GOOD TEACHING IS GOOD TEACHING: EFFECTIVE EDUCATIONAL AND BEHAVIORAL INTERVENTIONS FOR CHILDREN WITH FASD

Abstract

Fetal Alcohol Spectrum Disorder (FASD) has recently been recognized by law as a specific subcategory within the disability of Other Health Impaired. While many of these children may already be identified as children eligible for special education assistance, most educators are unfamiliar with how a child is adversely impacted by FASD and what educational and behavioral strategies have proven to be most effective with this population. This presentation discusses the specific characteristics of FASD, the impact that this new legislation may have on education, and the evidence-based strategies that have proven effective with this population.

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Good Teaching is Good Teaching

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1. SB 1016
    a) Article 2.4. Eligibility Criteria for Special Education and Related Services on the Basis of Other Health Impairment
        i. 56332. The State Board of Education shall include "fetal alcohol spectrum disorder" in the definition of "other health impairment" in Section 3030 of Title 5 of the California Code of Regulations.

2. Other Health Impairment
    a) CCR 3030 (b)(9) Other health impairment means having limited strength, vitality, or alertness, including a heightened alertness to environmental stimuli, that results in limited alertness with respect to the educational environment that:
    b) Is due to chronic or acute health problems such as asthma, attention deficit disorder or attention deficit hyperactivity disorder, diabetes, epilepsy, fetal alcohol spectrum disorder, a heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, sickle cell anemia, and Tourette syndrome; and
    c) Adversely affects a child's educational performance.

3. Fetal Alcohol Spectrum Disorders
    a) "an umbrella term describing the range of effects that can occur in an individual whose mother drank during pregnancy. These effects may include physical, mental, behavioral, and/or learning disabilities with possible lifelong implications." Bertrand et al, 2004

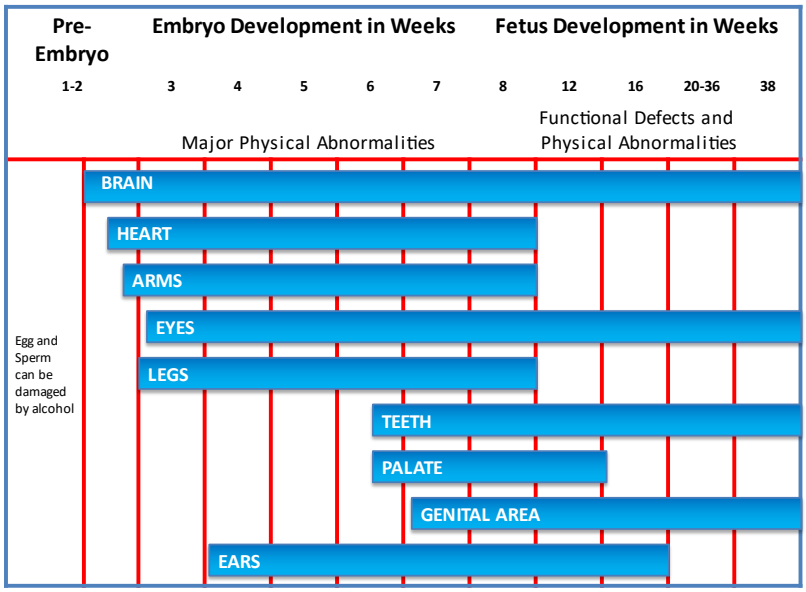
4. How big of a problem is FASD?
    a) Many are not even aware that it is a problem…
        i. 1.5%-4% are affected by FASD.
        ii. 11%-30% of women use alcohol during pregnancy.
        iii. 8% binge drink during pregnancy on at least 1 occasion
        iv. Among mothers with unplanned pregnancy, 56% report alcohol use in the month before they found out they were pregnant

5. If alcohol use is so prevalent, why aren't more children impacted?
    a) Impairment as a result of prenatal alcohol exposure is dependent upon multiple factors
        i. Dosage
        ii. Pattern and timing

iii. Genetics
iv. Co-occurring substance use (smoking/drugs)
v. General health
vi. Nutrition
vii. Level of stress/trauma
viii. Age of mother

b) "There is no known 'safe' level of alcohol consumption during pregnancy." (Office of the Surgeon General, 2005)

