

# Brain-Informed Behavioral Interventions

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# What you will learn from this talk

- What is normal aggression?
- The difference between
  1. Deliberate misbehavior or aggression
  2. Out of control, impulsive or explosive rage
- The brain's role in severe aggression
- Interventions for brain-based aggression



# Angry Child





# Explosive Child

- Glassy-eyed, jaw clenched, tight muscles= RAGE







BEHAVIORAL  
DISORDERS



# Causes of Severe Aggression

1. Possible genetic disorder?
2. Early brain injuries: premature birth with lack of oxygen, drugs/alcohol in pregnancy, difficult birth, malnutrition, physical abuse.
3. Head injuries, multiple concussions?
4. ADHD?
5. Disruptive Mood Dysregulation Disorder (DMDD)?
6. Bipolar Disorder?
7. Intermittent Explosive Disorder?
8. Adoption? Often no information.



# Moderate to Severe Aggression? Treatment Options

- Most experts suggest medication, parent training and psychotherapy.
- Behavioral interventions have low risk, but it may require a combination of medication and other interventions to manage severity.
- But, what medication protocol?





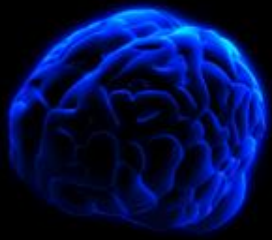
# Epidemic of Bipolar Disorder (BD)?

- Between 1994 and 2003 there was a 40 fold (4000%) increase in the diagnosis of BD in children and adolescents.
- Psychiatric researchers had broadened the criteria for pediatric bipolar, to include chronic irritability.
- But, research does not support this change.
  - Non-episodic irritability is unique; not a subtype of Bipolar Disorder (Geller et al. , 2008)



# Pediatric Neuropsychiatry

- The vast majority of the children being diagnosed with Bipolar Disorder were not classic Bipolar Disorder.
  - They show non-episodic (chronic) irritability, rather than classic (episodic) irritability.
- Non-episodic (or chronic) irritability appears to be a distinct condition, separate from Bipolar.
  - This is the basis for Disruptive Mood Dysregulation Disorder (DMDD) in DSM-5.



# DMDD: New Diagnosis

- Designed to replace “broad spectrum” Bipolar Disorder in children and adolescence.
  - In DSM IV, mania describes discrete week long episodes of irritated moods (episodic irritability).
  - In DSM 5, DMDD describes non-episodic (chronic) irritability with frequent temper outbursts.
  - DMDD is so new that research findings are on-going, but it is very similar to the concept of the National Institute of Mental Health’s Severe Mood Dysregulation findings.



# DMDD versus Bipolar Disorder

How does DMDD differ from Bipolar?

- A) First, it reflects non-episodic irritability (chronic) whereas Bipolar Disorder has episodes of irritability associated with mania.
- B) Also, it shows no euphoria or grandiosity, whereas Bipolar Disorder may show this during mania.
- C) Also, it shows no psychosis, whereas Bipolar Disorder may show this.



# Disruptive Mood Dysregulation Disorder (DMDD)

## A. Temper Outburst

- Severe recurrent temper outbursts to common stressors
- Beyond provocation
- Not consistent with age (developmental age 6+)
- Onset before age 10
- Never elevated mood or grandiosity

## B. Frequency

- Temper outbursts occur, on average, three or more times per week
- Between outbursts:
  - Mood chronically negative
  - Irritable, angry
  - Observed by others such as parents, teachers
  - For at least a year
  - In at least two settings
    - Home, school, peers





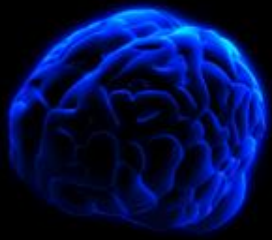
# Biological Markers for DMDD?

- BD rates do not vary by gender, but chronic irritability kids are mostly male (66-77%) (suggesting a distinct gender-based disorder).
- Parents of Bipolar kids are more likely (33%) to have BD themselves than parents of DMDD kids (2.7%), (suggesting a distinct genetic pattern).
- In 3 year follow-up, during adolescence, 1.2% of DMDD children had a manic episode, whereas 64% of truly Bipolar children had at least one manic episode.



