurse is often responsible for ensuring that all emergency care equipment, supplies, and medications are organized and readily available in a central treatment room. The nurse may also coordinate mock drills so that all health professionals and support staff know and perform their designated role when a true emergency occurs.

SAFETY ALERT!

Required emergency equipment for managing a pediatric emergency in a health center includes the following in various pediatric sizes (Wright & Krug, 2011):

- Oxygen delivery system (bag-valve masks in 450- to 500- and 1000-mL sizes, clear oxygen face masks with and without reservoir)
- Airway equipment (oral and nasopharyngeal airways, suction devices, laryngoscope handle and blades, endotracheal tubes and stylet, end-tidal CO_2 detector, nasogastric tubes)
- Pulse oximeter, peak flow meter, a nebulizer or metered-dose inhaler with a spacer/mask
- Intravenous (IV) and intraosseous needles, IV tubing, and normal saline or lactated Ringer's IV solution
- A length-based resuscitation tape and preprinted drug dosage chart to quickly identify equipment sizes and drug dosages by the length or weight of the child
- Essential drugs, including oxygen, epinephrine 1:1000, and albuterol for inhalation; suggested drugs, including activated charcoal, naloxone, 25% dextrose, antibiotics, oral and parenteral corticosteroids, atropine, and sodium bicarbonate

Locate the emergency equipment in every clinical setting where you have assignments so that you can quickly take the child to it or bring the equipment to the child if an emergency occurs.

Educating the Child and Family

Patient education regarding injury prevention, growth and development, nutrition, healthy lifestyles, and the home care of episodic illnesses and injuries are important nursing roles. The nurse may be responsible for selecting patient education materials for the waiting area and those specifically used to teach families about various conditions. Knowledge of the community and population served by the health center enables the nurse to select appropriate education materials for the culture and literacy level served.

Nurses teach families to provide the condition-specific care for the child at home. Examples of information provided include:

- Signs that the condition is not improving as expected and when to return to the healthcare provider
- How and when to administer prescribed medications and their potential side effects
- Recommended diet and activity
- Other supportive care for the child's condition
- Education to help the child and family recognize when to initiate care for a new episode of a chronic condition (e.g., asthma and sickle cell disease) to avoid a healthcare visit or reduce the episode severity

Ensuring a Safe Environment for Children

The health center has many potential hazards such as equipment, cleaning supplies, sharps, medications, and laboratory chemicals and supplies from which the child needs to be protected. The child must be attended at all times when in the examination area. Develop and implement infection control guidelines to reduce the transmission of infectious diseases among child patients and among the healthcare providers and children.

Identifying Community Resources

Nurses are often involved in identifying community resources needed by the child and family to help promote the child's health. Family support services exist in all communities to help families with the rearing of healthy children and managing family stressors. Community programs often exist to support the health and development of children, parental competencies, and positive family relationships. Most programs are designed with the premise that no family is entirely self-sufficient and most can benefit from some external support. Examples of these family support services include the following:

- Head Start and Early Head Start
- Before- and after-school programs for children of working parents
- School-based health and counseling services
- Play groups for preschool children
- Peer support groups
- Social service programs offered by the faith community
- Home visiting programs for high-risk children and parents
- Job skills training, adult education, and literacy programs
- Crisis care and respite care programs
- Funding for military family support programs

Compile a list of the formal and informal family support services in your community. Nurses play an important role in linking families to the types of community support services they need after performing a family assessment and collaborating with families to identify and seek assistance most beneficial to their needs.

Nursing Roles in the Specialty Healthcare Setting

Pediatric nurses also provide care for children with acute and chronic conditions within hospital outpatient or specialty care ambulatory settings. Children may be referred to physician specialists for diagnostic workups or for the long-term management of their chronic conditions. In some cases health promotion, health maintenance, and episodic illness care are provided to children with chronic conditions in these settings. With experience, pediatric nurses working in a hospital ambulatory setting develop specialized knowledge and skill to meet the specific needs of the population of children cared for in that setting (Figure 10–2 ●). The roles for nurses in these settings are similar to those described for the health center.

Nursing Roles in the School Setting

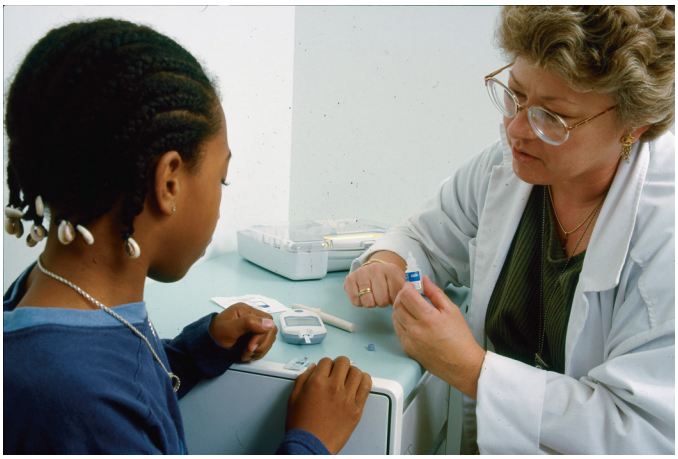
School nursing is a specialized practice of professional nursing in the education setting that advances the well-being, academic success, and lifelong achievement of students. School nurses care for children and youth with a wide range of physical and mental health challenges. They advocate for the children as policies are developed that affect the school community, such as nutritious school meals, recess activity time, and physical education classes for all students. School nurses are proactive in health promotion and health maintenance and serve as a safety net for children (Robert Wood Johnson Foundation, 2010).

An estimated 49.3 million children and adolescents attend public schools in the United States, and an estimated 13% have a known medical condition or disability (U.S. Department of Education, National Center for Education Statistics, 2011). Approximately 4% to 6% of children have daily medications administered at school for conditions such as asthma, diabetes, and seizures (Clay, Farris, McCarthy, et al., 2008). Children with complex health conditions (e.g., dependent on medical technology, such as peritoneal dialysis, tracheostomies, and ventilators) need nursing and other healthcare services in the school setting (Raymond, 2009). These include children who are medically fragile. (See Chapter 12 for a discussion of children with chronic conditions and planning for their care in the school setting.)

