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INTRODUCTION

Facts and Figures

- Barkely Longitudinal study- Teens
 - % committing crime ADHD = 48 Control =20
 - Number of offenses committed ADHD= 6.4 Control 2.1
- Robert Eme
 - 28 % enter JJ system with IEP DX of ADHD.
 - Detained youth 33% Self Rating 67% Teacher rating
- MAYSI
 - Cook County Juvenile Detention Center 20% depression, 20% Anxiety, 50% substance abuse, 50 % ADHD and or conduct disorder. Excluding conduct disorder 2/3 have psychiatric dx.**

Facts and Figures

- 15 controlled studies of ADHD and prisons reviewed by Pete Quily
 - 21% to 45% of prisoners have (mostly untreated) ADHD.

Driving

- significantly more likely to be convicted for speeding, not obeying signs and signals, following too closely, improper passing, and not following road markings. somewhat more likely-reckless driving, drunk driving, and poor lane placement.
- four times more likely than others to be involved in accidents. Medication reduces risk.
- ADHD motorists are also more likely to run out of gas

ADHD and Substance Abuse

- Barkley-Adolescents
 - Increased dx of dependence and abuse of both legal and illegal drugs
- ADDA Justice Workgroup
 - ADHD- 50% greater incidence of substance abuse.
 - ADHD + CD- The incidence triples

Mental Health

Barkley- ADHD throughout the Lifespan

- **Oppositional Defiant Disorder – 40 to 80%**
- **Conduct Disorder – 20 to 56%**
- Anxiety Disorders – 10 to 40%
- Major Depression – 0 to 45%
- Child Bipolar Disorder – 3 to 6%
- Tic Disorders – 10 to 15%
- Tourettes Disorder -- <2%
- Obsessive-Compulsive Disorder – 11%
- **Sleep Disorders – 30 to 56%**
- **Learning Disabilities – 24 to 70%**

Tipping Points

- **When kids with ADHD are at risk for starting a negative trajectory. Identified by those in the juvenile justice system as being when difficulties started or intensified. Goal of intervention is to change the trajectory of their lives.**

Tipping Points

by Steve and Phil

- Oppositional Battles- Ineffective parenting coercion spirals- parent gives in (Patterson)
- Rejection and exclusion by other kids (age 6 or 7)
- Dropping or failing grades
- Switching to middle school or high school
- School exclusion (suspensions and expulsions)

Tipping Points

- Hanging around with older kids
- Starting to smoke cigarettes
- Starting other drugs
- Driving
- Starting first job

Fred's Key Facts/Metaphors

- Frontal Lobe Inhibition areas smaller and less active- ADHD is a braking problem
 - Results in an average developmental delay of 30% in self control (inhibition) and/or focusing and sustaining attention
 - Medication as brake fluid (booster)/steering wheel fluid

Fred's Key Facts/Metaphors

- People with ADD/ADHD have interest based nervous system
 - Not interested - like south pole of two magnets
 - Result- takes eight to 10 x's as much energy to get through a school day
 - If interested – incredible persistence (hyperfocus?)
 - Examples
 - More accurately IDD/IDHD?

Fred's Key Facts/Metaphors

- People with ADHD do better when:
 - High Interest
 - Fun
 - Immediate Consequences
 - Frequent Feedback at point of performance
 - Supervised
 - One-to-one
 - Novel Situation-Strangers