# Treatment for DMDD?

- No treatment strategies have been established:
- But, Bipolar medications may NOT be needed.
- Experts agree that the selection of medications for the management of maladaptive aggression in youth is a major clinical challenge in pediatric mental health.

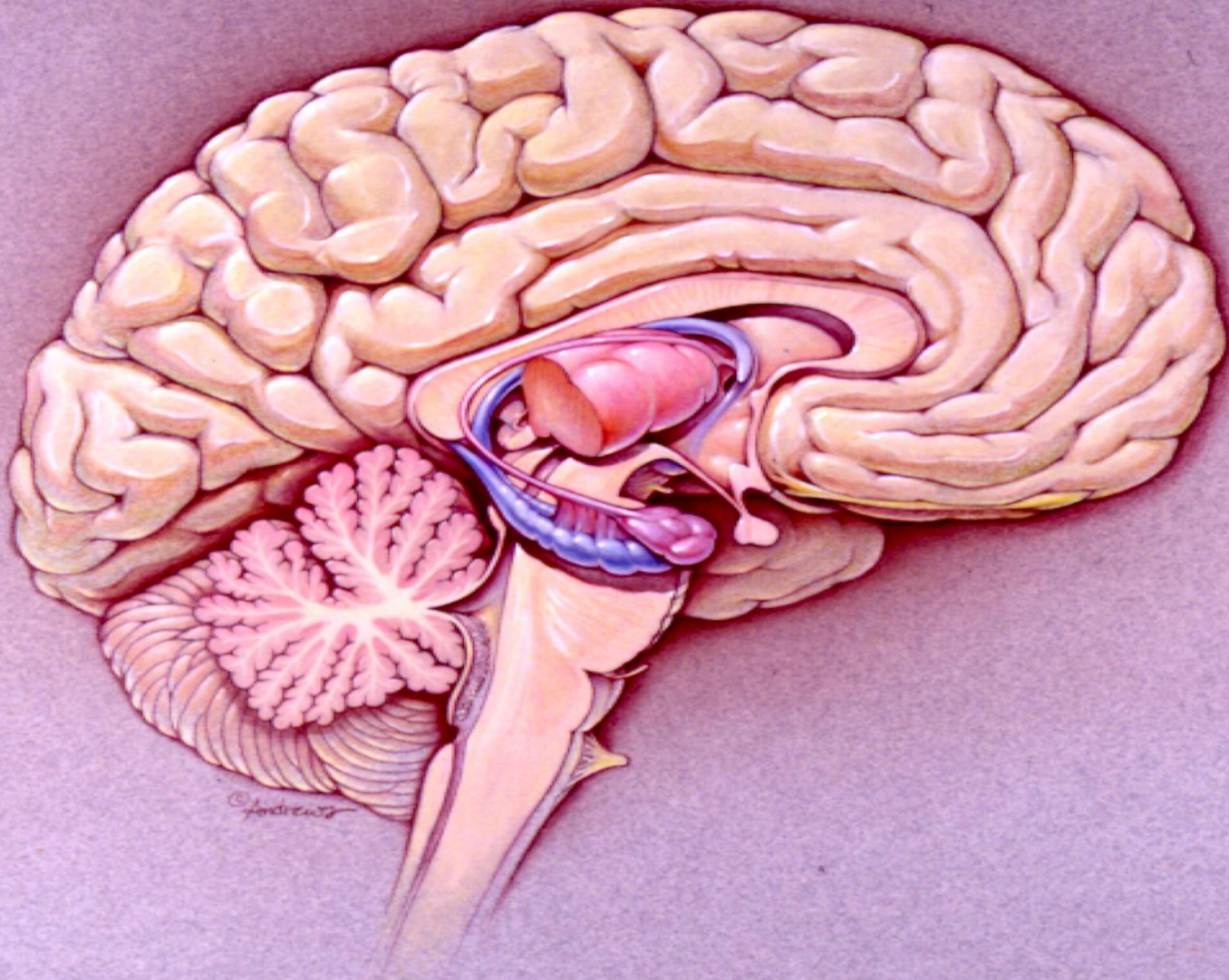


# Treatment Interventions

- Medications to address brain dysfunctions
  - 1) Anticonvulsant/Mood Stabilizers – Rages, Irritability
  - 2) Amantadine HCl - Impulsivity
  - 3) Stimulants – ADHD
- Psychosocial and Psycho-educational
  - 1) Psychotherapy (family and individual)
  - 2) Specialized academic interventions
  - 3) Skill-based therapies