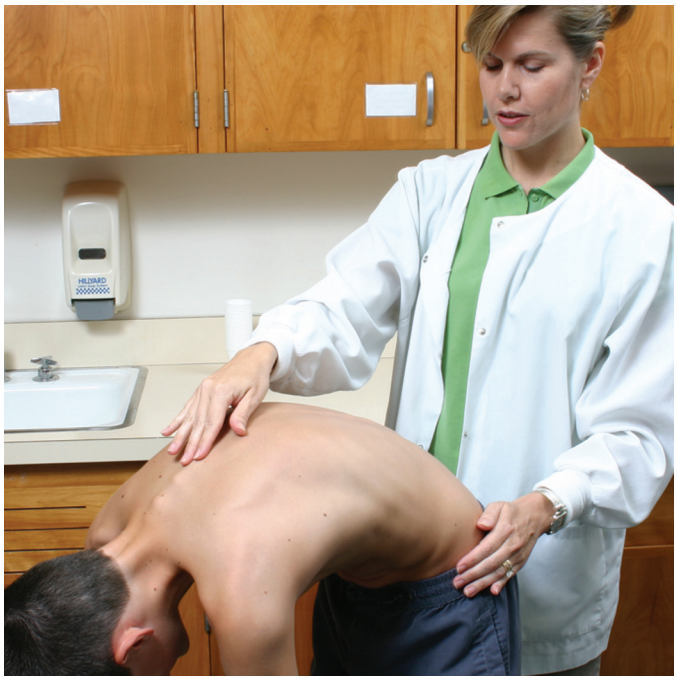
The breadth of school health issues addressed by school nurses is illustrated in national health objectives published in *Healthy People 2020*. *Healthy People 2020* objectives that relate to school health issues include the following (U.S. Department of Health and Human Services, 2010):

- Increase the proportion of elementary, middle, and senior high schools that provide comprehensive school health education to prevent health problems in the following areas: unintentional injury, violence, suicide, tobacco use and addiction, alcohol or other drug use, unintended pregnancy, HIV/AIDS and sexually transmitted infections, unhealthy dietary patterns, and inadequate physical activity.
- Increase the proportion of elementary, middle, and senior high schools that have health education goals or objectives that address the knowledge and skills articulated in the National Health Education Standards.
- Increase the proportion of public and private schools that require students to wear appropriate protective gear when engaged in school-sponsored physical activities.
- Reduce weapon carrying by adolescents on school property.
- Increase the percentage of schools with a school breakfast program and offer nutritious foods and beverages outside of school meals.
- Increase the proportion of states and school districts that require regularly scheduled elementary school recess.
- Increase the proportion of the nation's public and private schools that require daily physical education for all students.
- Increase the proportion of adolescents who spend at least 50% of school physical education class time being physically active.
- Increase the proportion of children and youth with disabilities who spend at least 80% of their time in regular education programs.

The school nurse plans, develops, manages, and evaluates healthcare services to all children in the educational setting. Other roles of the nurse in the school setting include the following: maintaining infection control, participating on teams to develop student individualized education plans (IEPs) and individualized health plans (IHPs), updating health records, collecting data on services provided to students, consulting with health teachers about educational topics, investigating environmental safety hazards, developing an emergency preparedness plan, and planning for crisis intervention and support services.



● **Figure 10–2** Nurses often assume a larger role in working with children and families with a chronic health condition in the hospital ambulatory setting. Developing a care plan and educating the family to manage type 1 diabetes is an important role of this pediatric nurse who is also a nationally certified diabetes educator.



● **Figure 10–3** The school is often the setting for screening tests of large groups of students to identify those who may have a health problem that could interfere with learning. Screening tests are often organized so all children in a particular grade are assessed, such as scoliosis screening for children in fifth grade.

The traditional tasks of screening, first aid, and monitoring immunization status are still performed (Figure 10–3 ●). In many cases, the nurse works with families of the students to ensure that needed care is provided. See Chapter 12 for more information on IEPs and IHPs.

Collaboration with the other health professionals in the community is also important to promote health in the school setting, as the following examples illustrate:

- Partnering with the school physician consultant to discuss and update standing orders for the care of children. These standing orders usually address urgent and emergency care potentially needed by students and the variety of student healthcare problems that may occur.
- Working with the parent–teacher association and other community organizations to organize health fairs and injury prevention programs for students.
- Communicating with the child's primary healthcare provider or pediatric specialist about a child's specific health condition that needs to be effectively managed in the school setting. It is essential to have the parent's permission to obtain patient information and to follow confidentiality requirements. The school nurse has regular opportunities to monitor the child's health status and to provide information that may help the child's healthcare providers with ongoing condition management.

In some communities, school-based health centers provide comprehensive physical, dental, reproductive, and mental health services plus health education to students. Care is often provided by a multidisciplinary team of nurse practitioners, physicians, physician assistants, mental health providers, and other supporting staff. The school nurse may collaborate with a school-based health center by identifying students to receive services and then helping to implement recommended care to the student in the school setting.

Preparation for Emergencies

Because children spend so much of their day in school, this setting is a common location of injury and acute illnesses. The school nurse often works with school administrators, the school physician consultant, and the local emergency medical services (EMS) agency to develop a response plan for true emergencies. School personnel (administrators, secretaries, and health aides) also need training to identify an emergency that requires activation of the local EMS system and to provide emergency care until the EMS providers arrive.

Other potential emergencies can occur during school hours, such as natural and man-made disasters, and behavioral crises (e.g., school shootings). Nurses may participate in planning committees to develop a school emergency operations plan, a community-based coordinated response plan for the incident. See page 243 for more information. Children experiencing a traumatic event may need psychologic support (see Chapter 28).

Facilitating a Child's Return to School

The school nurse also helps the child return to the classroom following an acute illness or injury. Examples include making environmental adaptations, creating an individualized health plan (IHP) when a new health condition is diagnosed, or revising the IHP when a significant change in the status of the child's chronic condition has occurred (see Chapter 12). The child's parents or the pediatric nurse in the hospital or community setting may initiate the request to coordinate the child's return to school. Educational materials about the child's condition can be recommended to educate students, faculty, and staff. The school nurse then begins to work with the family to prepare teachers and school administrators for the child's special needs, such as limited mobility or medications. The child's teacher and classmates can be prepared for the child's physical changes if

Clinical Reasoning Acute Asthma Episode at School

Lani, 8 years old, is anxious because she is having more trouble breathing than usual. Her teacher notices her breathing difficulty and sends Lani to the school nurse for treatment. Lani has a nebulizer at school, and this treatment often relieves her symptoms and allows her to return to classes. In this case Lani's acute asthma episode does not respond to the treatment, so the school contacts her mother to pick her up from school and take her to the emergency department.

What special arrangements are needed to permit a child to receive care for asthma or another chronic condition while at school? See Chapter 20 and *Evidence-Based Practice: Improving Asthma Management at School* for more information about asthma management.

Evidence-Based Practice Improving Asthma Management at School

Clinical Question

Because of the potential for frequent absences and the need to manage their condition at school, what are some strategies for helping children with asthma to improve their school performance?