6. Developmental impact of prenatal alcohol exposure



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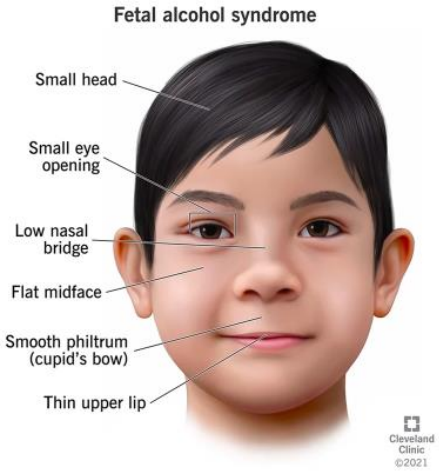
7. Facial Dysmorphology of Fetal Alcohol Syndrome



8. FASD Diagnostic Criteria

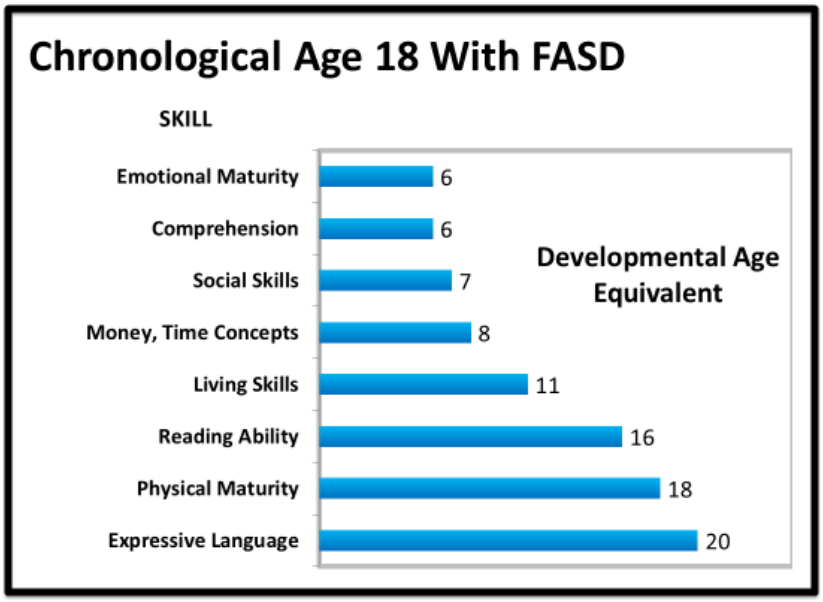
FASD: Diagnostic Criteria

I. Confirmed prenatal alcohol exposure
II. Growth impairment
III. Facial dysmorphology
IV. Neurodevelopmental disorder*

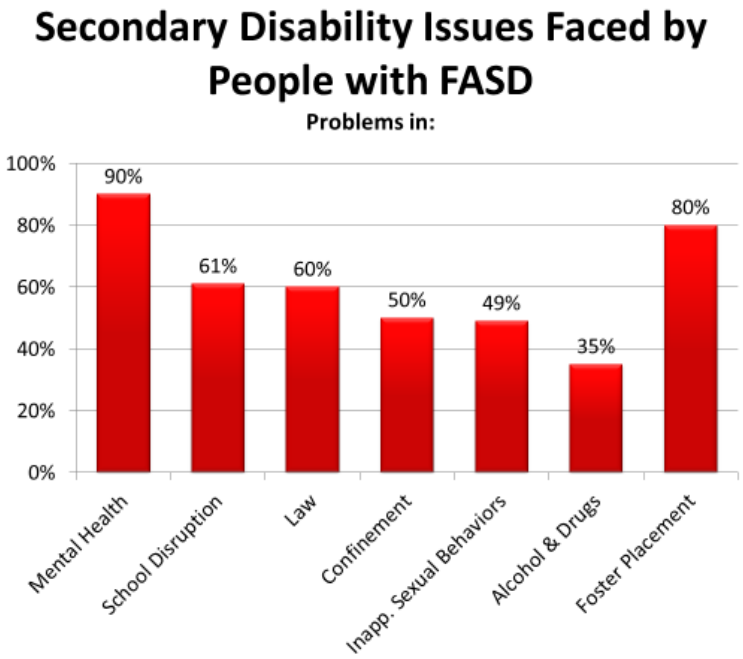
FAS	Fetal Alcohol Syndrome Meets criteria in categories: II, III, and IV
pFAS	Partial Fetal Alcohol Syndrome Meets criteria in I, III, and IV
ND-PAE	Neurobehavioral Disorder with Prenatal Alcohol Exposure Meets criteria in I and IV
ARBD	Alcohol Related Birth Defects Meets criteria in I and III