# Impulse Control & Concentration

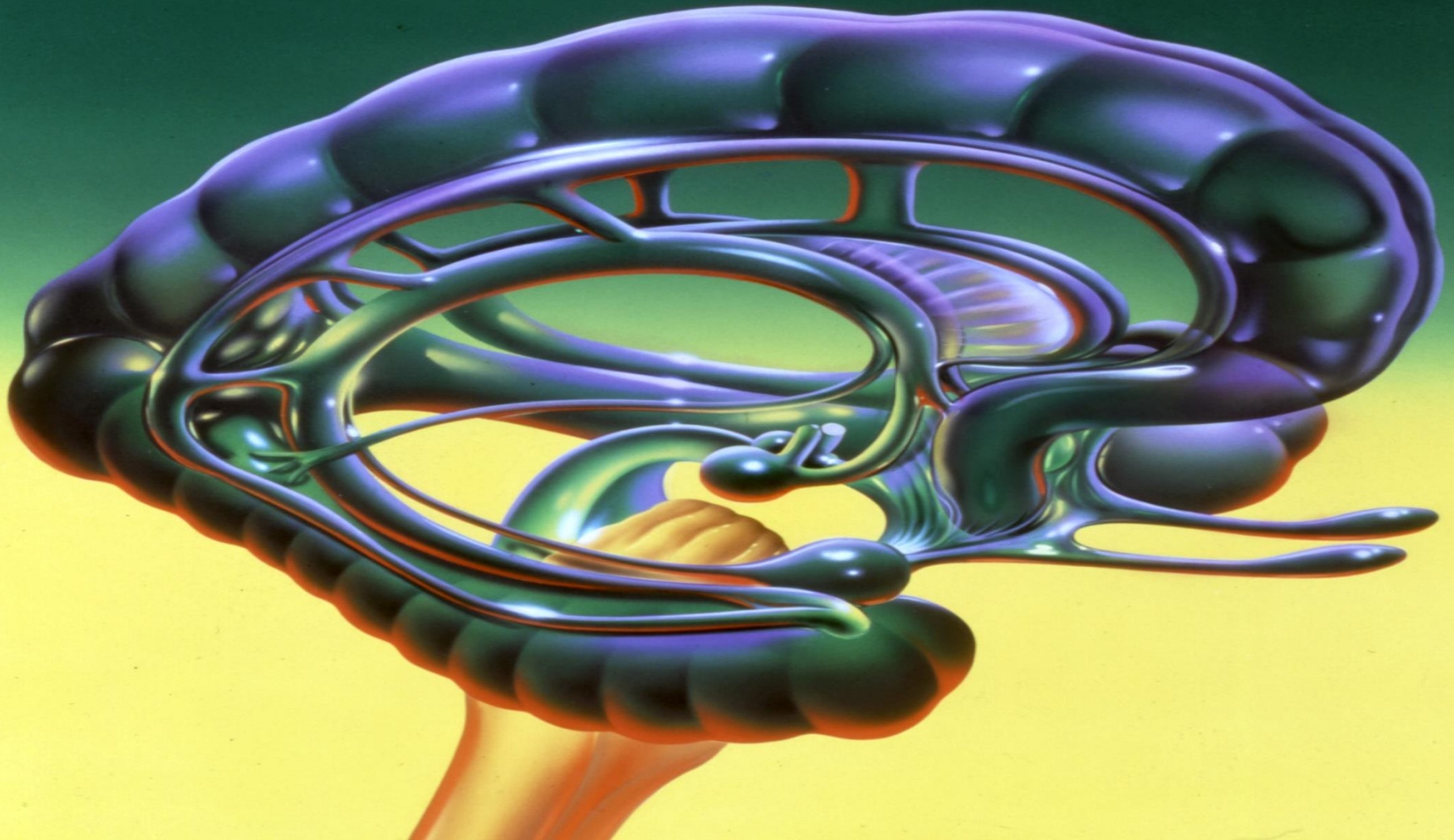






# Emotion Generation System

## [Limbic