The Evidence

Children with persistent asthma from 36 schools ($n = 240$) with a mean age of 11 years participated in a randomized controlled trial to determine if supervised asthma therapy at school would increase adherence to inhaled steroid therapy compared to parent-supervised asthma therapy. The three outcome measures were poor asthma control, defined as one or more school absences due to respiratory illness or asthma each month, using a rescue inhaler more than 2 times a week, or one or more peak expiratory flow meter (PEFM) readings in the red or yellow zone. All study children had the same risk of poor asthma control episodes as the study began. Use of the dry-powder inhaler was supervised by the study's staff for children in the school treatment group. Study findings revealed improved asthma control in the school-based treatment group (Gerald et al., 2009).

A second study recruited 530 children with persistent asthma, ages 3 to 10 years, from 67 schools for a randomized controlled trial with school daily-observed therapy compared to parent-administered therapy. Families of all children received a diary to track the child's symptoms, which were retrieved by a monthly telephone interview. Children in the school treatment group had more symptom-free days, significantly fewer nights with symptoms, fewer days with activity limitations, and fewer school absences than the children in the parent-administered therapy group. Children in the school treatment group were also less likely to have an asthma episode requiring oral prednisone treatment (Halterman et al., 2011).

The Asthma Inventory for Children (measuring asthma self-management behaviors) and the Asthma Belief Survey (measuring asthma self-efficacy) were tools used to evaluate the perceptions by 81 African American children between the ages of 7 and 12 years. Findings revealed that the children who scored higher on the self-efficacy scale also scored high on the asthma self-management scale. This means that the children who believe they can manage their asthma well also reported using more self-management behaviors to control their asthma (Kaul, 2011).

Best Practice

Effective strategies, such as supervised medication administration to reduce the number of acute asthma episodes and the number of school absences, are important. Education that teaches asthma self-management may help children develop confidence in their ability to manage their asthma. Prior research revealed a relationship between how well the child self-manages his or her asthma and the child's asthma symptoms and morbidity (Kaul, 2011).

Clinical Reasoning

When in a school clinical experience, identify the number of children with asthma and how many children report to the school nurse with asthma episodes in a month. What strategies has the school nurse used to reduce the number of asthma episodes in children with persistent asthma (e.g., educating students about self-management, providing medication at school, or seeking an asthma action plan)? How effective are those strategies in reducing asthma episodes or reducing the severity of episodes in individual children?

appropriate. Sometimes the teacher's expectations of the child need to be modified, such as a child with a mild brain injury who may have decreased ability to concentrate for several weeks during recovery.

Nursing Roles in the Childcare Setting

An estimated 12 million children under 6 years of age receive care in out-of-home childcare settings while parents are at work (Crowley & Kulikowich, 2009). Many types of childcare arrangements exist, such as in-home care by a family member or nanny, a babysitter cooperative, a licensed childcare family home setting for up to five children, or a licensed childcare center for six or more children.

States establish minimum licensure requirements and guidelines for the safe operation of childcare settings that address the staff qualifications and training requirements, staff-to-child ratio, safe food handling, safe health practices, and environmental safety. Guidelines for the safe operation of childcare centers are available through the National Resource Center for Health and Safety in Child Care. Head Start childcare centers are federally mandated to screen children for medical, dental, and developmental problems using licensed health consultants (Gupta, Pascoe, Blanchard, et al., 2009).

Nurses can assume an important consultant role in the establishment of a childcare center's policies for health practices, teaching staff about safe health practices, and monitoring and promoting health practices in the setting. The nurse consultant can also teach staff to identify children with illnesses and to provide first aid for injured children. Nurses may provide health screening and direct care in childcare centers that care for ill children.

Reducing Disease Transmission

Children attending childcare centers are at increased risk for infectious diseases. Children are close together in large numbers, put things in their mouths, may be contagious before symptoms

Growth and Development
Childcare Outcomes

When low-income children receive quality childcare that addresses their health and developmental needs and provides support to parents, numerous benefits have been noted in research (e.g., improved behavioral outcomes in school-age children, improved school readiness, and improved academic outcomes). Other long-term studies of quality childcare outcomes for low-income children have found fewer juvenile arrests, enhanced academic achievement, and delayed average age of childbearing (Rosenthal, Crowley, & Curry, 2009).

Clinical Tip

The effectiveness of nurse consultants in licensed childcare centers in five California counties was evaluated. Of the 73 childcare centers with nurse consultants, findings revealed a greater number and higher quality of written health and safety policies consistent with national standards in contrast to 38 comparison centers. The centers with nurse consultants also improved many health and safety practices, such as handwashing guidelines and preparing for an emergency (Alkon, Bernzweig, To, et al., 2009).

occur, and are susceptible to most infectious agents. The nurse can educate and work with the childcare center manager and staff to reduce disease transmission in the following ways (Mink & Yeh, 2009):

- Teach staff when and how to perform hand hygiene, manage a child's secretions, sanitize toys and surfaces, and treat a child's cuts and scrapes.
- Develop guidelines for diapering infants and toddlers to reduce disease transmission.
- Check each child's health daily for signs of acute illness (e.g., behavior changes, rashes, fever, vomiting, diarrhea, or eye drainage). Isolate and care for an ill child until he or she returns home.
- Monitor the immunization status of children and plan for the exclusion of unimmunized children when a vaccine-preventable disease occurs in a child attending the facility (see Chapter 16).
- Develop and follow guidelines for safe food preparation and handling.

Health Promotion and Health Maintenance

Health promotion activities within a childcare center promote the child's highest level of functioning and development, such as activities to stimulate physical, cognitive, and emotional development, and nutritious food to foster growth. Health maintenance activities are those that prevent injury or disease, such as immunization monitoring, infection control, and practices like putting infants on their back to sleep. See the *Sudden Infant Death Syndrome* section in Chapter 20 for additional information.

Environmental Safety

To prevent child abduction, ensure that the childcare center maintains a current list of family members who may take a child from the facility and has guidelines for verifying identity when necessary.

The nurse should inspect the childcare environment to identify hazards that could cause injury to the children. Cleaning supplies and other toxins must be stored in a locked cabinet to prevent exposure. Inspect toys used by children to ensure that there are no sharp edges or points, small parts, or pinching parts. Check the safety of playground equipment (Figure 10–4).

Figure 10–4 Assess the childcare center's environment for safety hazards. Check the area around playground equipment, making sure there are wood chips or cushioned tiles under the equipment. Inspect the playground equipment for protruding screws, loose nuts and bolts, and instability at least monthly.