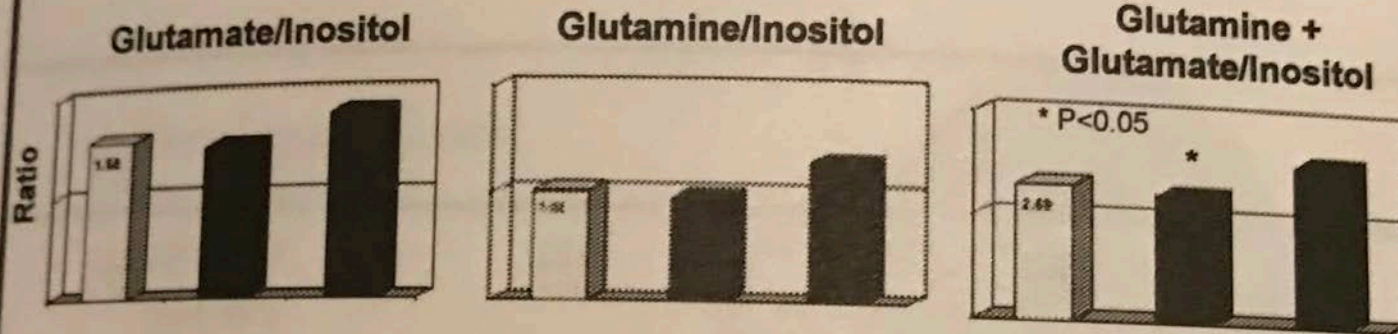
Impart Hope

- Imparting hope to child/teen/adult/parent
 - Hunter in farmer's world
 - Individuals with ADHD perform better in situations/jobs interested in sometimes as well or better than those without ADHD. Give examples of successful people with ADHD
 - Vocational counseling – jobs suited for those with ADD/ADHD
 - Hallowell's keys to successful outcome-Job Interested in marry and/or hire right person

MEDICATION

MEDICATION

Stimulants Normalize Brain Neurochemistry in ADHD Youth



Magnetic Resonance Spectroscopy Study
using 4 Tesla Scanner (McLean Hospital, Belmont)
Treated with OROS MPH: mean dose of 54 mg (0.9 mg/kg/day)
Controls- no ADHD (single scan)
ADHD- Scanned off drug baseline and again 6-8 weeks later

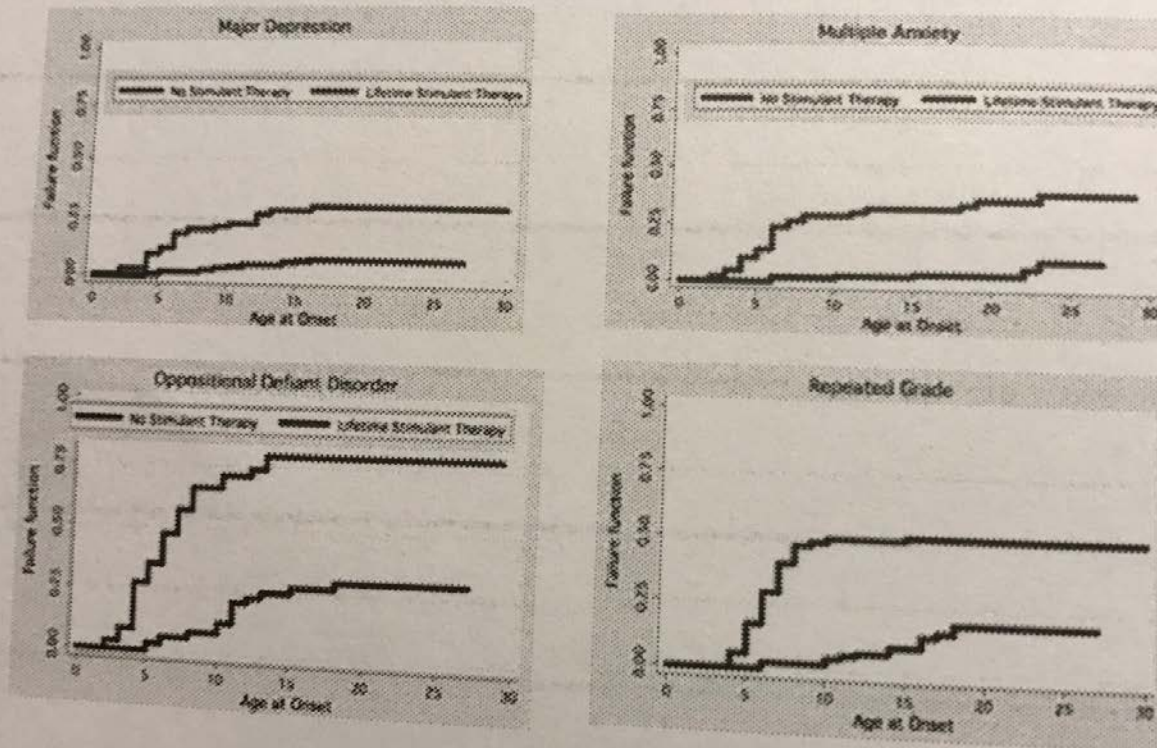
(Hammerness et al. 2012 World Psych)

MEDICATION

Protective Effect of Stimulants on Comorbidity

N= 140 boys with ADHD at entry; 10 year follow-up data

N=82 subjects receiving stimulants [mean duration of 6 yrs] & 30 not on stimulants



Biederman et al. *Pediatrics* 2009 Jul;124(1):71-8.