Brain]





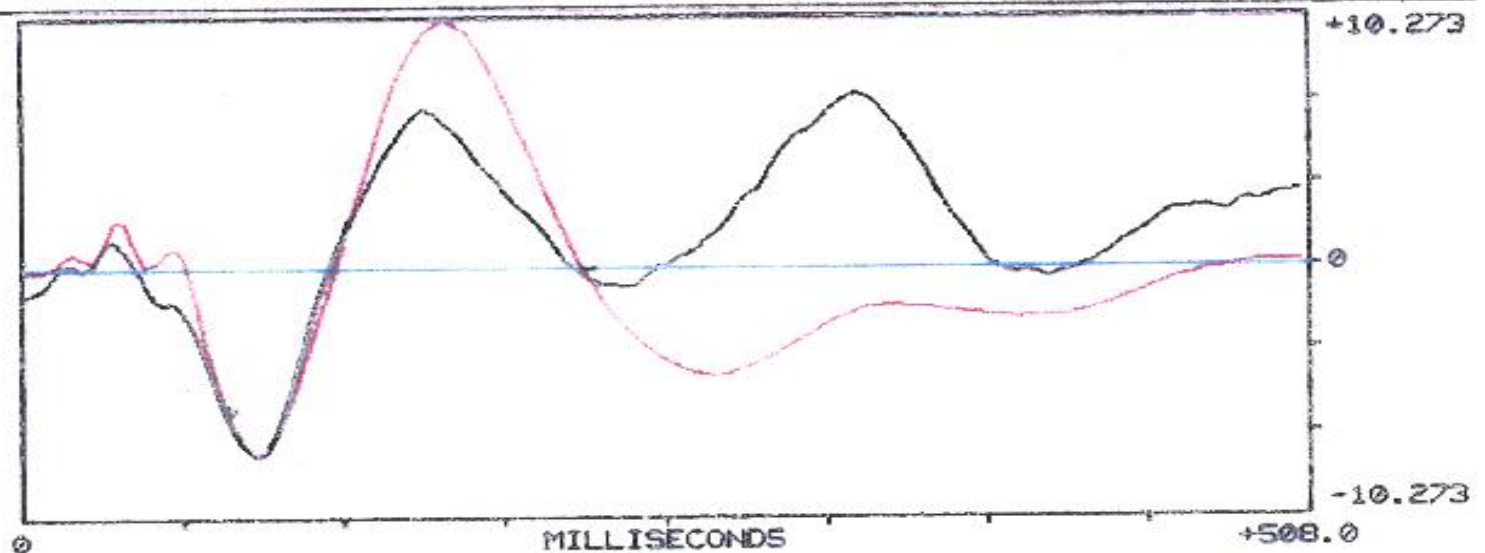


# Auditory Evoked Response

Age: 15.114  
Visit: 1  