Emergency Care Planning

As in the school setting, guidelines for assessing and identifying the child with an emergency health condition and the development of an emergency care plan for an acutely ill or injured child are essential. This plan should include giving first aid, calling EMS to transport the child to the emergency department, notifying the parent, and accompanying the child to the emergency department until the parent arrives.

Health Promotion

Nurses working with a childcare center can design and offer health education programs for the children (such as tooth brushing, hand hygiene, blowing the nose into a tissue, and coughing or sneezing into the elbow or shirt sleeve if a tissue is not available) to promote healthy habits.

Nursing Roles in the Home Healthcare Setting

Home health care is a component of the continuum of comprehensive health care provided to children and families. Children with episodic or long-term health conditions can benefit from home health services to promote their optimal function and participation in the family. Home health services may be provided to children with complex health conditions, short-term acute care conditions, and even for hospice care (see Chapter 13 for end-of-life care).

Pediatric in-home services for children with complex healthcare conditions or who are medically fragile have increased because of the increased survival of preterm infants, infants with complex congenital conditions, children with severe trauma, and children with life-limiting or life-threatening conditions (Cervasio, 2010). Technologies now used in the home include ventilators, suction, peritoneal dialysis, enteral feeding tubes, and pumps for intravenous fluids, medications and feeding tubes.

The home environment is believed to improve the long-term care of these children by integrating them into the family and promoting their growth and development. The family often feels as if some control over family life is achieved by having the child in the home. However, some families feel like they have no choice about assuming responsibility for the ongoing nursing and technologic care of their child who is medically fragile (Boroughs & Dougherty, 2009). This causes stress as the family attempts to balance the child's constant care requirements and needs of the entire family. Healthcare providers and insurers are challenged to simultaneously address the child's illness and developmental needs while providing the support families need so these children do well in their home environments.

Home health care is considered a cost-effective alternative to hospital inpatient care. Because health insurers often cap the total health benefit for these children, state Medicaid programs are often the primary payer for these services (Sender, 2011). The family also has a financial burden because of paying some costs out of pocket—for medications, supplies, and transportation. A parent may have to give up employment to care for the child, which may also be required to qualify for Medicaid.

Nurses need a variety of skills and knowledge to work in the pediatric home care setting, such as:

- Knowledge and experience in pediatric assessment and acute care practice with various medical technologies used. These skills enable nurses to provide direct care, teach the family and child self-care practices, and monitor the child's progress.
- The ability to adapt, be creative, and be prepared to deal with the unexpected, such as equipment malfunctions.
- An understanding of community resources, financing mechanisms, and multiagency collaboration; and good communication skills.
- Knowledge of the community's health resources to help families obtain services that match the child's and family's needs.
- An understanding of the community's cultural diversity and the cultural values of the families served.
- Skill in collaborating with other healthcare team members.

Home care nursing is focused on assisting a family to gain a greater ability to more independently manage the child's care related to a chronic condition or an acute condition following hospital discharge. Nurses also work with the family in the home care setting to promote or restore the child's health while attempting to minimize the effects of the disability and illness, including terminal illness (Figure 10–5 ●).

● **Figure 10–5** Nurses provide both short-term and long-term services to families in the home setting. In some cases, families need support for a short time after the child is discharged from the hospital following an acute illness. In other cases, families need assistance with complex nursing care for the child assisted by technology.

NURSING MANAGEMENT *for the Child in the Home Healthcare Setting*

Nursing Assessment and Diagnosis

Home health nurses assess the home, the child, and the family during intermittent skilled nursing visits. Assessment of the home is focused on safety of the environment and the resources for the child's care. When working with the hospital discharge planner or case manager to initiate home health services, the following aspects of the home are assessed:

- Home readiness (safe sleeping arrangements, adequate supplies, ability to meet nutritional and fluid needs, telephone access, heat, electricity, refrigeration, lack of any communicable diseases in the home, and safe access into and out of the home)
- Potential hazards related to the child's age, condition, and requirements for technology-assisted care (e.g., extension cords used to plug equipment into electrical outlets)
- Features of the home environment that could cause an acute illness (e.g., use of a woodstove or fireplace for heating that could cause respiratory distress, active renovation of a house built before 1960 that releases lead dust, and family members who smoke)

Assessment of the child is focused on the current health status, growth, developmental progress, and social interaction with family members and healthcare providers. The potential for abuse and neglect is assessed, because children with complex health conditions are at higher risk.

Family strengths and coping abilities are evaluated along with parenting methods (see Chapter 2). Parents' skills in giving the child needed medications, performing care procedures,

Developing Cultural Competence
Assessment

When assessing the child and family in the home, recognize when potential conflicts might exist between recommended medical care and the family's preferences. Identify which family member is most influential in decisions about the child's care. Use open-ended questions to talk with families and understand the problem from their point of view. Ask family members to identify the issue, why it is a concern, and the impact on their lives. Information gained can be used to educate the family and to develop a nursing care plan that integrates the family's preferences for the child's care.

and detecting important signs of the child's changed health status are assessed. The presence of siblings, their developmental and physical status, and their needs should also be assessed.

Examples of nursing diagnoses that could apply to the family as the child transitions from the hospital to home setting include the following (NANDA-I © 2012):

- ***Home Maintenance, Impaired*** related to insufficient family organization and planning
- ***Coping: Family, Compromised*** related to multiple stressors in caring for a child with a complex health condition
- ***Therapeutic Regimen Management: Family, Ineffective*** related to complexity of medical interventions
- ***Social Interaction, Impaired*** related to therapeutic isolation

Planning and Implementation

Nursing care should focus on promoting an environment within the home for the child to develop, learn social skills, and gain a sense of identity based on family values. Nurses help families in the home setting in the following ways:

- Ensuring that the child will be safe at home
- Providing competent nursing care to the child
- Educating parents about the child's condition and signs that may indicate a change in health status
- Educating family members to safely administer medications and feedings, use medical equipment, and perform medical procedures
- Demonstrating methods to promote the child's development
- Linking families to community resources, including support groups, respite care, and therapeutic recreation
- Assisting families in time management skills
- Advocating for increased health insurance coverage or locating other sources of financial assistance

Collaborating with the Family

The nurse works in partnership with the family in the home to promote the health of the child and of the family unit. The nurse must develop a respectful and trusting relationship with the family, remembering that control belongs to the family in the home care setting. Open communication is essential so the nurse can learn what is important to the child and family, and then modify the nursing care plan when appropriate.

