"Exploring Clinical Aspects of Mood Dysregulation through Case Studies: A Panel Discussion with Child and Adolescent Psychiatrists"

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Disclosures

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Patient-Centered Outcomes Research Institute		X
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This presentation	X	

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The Angry Boy, Frogner Park, Oslo, Norway

Learning Objectives

At the conclusion of this webinar, the participant will be able to:

- Describe the phenomenology of irritability/emotion dysregulation and resulting outbursts in children
- Discuss the differential diagnosis of severe irritability in children
- Discuss the use of standardized screening tools and referral to the PPC Hub for children identified with emotional dysregulation
- Articulate our current knowledge base for treating outbursts in the sickest kids

7 year old female in 1st grade

- Referred with symptoms of aggression, disruptive behavior, social Issues, and mood changes.
- Distractible, impulsive, and rage outbursts since age 2; Mom has trouble getting her to do anything, especially school work. She is negative attention seeking.
- Behavior worse since age 5; Grandma died then
- Has attention deficits, both staring and distractibility; gets bored easily; excessive need for validation, praise, hypersensitivity for perceived ignoring her; demanding; has trouble keeping friends because of mood swings.
- Milestones early; no evidence of abuse, neglect, physical illness or psychosis

8 year old boy

- Increasing episodes of explosive anger, typically in response to frustration, home > school, several times a day.
- Formerly a good, well-liked student, is now more socially withdrawn .
- He is hyperactive, impulsive, inattentive, easily frustrated.
- He has anxiety, somatic symptoms (headaches, stomach aches, enuresis), sensory sensitivities
- He also has eye rolling, facial twitching, snorting, throat clearing, head turning, and repeated touching.
- He fears of harm coming to his parents or to himself, and responds with compulsive checking, repeated requests for reassurance, need to repeat certain gestures until it feels “just right.”
- OT evaluation demonstrated sensitivity to and difficulties processing multisensory input and misperception of certain social exchanges as threats.

FIRST PROBLEM

where to classify outbursts

SEVERE TANTRUMS: 17% PRESCHOOLCHILDREN**
19% SCHOOL-AGED CHILDREN+
6% ADOLESCENTS***
~40% OUTPATIENT REFERRALS*
>90% INPATIENT REFERRALS*

**Copeland et al., AmJP, 2013; ***McGlaughlin et al., AGP 2012
*Margulies et al., Bipolar Disorders, 2012;

Outbursts occur in children with
ADHD; oppositional defiant disorder
Autism with mood dysregulation
Anxiety with catastrophic reactions
OCD with interrupted rituals
Mania and depression with irritability
Psychosis with misperceived reality

6 constructs we are addressing

1. Irritability- proneness to anger
2. Mood dysregulation – getting too angry, too quickly, too often and for too long
3. Resulting behaviors: what the person does when angry (contain it, express it verbally and/or physically against property or people)
4. Where the issues express themselves and cause impairment– home, school, public, etc.
5. How often they occur
6. How severe they are compared to recognized norms

FIND: Frequency, Intensity, Number, Duration

I like to think of a bomb

The size of the Explosion
"phasic irritability"
EMOTION REGULATION

and how long it lasts
EMOTION REGULATION

The length of the fuse
Emotion GENERATION
("tonic irritability")*

What lights the fuse: triggers

***Irritability** -proneness to experiencing anger in response to negative emotional events; tonic-grumpy; "huffing and puffing"; short fuse

How do I evaluate it

- Remember S*A*R
- Screen
  - I use the Irritability Inventory – a paper and pencil measure as a screen as well as comprehensive rating scales
- Ask
  - If the parent checks anything off, I explore it further
  - That way I'm able to get a systematic description without the a priori assumption that the child has bipolar disorder, DMDD or depression
- Rate
  - That needs validated rating scales to gauge severity and to possibly use as outcome measures

Irritability Inventory

1. **HOW EASY IS IT FOR HIM/HER TO GET ANGRY?** (Please circle the letter of the **ONE BEST** response)
   - **a.** S/he is rarely irritable or angry
   - **b.** S/he is mostly reasonable but has days at a time where s/he is very touchy and gets very angry very easily.
   - **c.** S/he rarely gets angry but when s/he does, the explosion is huge compared to the incident that provoked it.
   - **d.** S/he has always been cranky and easily angered.