Tue Apr 6 1993

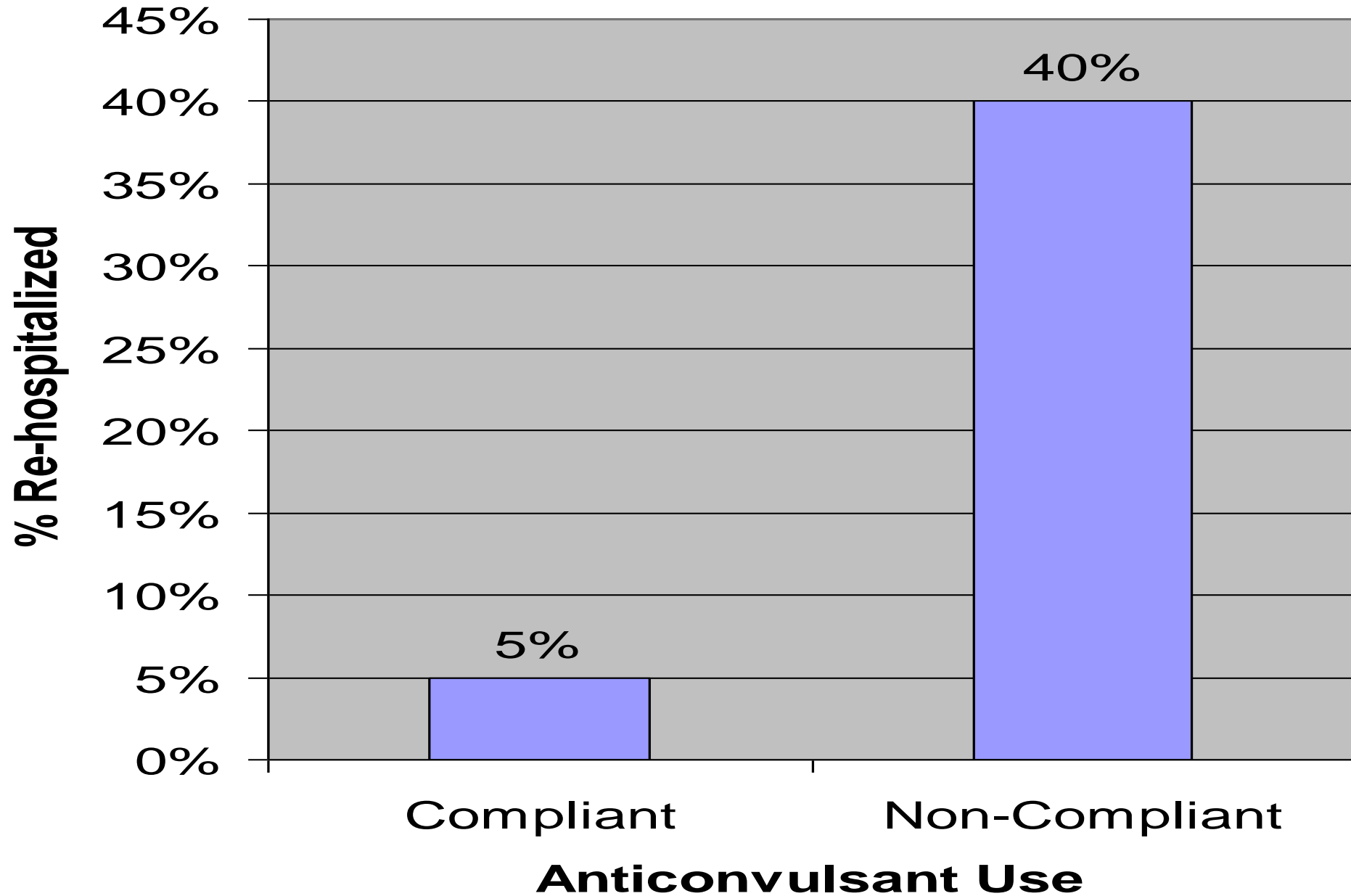
Reason: cerebral dysrhythmia  
Sensory Deficit: reading glasses