Role expectations of the nurse, especially when in the home for extended hours, must be clearly understood to reduce stress in the family. House rules for such things as parking, private areas in the home, door to use, where to store belongings, and routines need to be negotiated, and then those rules need to be followed. The success of home care is also based on effective cultural communication. For example, some Jewish families follow strict dietary guidelines that do not permit milk and meat to be served together in the same dishes. The nurse needs to abide by the dietary guidelines and observe the family's food preparation practices.

The range of nursing care that may be included in a child's home care plan may include sensory stimulation, routines of daily living, positioning and skin care with gentle handling, respiratory care, nutrition and elimination, medications, and other supportive therapies. Other providers, such as physical therapists, speech-language therapists, occupational therapists, and social workers, may provide other healthcare services in collaboration with the home health nurse.

A parent or guardian should be present when nurses provide home care. Informed consent is needed for invasive treatments and decisions for provision of needed emergency care to prevent serious consequences. A plan for communication of key patient-care information (e.g., daily notes both the family members and nurse write) and meetings with family members at set intervals are important for the families and nurses to share information. This also helps the family members evaluate how well the nurse meets their expectations for care of the child.

Supporting the Family

When home health nursing is episodic, parents of children with complex conditions often feel stressed by the constant care demands. They may be sleep deprived when caring for the child 24 hours a day and need some assistance in identifying alternative care options, such as **respite care**, a service that allows parents to take a short break away from the daily care (see Chapter 12 for more information). Families often need support in identifying and advocating for potential services that may be of value to their child and financial resources for which they may be eligible. The home health nurse is often valued as a resource that can provide support, educate the family about managing the child's care, and advocate for resources for the family (Koshti-Richman, 2009).

Emergency Preparedness

The nurse should help the family develop an emergency care plan for any child whose condition could worsen rapidly and become life threatening (e.g., severe congenital heart defect, tracheostomy, or apnea), or be beyond the care that the parents or home health nurse can provide. The plan should provide guidelines for when to call 9-1-1. The emergency care plan should include an essential medical history that provides the emergency care providers with enough information to understand the child's health condition, to prevent delays in disease-specific treatment, and to minimize unnecessary interventions until the child's personal physician can be consulted.

Families Want to Know Home Evacuation Plan

Developing a home evacuation plan is important when the family has one or more children with special healthcare needs. Important steps to have families take in developing the plan include:

- Have working smoke and carbon monoxide detectors in the home and teach children what the alarm means. Make sure batteries are changed twice a year.
- Draw a diagram of your house. Mark all windows and doors. Plan two routes out of every room. Think about an escape plan if the fire starts in the kitchen, bedroom, or basement.
- Figure out the best way to get infants and young children out of the house. Will you carry them? Is there more than one small child, and if so, how will you get all the small children out if you are the only adult?
- Teach preschool and school-age children to follow the escape plan by crawling, touching doors, and going to the window if the door is hot. Show children how to cover their nose and mouth to reduce smoke inhalation.
- Prepare an alternate fire escape plan in case you are alone with the child when the fire begins.
- Keep home exits clear of toys and debris.
- Select a safe meeting place outside the home. Teach children not to go back inside the burning home.

Families should develop a plan for safe evacuation of the home in case of fire or other emergency. This is very challenging when the child cannot mobilize independently and requires equipment for continued survival or quality of life. See *Families Want to Know: Home Evacuation Plan* for information to help families develop a plan for safe evacuation of the home.

When the child is dependent on technology, the family should notify the power company so that the home is on the high-priority list for service after power outages. Backup generators may be needed if electrical power for life-sustaining equipment is essential. The child should also be registered for a disaster shelter that can accommodate the healthcare needs of the child and at least one caregiver when major power outages occur.

Evaluation

Expected outcomes of nursing care include the following:

- Care of the child's medical needs is integrated into the family's routines when possible.
- The family has an emergency care plan for the child in the event of a disaster, a weather emergency, or if the child's condition suddenly worsens.
- The home health nurse and family work in partnership to promote the child's health and growth and development.

ASSESSMENT OF COMMUNITY NEEDS AND RESOURCES

Community Assessment

Community assessment is a process of compiling data about a community's health status and resources to develop a public health plan to address the health needs of a target population within that community. For example, the target population could be all children, a specific age group, or even a special group of children (such as those with a chronic condition). The community assessment process involves community partners but follows the nursing process format. Information gained about the number of individuals with the health need and knowledge of existing resources helps health professionals determine if additional programs or resources are needed. An overview of the community assessment process is described, but additional resources such as a community health nursing textbook are needed to complete a full assessment.

Community assessments may be conducted for the following reasons:

- A request is made by interested community advocates or the local health department.
- Justification is needed to fund a new or expanded healthcare program.
- Evaluation of responses to healthcare programs or interventions (such as immunizations, injury prevention programs, or services targeted to new immigrants in the community) may provide the data to determine if the children with greatest needs have been appropriately targeted and are benefiting equally from the intervention.

The focus of a community assessment is on the target population, for example, ensuring that all children in the community, regardless of socioeconomic status and racial group, are considered when trying to ensure access to care or specific interventions—such as injury prevention programs, immunizations, school health services, or suicide prevention programs.

A community assessment is often initiated because one or more individuals (i.e., concerned parents, school nurse, or community leader) are concerned about a health or social issue, such as a child who is severely injured in a pedestrian crossing on the way to school. The concerned individuals partner with other **stakeholders** (all community residents, policy makers, health providers, and funders concerned with the outcome of the assessment) to investigate if this is an isolated event or if similar incidents have happened at other locations and to identify ways to protect other children. Community partners for this investigation and community assessment may include nurses, family members, local organizations (e.g., Kiwanis, Safe Kids, parent-teacher association), the faith community, the local trauma center, an epidemiologist, elected officials, and health department representatives.

Family members, a pediatric nurse, and a school nurse are important members of the group when pediatric health issues are being addressed.

Developing Cultural Competence
Integrating Cultural Groups into Community Assessments

Community assessment leaders should invite community members representing different cultural groups to participate in the process. They help provide an important perspective of the community's needs and help identify culturally appropriate and culturally acceptable strategies to address the health problem.

The first step in beginning a community assessment is to clearly define its purpose and scope to keep the process focused. The purpose is often associated with a specific problem that an advocate or community leader would like to have addressed by the community. Example issues could be one of the following:

- Several child pedestrians and bicyclists have been injured or killed by motor vehicles over the past 3 months in the same neighborhood.
- Two children drowned at the local lake in a boating incident.
- Three teens from a local high school have committed suicide in the past 2 months.
- The number of children who are fully immunized on school entry has decreased in the last year.

Once the purpose and scope of the assessment are determined, various factors that influence the health of a community should be considered when collecting assessment data (Clark, 2008, pp. 351–356).