2. **WHAT CAUSES HIM/HER TO GET ANGRY?** (Please circle **ALL THAT APPLY**)
   - **a.** S/he feels s/he is being criticized
   - **b.** S/he misunderstands what others are saying
   - **c.** Her/his demands must be met immediately
   - **d.** S/he can't handle change in routine
   - **e.** S/he is frustrated because s/he can't do something (task or activity)
   - **f.** S/he is hungry, tired, or pre-menstrual

3. **WHICH OF THE FOLLOWING DOES YOUR CHILD USUALLY DO?** (Please circle **ALL THAT APPLY**)
   - **a.** Expresses anger in an appropriate way (e.g., explains her/his perspective; goes to her/his room to cool down)
   - **b.** Argues, whines or sulks
   - **c.** Becomes verbally insulting, swears, shouts
   - **d.** Threatens
   - **e.** Slams doors, punches walls, makes a mess, destroys property
   - **f.** Self-mutilates, bangs head, or otherwise takes it out on self
   - **g.** Throws things
   - **h.** Hits, kicks, bites, spits
   - **i.** Needs physical restraint

(please circle THE BEST RESPONSE to EACH QUESTION BELOW)

4. **HOW OFTEN DOES A SERIOUS TANTRUM OR OUTBURST OCCUR?**	a. Never___ b. Rarely___ c. several times a month___ d. Weekly_____ e. at least 3 times/week___ f. Daily___
5. **HOW LONG DOES A TANTRUM OR OUTBURST LAST?**	a. a few minutes ___ b. up to 15 minutes___ c. up to half an hour_____ d. Up to an hour_____ e. Up to half a day_____
6. **IS YOUR CHILD ANGRY OR IRRITABLE BETWEEN OUTBURSTS?**	a. Not at all_____ b. Sometimes _____ c. often_____ d. very often_____
7. **HOW DOES YOUR CHILD UNDERSTAND THE OUTBURST?**	Remorseful_____ Forgets or denies it_____ Blames others_____ Spiteful_____

WHAT HELPS YOUR CHILD CALM DOWN?_____

MOTHER'S RATING

Name of person completing form: _____

Relationship to youth: Mother

DIRECTIONS: CIRCLE WHICH RATING BEST DESCRIBES THIS YOUTH'S OVERALL BEHAVIOR. ANSWER EACH QUESTION TO THE BEST OF YOUR ABILITY. IF SOMETHING USED TO BE A PROBLEM BUT NO LONGER IS, ALSO CIRCLE THE ITEM NUMBER.

Category A	Never	Some-Times	Often	Very Often
1. Does not pay close attention to details or makes careless mistakes	0	1	2	3
2. Has difficulty paying attention to tasks or activities	0	1	2	3
3. Does not seem to listen when spoken to directly	0	1	2	3
4. Has difficulty following through on instructions and fails to finish things	0	1	2	3
5. Has difficulty organizing work and activities	0	1	2	3
6. Avoids doing tasks that require a lot of mental effort (schoolwork, homework, etc.)	0	1	2	3
7. Loses things necessary for activities	0	1	2	3
8. Is easily distracted by other things going on	0	1	2	3
9. Is forgetful in daily activities	0	1	2	3
10. Fidgets with hands or feet or squirms in seat	0	1	2	3
11. Has difficulty remaining seated when asked to do so	0	1	2	3
12. Seems restless or jittery	0	1	2	3
12a. Runs about or climbs on things when asked not to do so	0	1	2	3
13. Has difficulty playing or doing things quietly	0	1	2	3
14. Is "on the go" or acts as if "driven by a motor"	0	1	2	3
15. Talks excessively	0	1	2	3
16. Blurts out answers to questions before they have been completed	0	1	2	3
17. Has difficulty awaiting turn in group activities	0	1	2	3
18. Interrupts or butts into other people's activities	0	1	2	3
18a. How often do the behaviors in Category A interfere with your child's ability to do schoolwork or get along with other people?	0	1	2	3

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TEACHER RATING

Category A	Never	Some-times	Often	Very often
1. Does not pay close attention to details or makes careless mistakes	0	1	2	3
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17. Blurts out answers to questions before they have been completed	0	1	2	3
18. Has difficulty awaiting turn in group activities	0	1	2	3
19. Interrupts people or butts into other people's activities	0	1	2	3
19a. How often do these behaviors from Category A interfere with the student's social or academic functioning?	0	1	2	3
20. Shifts from one uncompleted activity to another	0	1	2	3
21. Does dangerous things without considering possible consequences (like running into the street without looking)	0	1	2	3
22. Needs a lot of supervision	0	1	2	3
23. Calls out in class	0	1	2	3

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Rating “proneness to anger”
how the child feels

Affective Reactivity Index **not true, somewhat true, very true**	**ODD criteria** **(SNAP, Vanderbilt, CASI)**
Often* loses temper	Often* loses temper
Loses temper easily	
Easily annoyed by others	Often touchy or easily annoyed
Angry most of the time Gets angry frequently	Often angry and resentful
Stays angry for a long time	(CBCL items) Mood changes quickly Hot temper/temper tantrums Stubborn, sullen, irritable
Irritability causes problems	
* how ‘often’ is ‘often’?	