MEDICATION

REVIEW ARTICLE

Effect of Psychostimulants on Brain Structure and Function in ADHD: A Qualitative Literature Review of Magnetic Resonance Imaging-Based Neuroimaging Studies

Thomas J. Spencer
Eve M. Valera
Stephen V. Faraone

ABSTRACT

Objective: To review the literature on the effect of stimulant medication on brain structure and function in subjects with ADHD, as measured by functional magnetic resonance imaging (fMRI) and structural magnetic resonance imaging (sMRI).

Data Sources: We searched PubMed, PsycInfo, and Embase through the end of 2012 using the following keywords: (1) ADHD, (2) stimulant, (3) ADHD, and (4) ADHD disorder or disorder.

Study Selection: We included only English language articles with new data from case-control or placebo-controlled studies that examined attention deficit/hyperactivity disorder (ADHD) subjects on and off psychostimulants (as well as 3 relevant review articles).

Data Extraction: We combined details of study design and medication effects in each imaging modality.

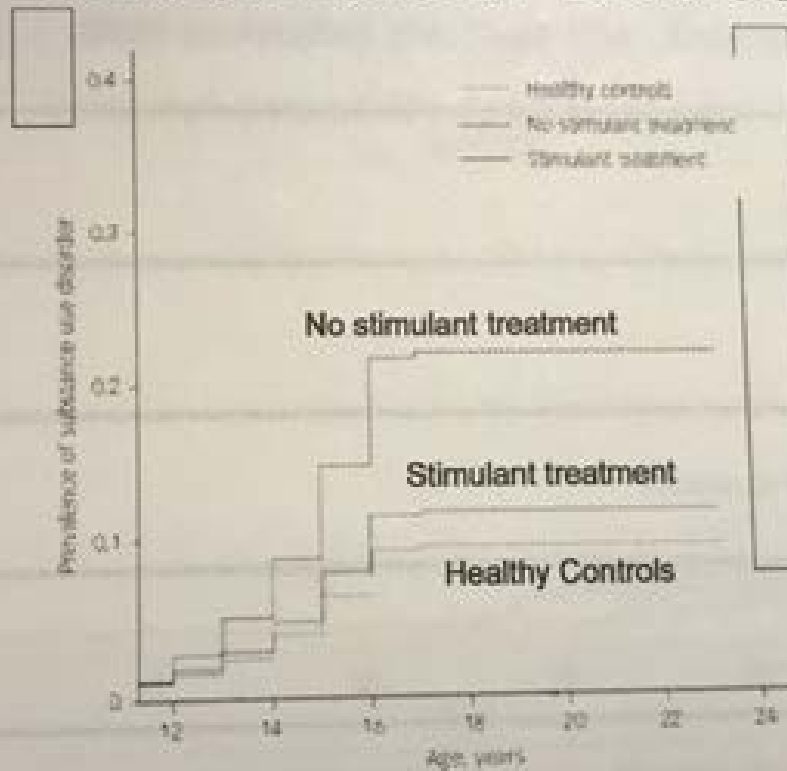
Conclusions: Despite the inherent limitations and heterogeneity of the extant fMRI literature, our review suggests that therapeutic oral doses of stimulants decrease alterations in brain structure and function in subjects with ADHD relative to unmedicated subjects and controls. These medication-associated brain effects parallel, and may underlie, the well-established clinical benefits.