- Demographic characteristics such as age composition of the community, birth statistics, age-specific and cause-specific mortality rates, racial composition, and **morbidity** (incidence and prevalence of certain diseases), as well as the immunization status of children
- Community prospects for continuing growth or economic challenges, cohesion of the community in dealing with past health problems or crises, existing tensions between various community groups, adequacy of personal safety services, communication networks, stresses in the community, and incidence of crime, homicide, and suicide
- Type of community (rural, urban, suburban), size, climate, topographical features, housing adequacy, water supply, waste disposal, and potential hazards that could lead to a disaster
- Sociocultural characteristics such as local government and community leadership, transportation, income and education levels, employment rates, occupations, family composition, faith communities, cultural groups represented, language barriers to health care, number of homeless families and children, recreation, shopping, and social service agencies
- Behavioral characteristics such as nutrition and specific dietary patterns, use of harmful substances, exercise and recreational opportunities, and population use of safety practices
- Health services available to children in the community covered by health insurance, Medicaid, or the State Children's Health Insurance Program (SCHIP); services available to uninsured children; and barriers to healthcare access

Stakeholders next make plans for data collection (types of data to be gathered, sources of data, and methods for obtaining the data) and data analysis. Some of the best data to use are those calculated as rates, such as the following:

- $\text{Birth rate} = \dfrac{\text{number of births in a state in year}}{\text{total state population (same year)}} \times 1{,}000$
- $\text{Mortality rate} = \dfrac{\text{number of deaths in a state in a year}}{\text{total state population (same year)}} \times 100{,}000$
- $\text{Age-specific mortality rate} = \dfrac{\text{number of deaths in children aged (e.g., 1 to 4 years) in a year}}{\text{total population of children aged 1 to 4 years (same year)}} \times 10{,}000$
- $\text{Cause-specific mortality rate} = \dfrac{\text{number of deaths due to (e.g., injury) in a year}}{\text{total state population (same year)}} \times 100{,}000$
- Incidence rate = number of new cases of a disease (e.g., type 2 diabetes) in a population in a specific time period
- Prevalence rate = number of children with a disease (e.g., asthma) at a point in time

National, neighboring state, and state data can be compared with community data using rates to determine how similar or different the community statistics are for the health problem.

Data may be collected from many sources. For example, the Centers for Disease Control and Prevention collects state data and calculates birth rates and death rates for all types of conditions. Data about population characteristics are available on the Internet from the U.S. Census Bureau (U.S. Census Bureau, 2010). Other potential sources of data include a state or local trauma registry; an immunization registry; community surveys; a telephone book for numbers of healthcare providers and faith communities; and local health agencies for such information as the number of child abuse incidents, trauma centers for injuries requiring hospitalization, clinics for specific services, and infants served by the WIC program. Law enforcement agencies may provide information on motor vehicle crashes, assaults, or homicides. Focus groups or interviews with key community representatives may provide information on perceptions of health needs (Clark, 2008).

An **epidemiologist**, a specialist with training in the study of patterns of diseases or health risks in a population, is often responsible for analyzing the data. Data trends are analyzed over several years to determine if the identified problem is a cluster of events that is part of a larger significant pattern. For example, the timing and clustering of events, such as the number of child

pedestrians and bicyclists killed or injured, provide a clue to explore recent changes in the community. Have traffic patterns changed because of construction? Does this happen every year as school sessions begin? Is it related to children enjoying spring weather after school? Once the data are collected and analyzed, the community group can then develop a plan to address the problem and have baseline data for evaluation of the planned community intervention.

Key community assets should also be identified during the data collection stage. A **windshield survey**, a walking or driving tour around a neighborhood or community for the purpose of identifying resources and characteristics of the community, often provides important information needed to plan interventions. What could be collected during a windshield survey to study child pedestrian injuries and deaths?

A community assets map can be developed to help identify the presence of some community resources such as its healthcare facilities, local library, grocery stores, recreation facilities, schools, and so on.

Planning and Evaluation

An intervention is planned and implemented after the collected data have been analyzed and the community health problem is more clearly described. The planning involves a collaborative effort with all the stakeholders contributing ideas, developing strategies, considering funding sources, and ultimately promoting and advertising the plan in the community. The collaboration often includes persons with specific skill sets who can take leadership roles with different aspects of the interventions. The planning group's knowledge of the cultural beliefs, primary language, income levels, reading level, sources of community health education, and potential community partners is valuable in designing the intervention. Knowledge about potential community funding resources or barriers helps in determining potential strategies that may be approved and endorsed by community decision makers.

The plan and interventions for the health problem need to be evaluated. Data collected before the intervention can serve as one comparison for the evaluation. Evaluation should also focus on the intervention and how well the target population received it, as well as the outcome, such as reduced injuries and deaths.

DISASTERS

Disasters are serious and massive events that impact many people and cause extensive damage, hardship, deaths, injuries, and psychologic trauma. Natural disasters include floods, ice storms, hurricanes, earthquakes, volcanic eruptions, tornados, and wild fires. Trains or trucks carrying toxic chemicals and nuclear waste that crash or explode may also cause a disaster. Terrorism is another potential cause of disasters and may involve the use of infectious organisms, explosive devices, toxic chemicals, or radioactive agents. (See Chapter 16 for information about infectious agents used for bioterrorism.) Disasters may cause death, injury, physical damage, psychologic trauma, and economic disruption.

State and federal agencies, hospitals, and health professionals are participating in **disaster preparedness**, community planning for responses to natural and man-made disasters that involve multiple casualties. Special planning for the needs of infants, children, and adolescents must be integrated into these efforts. Health services are needed to treat injuries and potential illnesses caused by contaminated water or other exposures.

Growth and Development

Developmental considerations must be considered during disaster planning, because young children may be unable to do the following (American Academy of Pediatrics [AAP], 2008; Kelly, 2010; Murray, 2010):

- Understand what is happening and why, or how to reduce the effects of the disaster.
- Cope with the stress of the disaster.
- Figure out how to flee or take evasive action to escape danger.
- Follow the instructions regarding evacuation or safe actions.
- Tell others they need help, or explain their health problem.
- Distinguish between reality and fantasy with repeated broadcasts of the disaster.

Children have special vulnerabilities during a disaster. Disasters are very traumatic for the children involved, and there may be immediate and delayed responses. Fear and panic are among the most common behaviors exhibited when families are not prepared (Murray, 2010). Children may lose their homes and personal possessions. They may be separated from their families. Friends, pets, and family members may be injured or dead. They may also have problems expressing their feelings about the disaster.