(Stringaris et al., J Child Psychol Psychiatry, 2012; Aebi et al., 2013)

Disruptive Mood Dysregulation Disorder: OI VEY

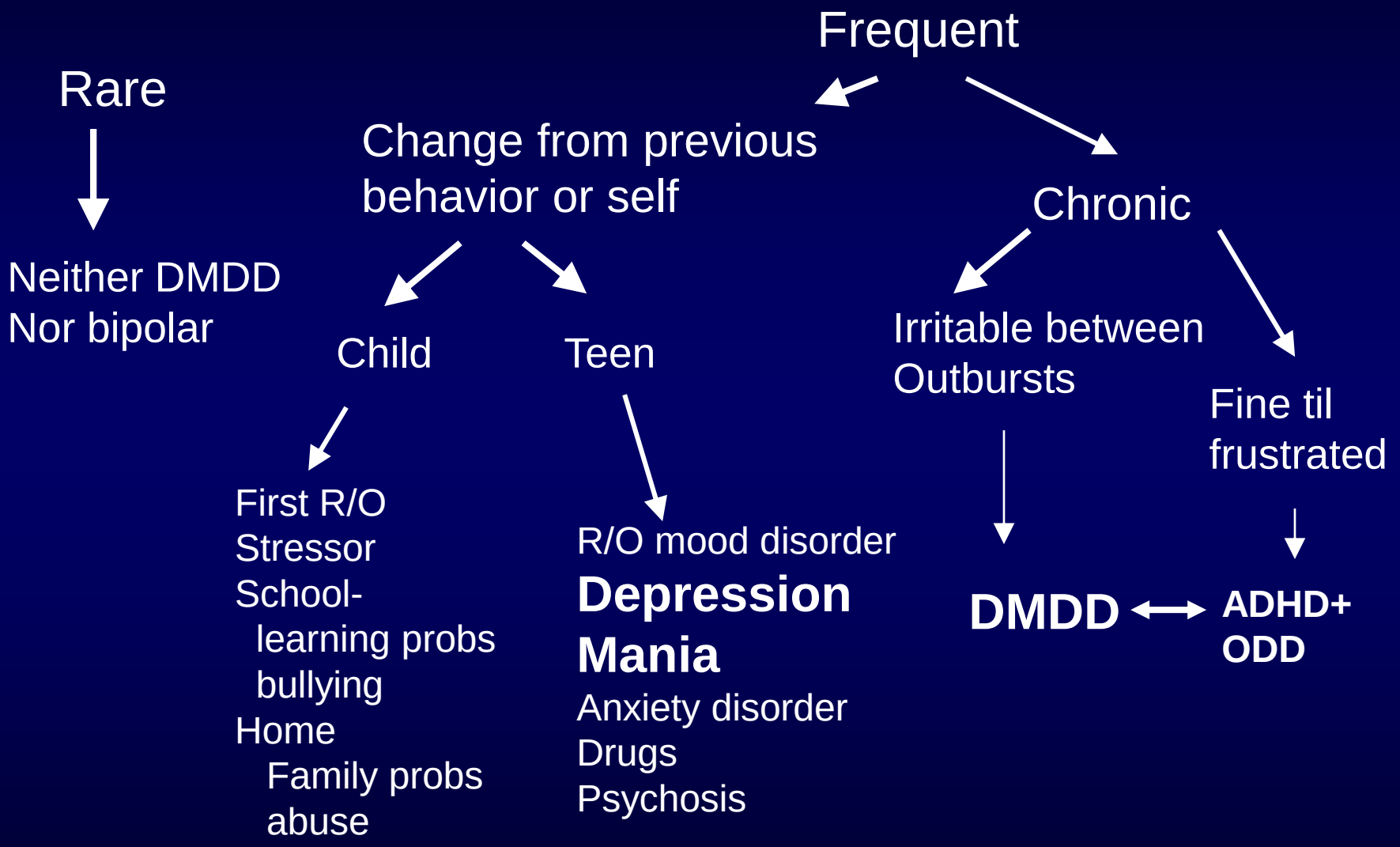
- **O**utbursts – frequent, impairing, in more than one place (i.e. not just conflict with a parent or teacher)
- **I**rritable mood when not having outbursts
- **V**ery chronic-has lasted at least a year
- **E**xplained by another [better understood] condition e.g. mania (at least a day), MDD, PTSD, anxiety, autism??? not DMDD
  - The point being that outbursts occur in many conditions that need to be ruled out first
- **Y**oung-Starts in childhood (after age 6, before age 10)