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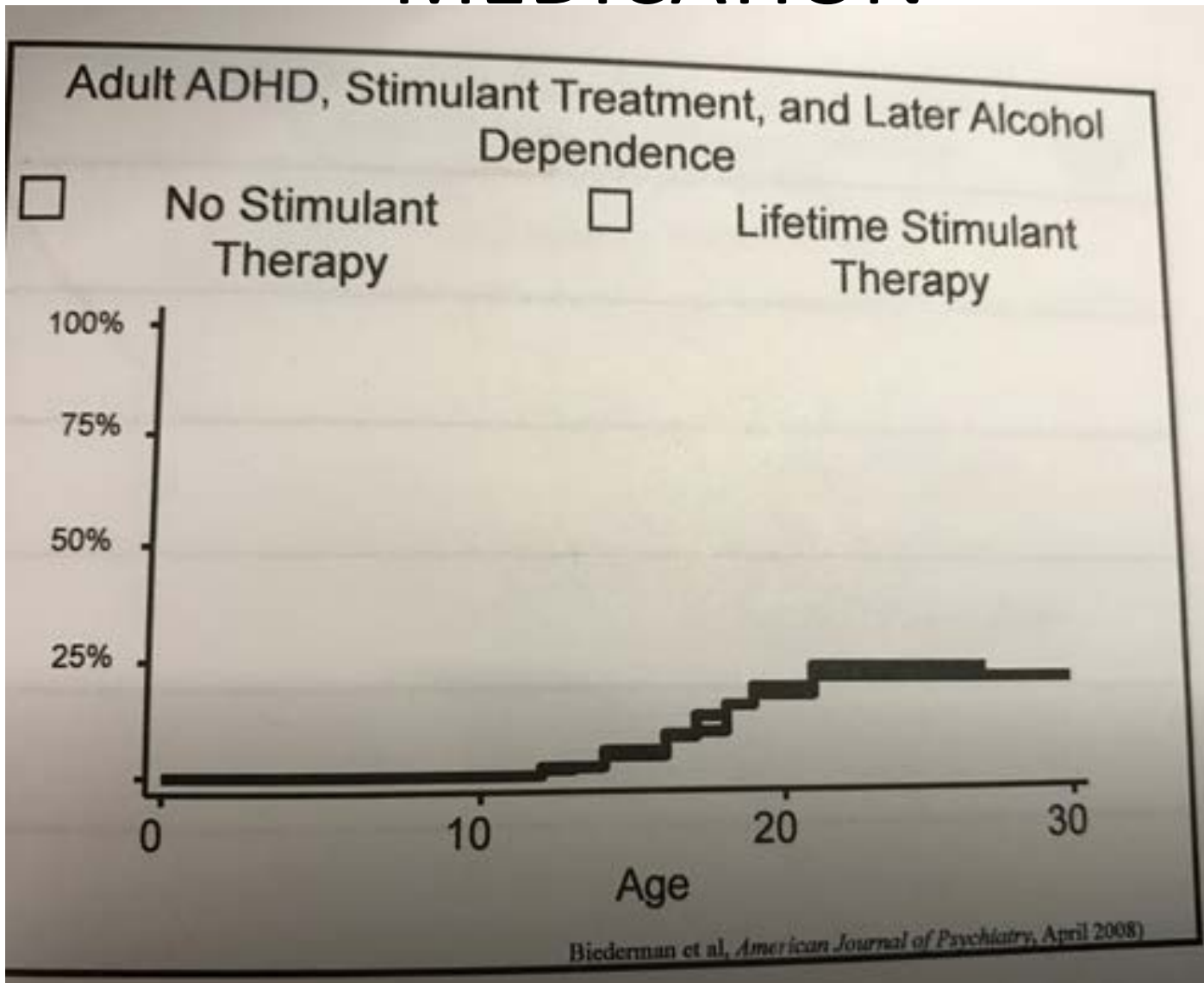
MEDICATION

Cumulative Lifetime Risk for Any Substance Use Disorder



Groenman AP, et al. *Br J Psychiatry*. 2013; 203(2):112-119.