*executive function, memory, cognition, social/adaptive skills, academic, language, motor, attention, or activity level.

9. Developmental Age Equivalent



10. Secondary Disability Issues



11. The hope is that through early identification and treatment, the trend towards secondary disabilities can be disrupted.

12. How does prenatal alcohol exposure affect behavior and learning?
    a) Alcohol is a global teratogen
    b) Social-Emotional
        i. Attention
        ii. Social skills
        iii. Emotional Regulation
    c) Cognitive
        i. Memory
        ii. Abstraction
        iii. Generalization
        iv. Temporal reasoning
    d) Behavioral
        i. Impulse Control
        ii. Judgement
        iii. Cause and effect

13. Damage to the prefrontal cortex
    a) Responsible for most of the cognitive impairment of PAE
    b) Impaired beyond IQ
    c) Persists across the lifespan

14. Executive Function
    a) Working Memory
        i. Verbal working memory
            1. “inner-ear”
            2. Words
            3. Characteristics Verbal Working Memory Deficits
                a. Incomplete recall
                b. Following directions
                c. Processing sequence
                d. Cause and effect
            4. Evidence of Verbal Working Memory Overload
                a. “Can you repeat that?”
                b. “What’s next?”
                c. “Where am I?”
                d. “What?” “I didn’t do it.”
        ii. Visual-spatial working memory
            1. “inner-eye”
            2. Objects, shapes
            3. Visual representations of words
            4. Characteristics Visual-Spatial Working Memory Deficits
                a. Problem solving (chunking information)
                b. Math problems
                c. Word Problems
                d. Facial Expressions
                e. Visual-motor integration
            5. Characteristics Visual-Spatial Working Memory Overload
                a. Mounting frustration,
                b. avoidance behavior,
                c. learned helplessness,
                d. give up
        iii. Can working memory deficits be misinterpreted as ADD/ADHD?
            1. Attention vs Working Memory Deficits
                a. Estimates of ADD/ADHD range from 60%-70% of FASD
                b. Deficits in attention are not global.
                    i. Deficit in visual sustained attention
                    ii. Auditory attention is a relative strength
                c. Males (86%) Females (29%)
                d. Slower processing speed of the brain is overwhelmed by a constant barrage of environmental stimuli.
            2. Attention Deficit 4-Factor Profile
                a. ADHD
                    i. Focus
                    ii. Sustain
                    iii. Retrieval
                    iv. Impulse Control
                b. ADHD/FASD

i. Flexibility in Problem Solving
ii. Shift
iii. Encode
iv. Impulse Control

b) Problem-Solving
    i. Organization
        1. Messy work
        2. Missed/late assignments
    ii. Time Management
        1. Trouble getting started
        2. Procrastination
        3. Incomplete work
        4. Tardy
    iii. Planning
        1. Quick response
        2. Violate the rules
        3. Work completed quickly but with many errors
c) Concept Formation and Set-Shifting
    i. Abstract Concepts
        1. Forms of government, Justice
        2. Numbers concepts, mathematics, quantities,
        3. Feelings of others
        4. Emotional state (embarrassment, courage, etc.)
    ii. Following Rules
        1. Concrete literal interpretation
        2. Difficulty incorporating environmental cues to modify response
        3. Knows but doesn't do
    iii. Shifting strategies
        1. Persist in using an error-prone strategy
        2. Repeated wrong answer
        3. Perseveration
d) Impulse Control
    i. Anticipating Consequences
        1. Difficulty with regulating emotional arousal
        2. Difficulty selecting appropriate problem-solving strategies.
        3. Inefficient processing of environmental information
    ii. Responsiveness to Social Cues
        1. Difficulty with gestural communication
        2. Difficulty with interpreting facial expression
        3. Difficulty with interpreting tone of voice
    iii. Poor Interpersonal Relationships
        1. Resists limits and requests by authority figures
        2. Juvenile delinquency
        3. Sexually inappropriate behavior