Diagnoses in clinic children with DMDD (%)

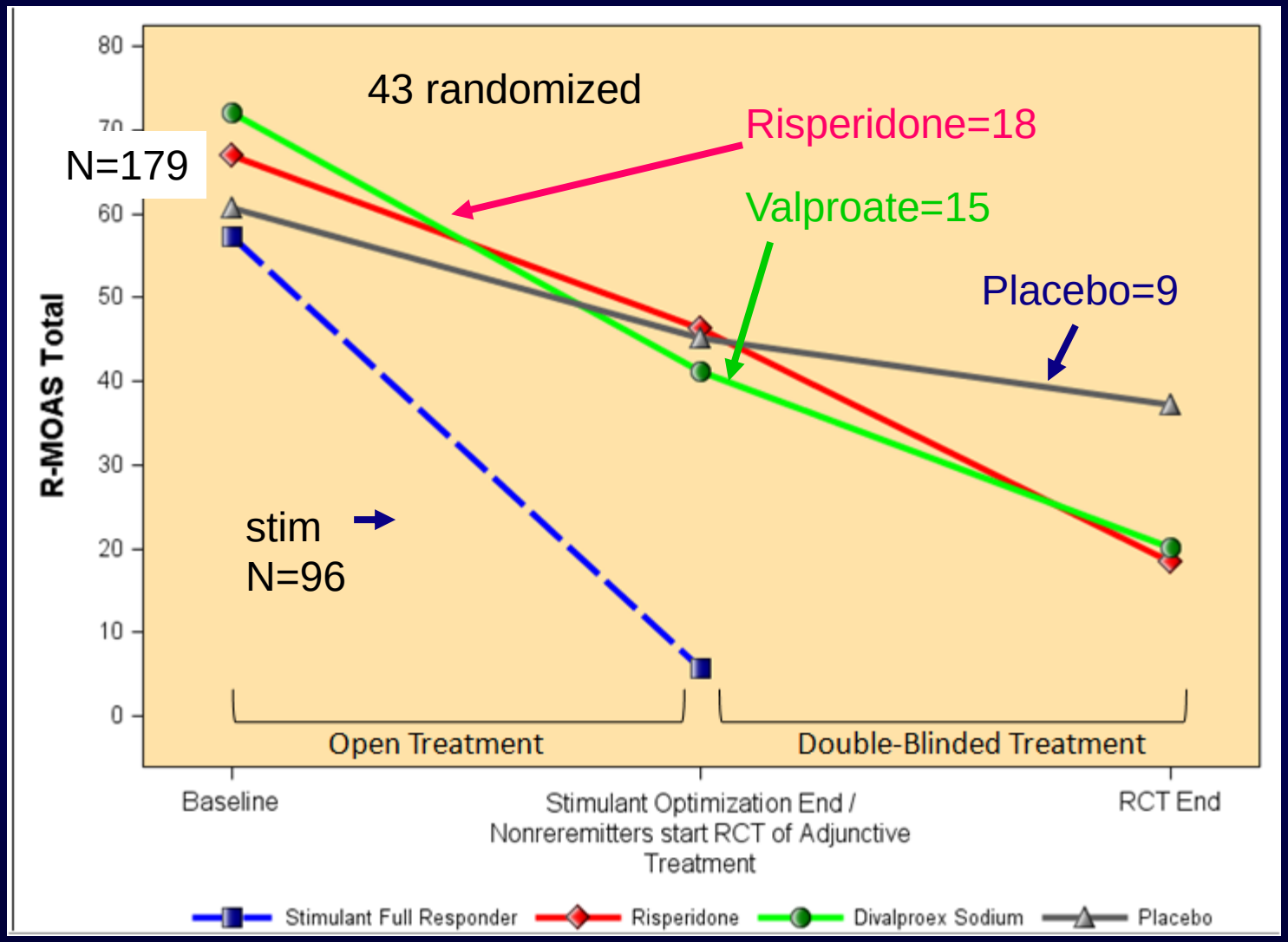
Study Sample size (irritable+expl)	Inpat DMDD 32	LAMS DMDD 184	SUSB DMDD 236	No DMDD
Manic Sx: CMRS>/=20	**69.6**	**28** (ESM+)	33.3	8.9
Bipolar I manic	**3.1**	**9**	**9.7**	**6.4**
ADHD	81.2	79	81.9	76.0
Anxiety	41.9	31.5	31.2	36.8
Depression		20	17.4	18.4
ODD	100	78	82.7*	14.8
ADHD + ODD	**78.1**	**77**	**86.1**	18.1
ASD	28.1	3	31.8	15.7