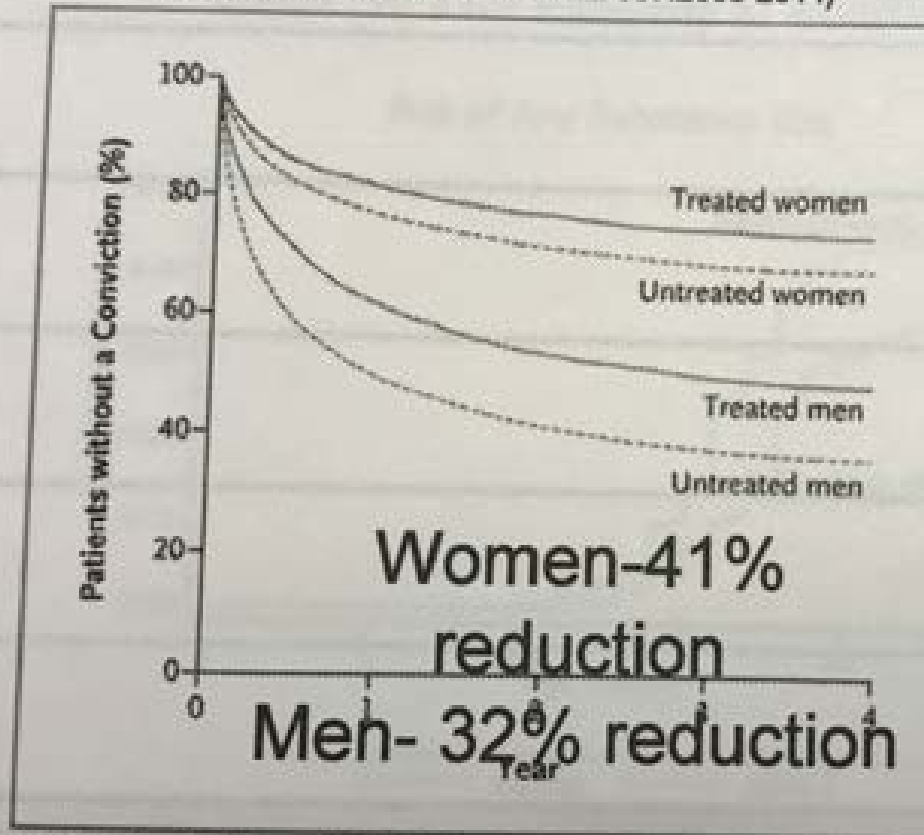
MEDICATION



MEDICATION

Medication for ADHD Reduce Criminality (& Drug Offenses)

(Lichtenstein et al. NEJM 2012: 367:2008-2014)



Swedish national registers (N= 25,656 with ADHD-about 50% on medications)
Ca. 40% of convictions related to drug offenses (Tx OR=0.6). No difference in type of ADHD medication (stimulants, nonstimulants) or level of crime.

MEDICATION

- Driving- without meds 3-4x's the accident rate as those taking meds
- Work- Norway- people take meds as kids higher employment rate as adult (3x's more like to be employed)

Model

Prison Treatment Program

- Medication
- Education- school
- Vocational counseling and training
- Therapy for additional problems
- Mos. Supply of medication, put in contact with support group when released
- At release given medication for one month, support group, and referred to physician
- **(Teen Addition- Parent training)**

If He Outgrew It, What Is He Doing in My Prison? by T. Dwaine McCallon, M.D. 1998.

Community Interventions

Coffee County

- Coffee County Juvenile Court
 - Truancy Court
- Children’s Policy Council
 - Advises District judge on Juvenile justice issues
 - Conducts annual needs assessment that identifies three major needs in county to identify priorities for grant funding.
 - Contact: liletta.jenkins@dca.alabama.gov 334-353-2710
Statewide Coordinator

Coffee County Family Services Center

- Assessment & Referral
- Young Parents/Building Blocks
- Breast Cancer/Women's Health Education
- Juvenile Redirection Program
- Fatherhood Initiative

Coffee County Family Services Center

- Other services:
 - VITA tax prep (free tax preparation for \$68,000 or less annual income)
 - Backpack Blessings (provide school supplies for low income families)
 - Toys for Tots/Angel Tree (provided for over 800 children for December 2016)

Coffee County Juvenile Redirection Program

- October 2015: \$61,000 grant provided through Department of Youth Services (DYS)
- Purpose of grant is to intervene with families in the juvenile justice system and prevent youth from placements at DHS facilities.
- Target: Youth who fall into the “high” or “very high” risk categories, based on the Model Risk Assessment completed by Juvenile Probation Officer (JPO).
- Coffee County Family Services provides Case Management for these families.

Coffee County Juvenile Redirection Program

- Referrals come either directly from court (court ordered) or separately from JPO's (informal adjustments).
- Each client receives a Biopsychosocial Assessment that is typed into a report and includes a summary and recommendations.