Protocol: xbasic

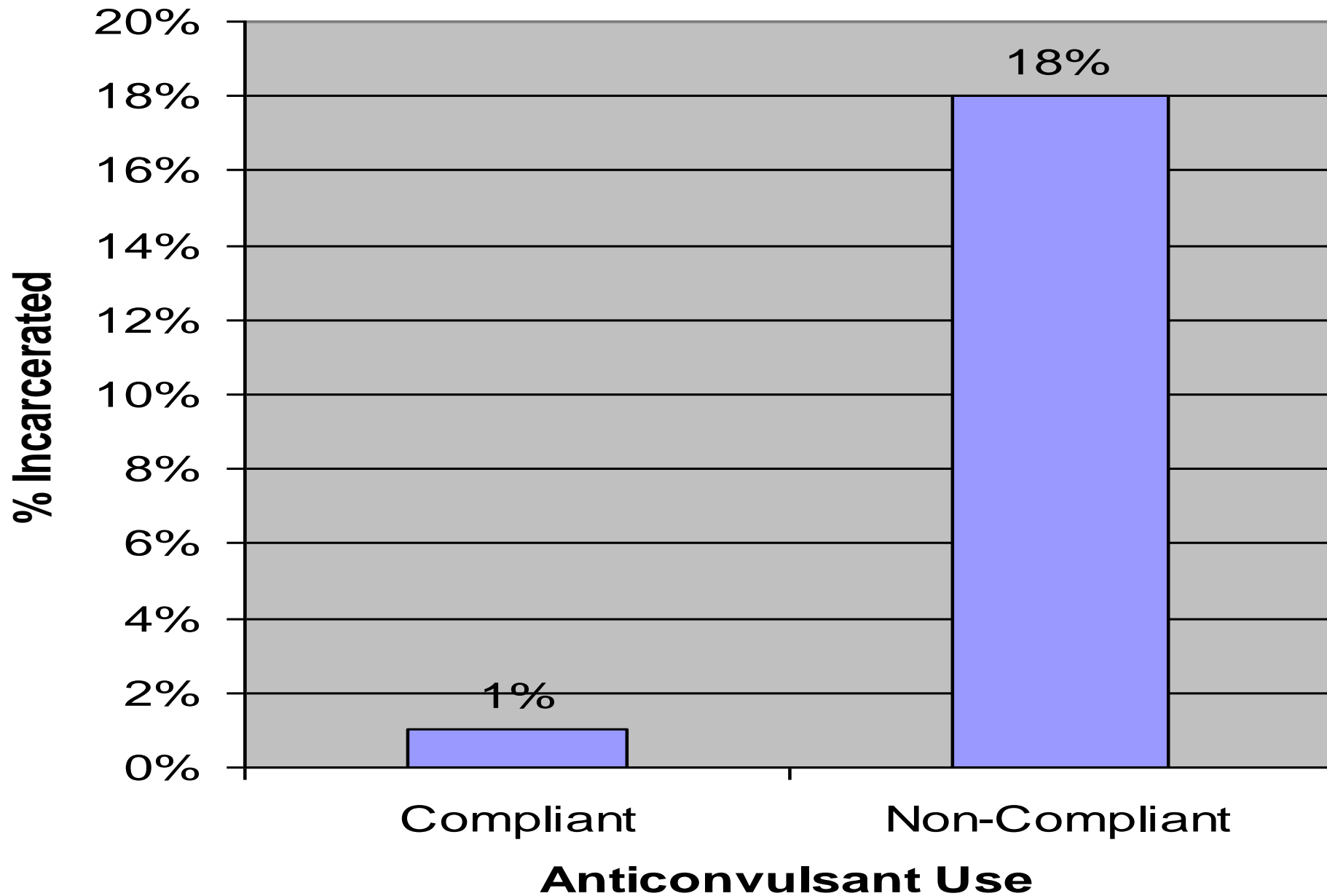


AUDITORY CAR - PFILE:aerT.1 GFILE:aer.g

# Need for Re-hospitalization



# Incarceration (within 12 mo.)





# Behavior Management of Children and Teens with Brain Dysfunctions 1, 2, 3...

Brain dysfunctions:

Cause irritability, impulsivity, distractibility and tendency to frequent explosive rages.

- ADHD – present in 85% of children with DMDD.
- Cognitive disabilities are also frequently present.

The children WANT to do well, but they CANNOT!

Medications are generally required to stabilize the underlying specific brain dysfunctions before any behavioral interventions can be reasonably effective.



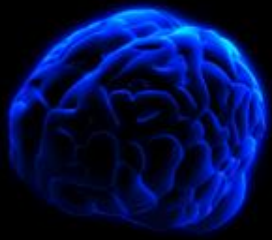




# Positive Discipline 1

- Less dependence on punishments (use only mild punishments such as time-out, never harsh)
- More dependence on incentives and rewards for good behavior (more pull, less push)
- With each punishment, explain what patient is to do next time, and reward it when it happens.
- Develop replacement behaviors.
- 'Neuro' children are easier to pull, than to push.





# Grandma's Rule

- Grandma's Rule is basic for psychiatric behavior but critical for brain-based interventions
- Parent:
  - *"First you must do what I want"*
  - *"Then you get to do (or have) what you want."*
  - Grandma wants child to wash hands before getting cookie.
  - Parent may want child to clean their room before going outside (or take turns, use polite language, etc.)