Margulies et al., 2012; Axelson et al., 2012; Roy et al., 2014; Carlson and Dyson, 2013

Differential Diagnosis of Explosive Outbursts



Results of stimulant + parent training lead-in; then randomization to Risp, VPA or PBO



Blader, et al. *JAACAP in press*.

Effect size of drugs in aggression-neuroleptics

	Outcome measure	Effect size SMD	Quality of evidence
Risperidone Normal IQ	Disruptive Aggressive 4 trials 429 kids	.60 (95% CI: 0.31-0.89)	high
Risperidone Low IQ	Conduct probs-aggression	.72 (95% CI .47-.97)	moderate
Quetiapine	Conduct 1 trial-19 kids	1.6 (95% CI 9-3.0)	Very low
Haloperidol	1 trial, 61 kids	Not reported Beat placebo	Very low

What about treatments that address both ADHD and mood

- Current approach
  - Maximize response of ADHD, usually to a stimulant
  - Add the 2nd treatment meant to address the mood (or aggression) symptoms
    - Stimulant + risperidone [1]
    - Stimulant + lithium or divalproex [2]
    - Stimulant + antidepressant [3]

1-Aman, et al. *JAACAP.* 2014;53:47-60.

2 Blader, et al. *Am J Psychiatry.* 2009.

3 studies under way

Other models for mood dysregulation

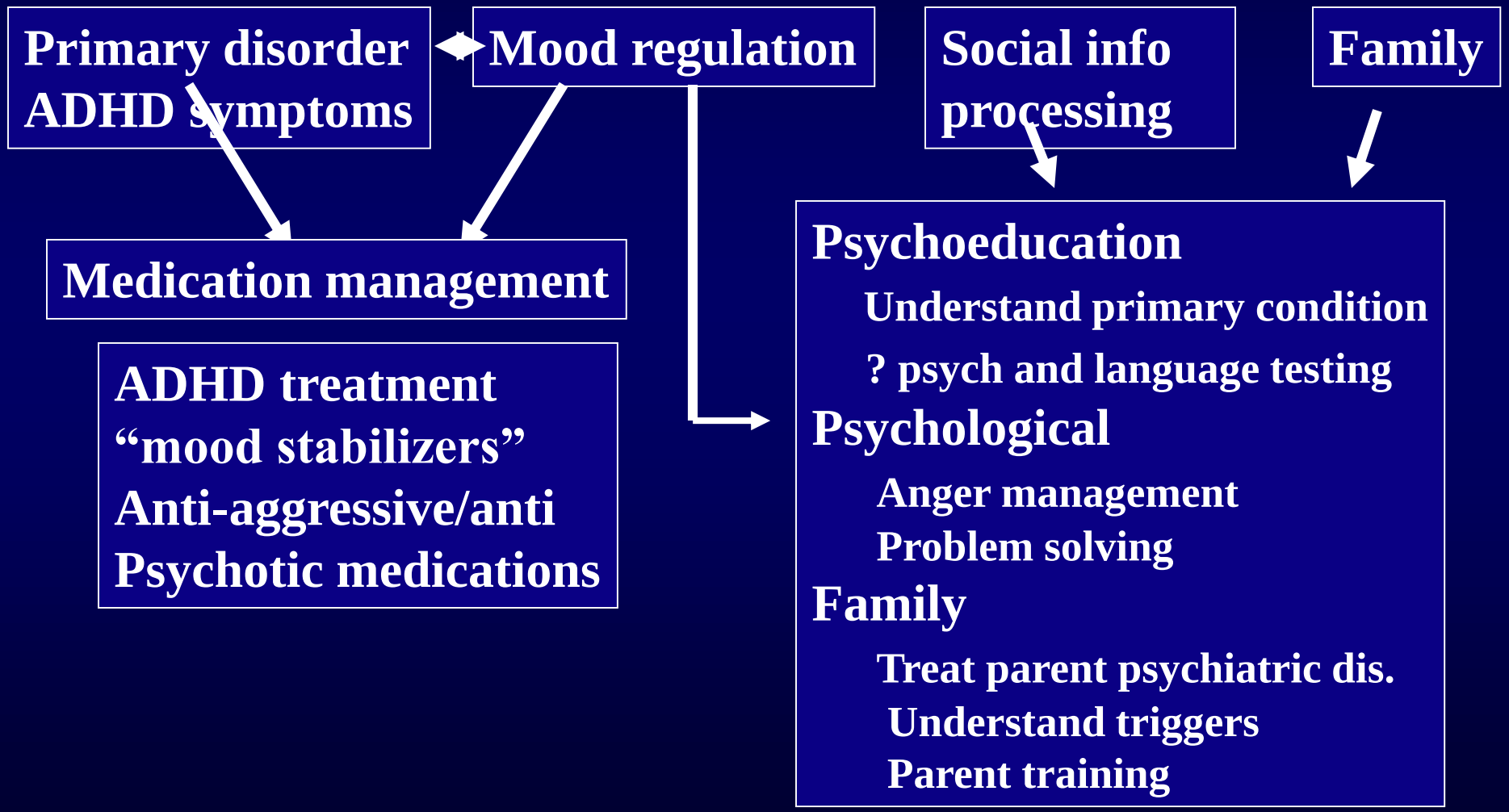
- Behavioral model- coercive relationship is set up whereby children and parents inadvertently reinforce the wrong things perpetuating the behavior
- Social information processing- kids misperceive the size of a threat and react to what they think is there not what is there; poor perspective taking
- Poor problem solving – seeing only one, usually unhelpful way of solving a problem and doing it over and over