Coffee County Juvenile Redirection Program

- Other screening instruments include:
 - Juvenile Problem Screening Questionnaire (Parent/Teen)
 - DSM-5 checklist
 - Vanderbilt Assessment Scales (Parent/Teacher)
 - Adolescent Drug & Alcohol Involvement Scale (AAIS)

Coffee County Juvenile Redirection Program

Outgoing referrals:

- All families required to attend Parent Project[®]/Why Try?
- Most teens/adolescents referred to counseling
- Psychological Testing
 - Diagnostic
 - IQ and Achievement
- Tutoring
- *Mentor Program

The Parent Project®

- 10 week intensive parenting course designed for parents of out-of-control teenagers or adolescents.
- Program was developed by a retired Police Officer (who worked extensively with juvenile justice system in Los Angeles) and a clinical psychologist (who provided evidence based research and practice).

The Parent Project®

- Parent Project focuses on the responsibility of parents, not the adolescents/teens.
 - Ex: adequate supervision. Lack of supervision is directly correlated with juvenile delinquents and also teen pregnancy.
- No more arguing! (gives parents appropriate skills to avoid yelling)

The Parent Project®

- Parents establish house rules
 - Forces parents to decide between necessary and unnecessary rules
 - Safety priority, then consequences
- T-Spots: Take everything away for a “short period of time”
 - If child “re-offends” any house rule, time starts over.
- Other areas addressed:
 - Drugs & Alcohol
 - Gangs
 - Suicide Prevention
- For more information: www.parentproject.com

Why Try?

- Program for teens and adolescents
- Operates on the principal that kids *want* to do better, but can't get off the "rollercoaster."
- Teaches responsibility for self (at home, school, community)
- Teaches teens to think ahead to goals they want to achieve
 - Or set goals if they don't have any

So far...

Of our 60+ referrals (15 months and counting...):

- At least 50% have a previous ADHD diagnosis, or have obvious signs of a history of undiagnosed ADHD.
- All of the ADHD clients had at least one comorbid disorder.

Let's look at 3 case examples:

“Kevin” – Domestic Violence 3rd

- Kevin was a 15-year-old African American male
- Accompanied by his mother for intake
- Kevin was diagnosed with ADHD at approximately age 6
- Kevin’s mother consistently sought treatment for her son, who continues to take medication.

“Kevin” – Domestic Violence 3rd

- Kevin sees a counselor every two weeks and is on the A/B honor roll.
- *Family was referred for Parent Project; however, they never followed through due to Mom’s difficulties with trouble remembering, easily distracted, and problems staying organized.

“Quentin” — receiving stolen property; carrying a gun without a permit

- 17-year-old African American male; attended intake with mother and step-father.
- Quentin admits to having these exact same charges in a previous county.
- Quentin was victim of a drive-by shooting. Smokes marijuana on daily basis since that time. Reports frequent nightmares and somatic complaints.

“Quentin” — receiving stolen property; carrying a gun without a permit

- Recognizes two employees at Family Services as his former school teachers (7th grade) and sheepishly admits that he was a “bit of a problem.”
- Former teachers each rate him as 9/9 for inattentive, and 8/9 for hyperactivity... he was hard to forget. 😊 Both also stated that they “loved him.”
- Referred for counseling and Parent Project/Why Try? He and his mother were compliant and participated well.

“Kaleb” – Domestic Violence 3rd

new referral

- Kaleb is a 13-year-old Caucasian male; his father (active duty military) attended intake with him
- Kaleb was born 10 weeks premature; spent several weeks in NICU. Had continued breathing difficulties (apnea) and stopped breathing during bottles.
- Several years later, Kaleb’s parents divorce. Dad deploys to Afghanistan. Mom and step-father provide unstable home environment: high conflict, verbal and physical abuse. Extent of abuse unknown.

“Kaleb” – Domestic Violence 3rd

new referral

- 3 years ago Dad gains primary custody. Kaleb lives in home with Dad, Step-mother, and 3 siblings (2 biological, 1 step)
- Kaleb has received mental health treatment for years for Mood Disorder, ADHD, ODD
 - medication consistently, therapy inconsistently.
- Kaleb demonstrates conflict with women.
- Has “meltdowns” daily; last 10-15 minutes now.

“Kaleb” – continued

- Parents and Kaleb plan to start Parent Project/Why Try? cycle this month.
 - Father has taken many courses in past, including “1,2,3 Magic!”
- Individual and family counseling will be recommended
- Referral for neuropsychological testing due to trauma at birth and infancy, as well as trauma received from emotional and physical abuse in childhood.