15. What services are available?
    a) The IQ of individuals with FAS ranges from 29 to 120, with mean IQ of 79. The IQ of individuals with FAE ranges from 42 to 142, with mean IQ of 90.
    b) If children with FASD qualify under existing eligibility criteria, they are likely identified within the categories of ID, LD, OHI, and ED.
    c) General Education Environment
        i. Most children with prenatal alcohol exposure do not meet the eligibility criteria as a child with a disability under the IDEA.

16. What works?
    a) The challenge is to create environments where children feel safe and feel that they belong.
    b) Problem solving requires self-regulation
        i. Focus on Self-Regulation
        ii. Human emotions are highly contagious…
    c) Self-Regulation
        i. As adults, we cannot take others any higher than we are ourselves.
        ii. Any strategy that does not start with adult self-regulation is doomed.
    d) Focus on Relationships
        i. “Relationships are the agents of change, and the most powerful therapy is human love." Bruce Perry
        ii. “A protective factor against disruptive school experiences is whether the child … connects with someone that they believe truly cares about them.” Streissguth (1997)

17. Implications for Instruction
    a) Environment
        i. Organized/Not Chaotic
        ii. Reduce Distractions
        iii. Warm Colors
        iv. Natural/Dimmable Lighting
    b) Create Structure and Predictability:
        i. Routines and rituals that promote regulation.
        ii. Information to reduce uncertainty
        iii. Separate time into blocks
        iv. Small groups to increase the number and quality of relationships
    c) Establish daily routines
        i. Visual schedules
        ii. Timers
        iii. Color-code assignments
        iv. Use a planner
        v. Write assignments in a calendar
    d) Use transition elements to move from one activity to another.
        i. Assist with self-regulation with a sense of humor.
        ii. Reinforce instructional elements with music.

e) Use Instructional practices that compensate for the cognitive deficits of a child with FASD
    i. Minimize assignments that require copying information from the board.
    ii. Use Concrete Manipulatives.
        1. In a memory for objects task, children with FASD remembered the same number of objects as typical peers (Uecker & Nadel, 1996).
    iii. Lessons should be:
        1. Logical/Sequential
        2. Use:
            a. Patterned repetition
            b. Concrete examples
            c. Physical manipulatives
            d. Visual organizers
        3. Engage with:
            a. Voice
            b. Choice
            c. Encouragement
    iv. Break up information into smaller segments
    v. Reduce the number and complexity of steps
        1. Retention rates similar to typical peers when number of words controlled. Mattson et al., (1998)
    vi. Use advance organizers
        1. Unfamiliar information is harder to maintain
    vii. Embed information into stories.
        1. Children with FASD demonstrated outstanding recall of information in stories as opposed to lists. (Pei et al., (2008); Swanson & Hoskyn, (1998))
    viii. Use visual organizers as memory aids
        1. Recall was improved with a combination of direct instruction and visual organizers.
    ix. Research Proven Strategies (Lloyd, J., Forness, S., & Kavale, K. (1998); Forness, S. & Kavale, K. (1999); Vaughn, S. Gersten, R., & Chard, D. (2000))
        1. Direct Instruction
        2. Mnemonic Strategies

18. Legal Implications
    a) Development of Guidelines
    b) Increased identification
        i. Many already identified
        ii. Most new referrals will come from Adoptive, Foster, Kinship Care
    c) Disproportionality
        i. Maybe
    d) Discipline
        i. “Known or should have known”