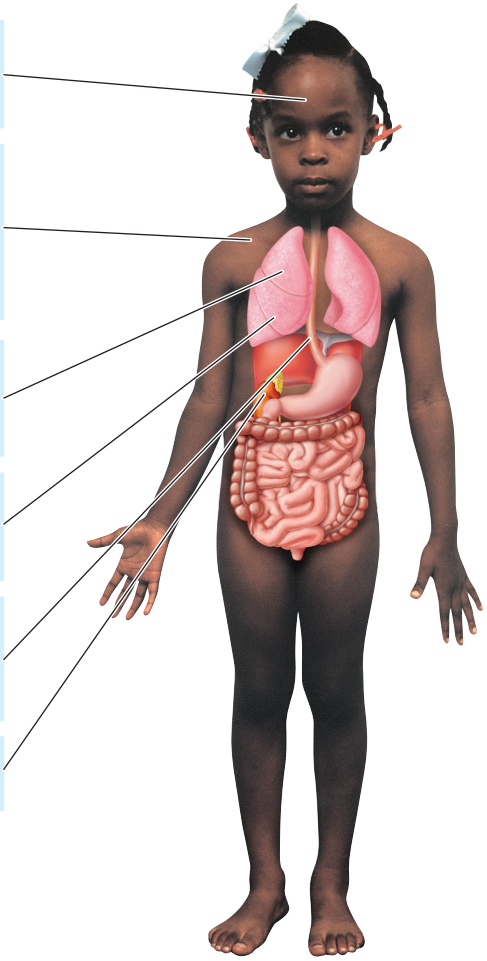
Clinical Manifestations

Injuries due to explosives or falling debris may affect any part of the body. Exposures to various chemicals and toxins may cause burning sensations in the respiratory tract, increased secretions, coughing, respiratory distress, tearing, blurred vision, eye pain, sweating, nausea and vomiting, bradycardia or tachycardia, seizures, muscle weakness, and burns to the skin. Few signs of radiation exposure are seen initially, but nausea, vomiting, and immunosuppression may develop.

Some common initial responses to a disaster, whether it is natural or man-made, include fear, anxiety, sadness, and confusion. The responses of children may be even greater if parents are also anxious or overwhelmed. Developmental stage, prior life experience, and the ability of the primary caregiver to meet safety and security needs will determine a child's response to disaster. Initial support interventions include the following (Murray, 2010):

- *Infants*—changes in sleeping and eating patterns, crying and irritability, exaggerated startle response, or apathy. Support involves providing a consistent caregiver and maintaining normal routines as much as possible.
- *Toddlers*—changes in appetite, disrupted sleep, nightmares, clinging behaviors, withdrawal, temper tantrums, and helplessness. Support involves providing a routine mealtime, play, bedtime routine, comfort item, and storytelling.

As Children Grow Response to Terrorism Agents



The child's size, physiology, and cognitive vulnerabilities lead to special considerations when the child is exposed to chemical, radiologic, or biologic agents of terrorism.

Clinical Therapy

Children have different physiologic responses to emergencies because of their smaller anatomy and developing organ systems. As a result, they require special management considerations when exposed to chemical or radiologic agents used by terrorists or to toxins released during another type of exposure, such as a train crash (see *As Children Grow* for more information).

The initial response to the scene of a disaster is to get the victims to fresh air and to quickly identify the level of injury or illness severity of all individuals. Emergency care and transportation to facilities that can provide needed care are initiated. Clinical therapy is focused on determining the type of exposure and providing immediate care to reduce the agent's effects.

Decontamination, the removal of chemicals and nerve agents from the skin, should be performed as soon as possible. Clothing is removed, and the child is washed with soap and water. Eye irrigation may be needed to reduce pain and eye damage. Decontamination reduces the child's exposure to the toxin and helps protect medical personnel who will care for the child.

Some children need fresh air, oxygen supplementation, a secured airway with an endotracheal tube, eye irrigation, fluids, and other symptomatic care. Burns or other injuries are cleaned and treated. Antidotes may be administered, such as potassium iodide for radiation exposure or atropine for nerve agent exposure.

- *Preschoolers*—regressive behaviors (bedwetting, thumb sucking, fear of the dark), alterations in eating and sleeping patterns, feelings of guilt, anxiety, and complaints of stomachaches or headache. Support involves letting the child know he or she is not responsible, allowing regression during stress, and promoting play and storytelling to express feelings.
- *School-age children*—preoccupation with the disaster, fear for themselves and their family, withdrawal from friends, decreased interest in daily activities, changes in temperament, and acting out. Support involves restricting media exposure, explanations of the event in age-appropriate terms, opportunities to express their feelings, and play therapies.
- *Adolescents*—anxiety, acting out, anger, changes in mood, stomachaches, headaches, and risk-taking behaviors. Adolescents may cope by helping in disaster response efforts. Support involves engaging adolescents in disaster response efforts when it is safe, encouraging them to talk with peers about their feelings, relaxation techniques, exercise, and journal writing.

NURSING MANAGEMENT

Disaster Preparation

Pediatric nurses in schools and other community settings play an important role in preparing families for a disaster. They can guide families to developmentally appropriate resources for talking with their children about disaster planning and disasters that occur. Families who discuss disaster planning with health

Growth and Development

Decontamination is a challenge with small children. The shower system should use lukewarm water to prevent hypothermia in the child. The shower system must be able to accommodate an adult who may be needed to hold and assist an infant or young child who is unable to follow directions (Scalzo, Lehman-Huskamp, Sinks, et al., 2008).

Health professionals also wear personal protective clothing and equipment that may cause young children to be more fearful, especially if supportive family members do not accompany them.

professionals are more likely to follow disaster preparedness recommendations, and children may cope better if involved in the family's disaster planning (Kelly, 2010). Children need to know what to do in case of a disaster and that police officers, firefighters, and emergency medical personnel are available to help them. They should be taught areas that are safest in the home, how to respond to smoke detector alarms and community alerts, when to call the emergency number, and how to contact the family members when separated (AAP, 2012).

Help the family develop a disaster plan for staying at home or for evacuation. Families must prepare to manage for 72 hours within their own home following a major disaster or epidemic. The family needs a 3-day supply of nonperishable food and bottled water, flashlights and batteries, a battery-powered radio, over-the-counter medications, and many other resources. Remember to have formula, diapers, bottles, powdered milk, moist towelettes, and diaper rash ointment for infants and children if needed. A plan for family pets should also be made. Refer to the Federal Emergency Management Agency (FEMA) website for the most current recommendations for family supplies to have on hand.