# Behavior Management Strategies

## 2

- Once some stability of the brain dysfunctions has been achieved, “Positive Discipline” can be implemented.
- Positive Discipline = “Tell them what to do, NOT what to stop. Example: John is doing his homework. He stops and starts yelling and cursing. Tell John “Next time you feel frustrated, tell me and we can work it out, without yelling and cursing”. Offering a “replacement behavior”. Next time he is doing homework, prompt him by saying “Don’t forget to come to me if you are frustrated”.





# Behavior Contract

## 3

### I Did It!

I did my jobs without being asked

I did my jobs without complaining

I didn't argue with Mom or Dad

I obeyed immediately

I obeyed cheerfully

I picked up after myself

I was kind and generous -- I shared

I used nice words

I treated Mom and Dad with respect

I treated furniture with respect

I chewed my food with mouth closed

I stayed in my seat during meals

I told my parents "Thank you!" today




# Behavior Management Strategies

## 4





- If they comply, praise them (or use some reward).
- If they don't comply, tell them again (no threats).
- If non-compliant after several attempts, then use Response-Cost = mild negative consequence. Such as \$1.00 reduction in allowance, loss of computer for 1 hour, or grounded to house for 2 hours.
- Books on Positive Discipline by Jane Nelsen, EdD available on Amazon.



# Reward Chart

## 5

### CHORES CHART

I Should...	SUN	MON	TUES	WED	THURS	FRI	SAT
Dress Myself 							
Pick Up My Toys <small>clean up</small> 							
Share with my friends 							
Clean up after meals 							
Go To Bed happy 							



# Behavior Management Strategies

## 6

- Collaborative Proactive Solutions (Ross Greene, Ph.D.) can be used as another alternative to rewards and punishments.
- It is, however, based on identifying “skill deficits” that impair the child’s ability to problem solve and defer actions while doing so.
- For this reason, it is not very effective until medical stability has been achieved. Neuropsychological testing can then provide valid identification of any skill deficits, and provide guidance for parents.
- Books by Ross Greene, PhD may be helpful.







# What is Crisis Mgt. for RAGE?

- SEE RAGE? Stop VERBAL de-escalation, don't touch him/her
  - No more talk, remove others, allow rage (if safe)
- SEE RAGE FACE: Slowly, very slowly, back away
  - Even if he/she follows, threatens, curses, throws stuff
- Don't look threatening – it is a defensive “seizure”
  - Make your face, body posture - non-threatening
- Don't approach or touch – unless hold must occur
  - but only for absolutely imminent danger





# Crisis Management for an Explosive Child

- RAGE (time limited, OUT-OF-CONTROL)
  - just keep it safe, it will go away in a few minutes.
- Do not try to de-escalate rage (NO MORE TALK)
  - Do not touch or it will take an hour to stop it.
- You let it wind down on its own (like an emotional seizure).
  - No restraint, or you will hold for an hour.
- Remove others from the room (don't move enraged child).
  - Defensive rage will subside on its own.



# Explosive Child: Crisis Management

- No show of force by numbers (THIS WILL TRIGGER AN ATTACK)
- Back off and watch for safety (HOLDING IS A LAST RESORT)
- Rage will run out of steam on its own (IF NO THREAT)
- Afterwards, expect fatigue, poor recall (remorse?)
- No point to punishment of out-of-control RAGE
- Use this strategy, not verbal de-escalation.



# Summary

Severe, brain-based aggression is best managed with a combination of:

1. Medication Protocol
2. Parent Behavior Management Training
3. Cognitive Behavioral Therapy
4. Anger Management Training
5. Other Skill-based Therapies
6. Modified Crisis Management Strategies.



# Resources

Dan Matthews, MD webinar on Disruptive Mood Dysregulation Disorder @

- <https://www.cigna.com>
- <http://www.neurobehavioralsystems.net/>

Dr. Larry Fisher's DMDD Behavioral Management Video:

- <http://www.neurobehavioralsystems.net/video/>

Behavior and Chores Printable Charts:

- <http://www.imom.com>
- <http://www.kidpointz.com/printable-charts/>

Books:

- Ross Greene, PhD <http://www.livesinthebalance.org>
- Positive Discipline by Jane Nelsen, EdD