Parents should also carry phone numbers of out-of-town contacts, schools, and neighbors at all times. Developing a list of each family member's medications, clothing, food, water, and other essentials is important so the family can quickly pack and respond to an evacuation order.

Advance planning is needed to ensure that children assisted by technology have the resources needed in the event of a disaster. Help the family register with the designated community shelter caring for individuals needing electrical power for their medical equipment. Batteries for medical equipment should be fully charged at all times. Additionally, parents need to arrange for a durable power of attorney so that consent for emergency medical care can be available should the child and parents become separated during a disaster.

Emergency Response

Nurses are important first responders during disasters. They provide emergency health care for rescued victims and first aid for the walking wounded, work in disaster shelters, and perform general public health interventions (e.g., vaccines, sanitation, food and water). Nurses can provide a safe place for children, away from media and unfolding traumatic events, such as the rescue of dead and injured. Do not allow children to leave a scene unaccompanied by a parent or other responsible adult. Assess for panic reactions, unexpected behaviors, and changing conditions.

Psychologic Support

Nurses with knowledge of child and adolescent development can meet the psychologic needs of youth in disasters. Respond to families in a compassionate and supportive manner, comfort and console children, and provide information and some guidelines for positive coping. Recognize when more psychologic help is needed and get the child access to that additional help (Schonfeld & Gurwitch, 2009).

Once the initial disaster is managed and children return to home or other settings, children may need extra time with their parents. Parents should attempt to reestablish daily routines for school, meals, play, and rest as soon as possible. Encourage parents to listen and answer the child's questions about the disaster honestly and in language the child can understand. If they cannot answer a question, it is better to be honest and say so, but they also need to reassure the child that they are trying to do everything to keep the child safe. Encourage older children and adolescents to discuss the disaster with family members and peers if desired.

Because disasters may cause disruption for extended periods, the child may have prolonged periods of emotional distress. Identify children and families who do not return to normal life patterns. The child and family may need to be evaluated for post-traumatic stress reactions (PTSD). (See Chapter 28 for a discussion of PTSD.)

Clinical Tip

A 12-volt inverter is an inexpensive device that plugs into a car's cigarette lighter and delivers 110 to 120 volts of alternating-current power. This device, which is powered using the car's battery or by turning on the engine, can be used to keep a patient's life-support device working (AAP Committee on Pediatric Emergency Medicine and Council on Clinical Information Technology, 2010).

Critical Concept Review

Learning Outcome 10.1: Discuss the community healthcare settings where nurses provide health services to children.

1. Physician offices and health centers.
2. Specialty healthcare settings, including hospital outpatient clinics.
3. Public health clinics and homeless shelters.
4. Schools.
5. Childcare centers.
6. The home.

Learning Outcome 10.2: Compare the roles of the nurse in each identified healthcare setting.

1. Nurses in childcare centers and schools triage emergent problems, maintain immunization records of each child, perform regular vision and hearing screenings, and refer children for other therapies.
2. Nurses in a health center or physician's office perform routine growth and development screenings, administer immunizations, care for children with acute illnesses and injuries, and arrange for referrals to other community services.

Learning Outcome 10.2: Compare the roles of the nurse in each identified healthcare setting. *continued*

3. Nurses in specialty outpatient clinics care for children with chronic health conditions, provide health promotion and health maintenance care, and arrange referrals to other community services.
4. Nurses in the home assess the environment and coordinate and assist families to plan care for children with chronic conditions, acute illnesses, or terminal conditions, and arrange for referrals to other community services.

Learning Outcome 10.3: Assemble a list of family support services that might be available in a community.

1. School-based: Head Start, Early Head Start, before- and after-school programs for children of working parents, health and counseling services.
2. Play groups for preschool children.
3. Peer support groups, parenting programs.
4. Social service programs offered by the faith community.
5. Home visiting programs.
6. Job skills training, adult education, and literacy programs.
7. Crisis care and respite care programs.

Learning Outcome 10.4: Develop a nursing care plan for a child in the school setting who has short-term mobility limitations.

1. Obtain information from healthcare provider about specific mobility limitations and expected duration.
2. Identify availability of elevator and potential safety concerns related to use of steps in the school setting. Determine child's need for assistance with mobility.
3. Work with the child and family to develop an individualized school health plan to support child's mobility for school activities.
4. Inform all school personnel about the child's plan for safe mobility during school activities.

Learning Outcome 10.5: Examine five ways in which nurses assist families in the home healthcare setting.

1. Providing direct nursing care.
2. Educating family members regarding home management of the child's condition.
3. Assessing the home for concerns related to infection, health risks, sanitation, refrigeration, heat, and safety.
4. Educating the family to promote the child's growth and development.
5. Recommending community resources to support the family in its care of the child.

Learning Outcome 10.6: Summarize the special developmental needs of children to consider in disaster preparedness planning.

1. Young children do not have the ability to understand what is happening or how to reduce the effects of the disaster.
2. Teach children what to do in the case of a disaster most common for regions where they live (e.g., flooding, fire, tornado).
3. Help children learn which groups of people can help them.
4. Ensure that disaster centers have supplies for infants and young children (e.g., formula, food, diapers, baby wipes, recreational materials).
5. Teach care providers to observe children for panic reactions and unexpected behaviors during a disaster. Do not allow children to leave a scene without an adult.
6. Monitor the child following the disaster for posttraumatic stress response.

Clinical Reasoning in Action

Gavin is a 1-year-old coming into the clinic for his well-child check. The clinic is set up to see teen mothers and their babies for well-child visits and immunizations. Diane, his mother, has been bringing him there since he was born. Gavin qualifies for healthcare coverage through the Medicaid system in his state. He was born full term and has never been in the hospital or had surgery. Diane is still attending high school and plans to graduate this year. She and Gavin are living with her boyfriend's (Gavin's father) parents until they can raise enough money to live on their own. Gavin's father does not come to the well-baby visits. Gavin attends childcare while his mother is at school. He is up-to-date on immunizations so far and there is no significant family medical history. However, there is smoking in the home.

Gavin has been walking since he was 9 months old. He is able to point, wave, clap, and speak two words. He is able to drink from a cup and put objects into a cup. He has been growing and thriving at an appropriate pace. Diane describes him as a good eater and tells you that he is currently on whole milk. He has soft stools daily and five to six wet diapers per day. He sleeps through the night and takes two naps per day. Diane describes him as an extremely active child and has worked on childproofing everything in the house.

1. What is the role of the nurse in caring for Gavin and his parents in the clinic?
2. What data does the nurse collect to perform a family assessment?
3. What strengths and stressors are likely to be present in this family?
4. What information should the nurse provide to help Diane prepare for evacuation with Gavin because springtime flooding is anticipated?

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