What about the outbursts?

- No consensus on how to intervene otherwise with episodes; outcome measures lacking
  - Behavior modification –has the most data [2]
  - Negotiation/collaborative problem solving has a little data
  - Verbal de-escalation only has no data at least in children
- PRN medications are widely used but there are no placebo-controlled data to demonstrate shortening of episode [1]

[1]-Baker and Carlson, EBMH, 2018
[2]-Carlson et al., JAACAP, in press

PROPOSED MANAGEMENT



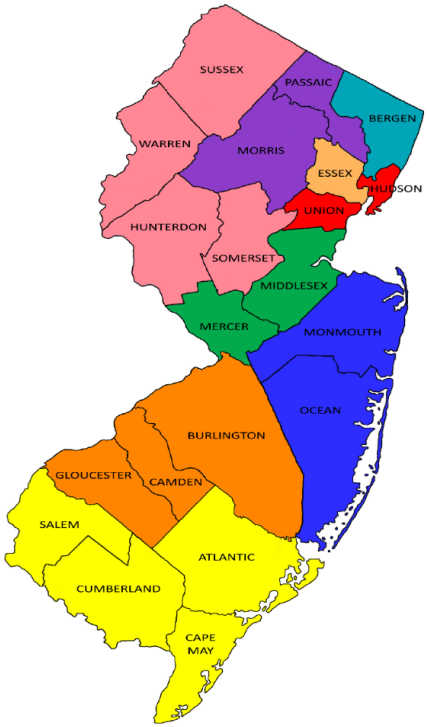
Treatment Summary

- Kids improve with stimulants and good behavior mod.[2]
- There is some improvement if ADHD is optimally treated and mood stabilizers or atypicals added.[3]
- Atypicals appear to work somewhat for the "aggression" aka"mood swings" aka "irritability"
- But, most children remain significantly impaired even if improved.
- Psychological interventions have some efficacy but require motivation and considerable effort

[1]Carlson, et al. 2009.
[2]Waxmonsky, et al. *JCAP.* 2009.
[3]Carlson, et al. 1992.
[3]Blader, et al. *Am J Psychiatry.* 2009.

AT THIS TIME IF YOU HAVE ANY QUESTIONS PLEASE ENTER THEM IN THE Q/A.

9 Pediatric Psychiatry "Hubs" Serving 21 Counties



- **Atlantic Health Hub @ Newton Medical Center**
- **Atlantic Health Hub @ Goryeb Children's Hospital**
- **Hackensack Meridian Hub @ Hackensack University Medical Center**
- **Hackensack Meridian Hub @ Palisades Center**
- **Hackensack Meridian Hub @ Saint Peter's Family Health Center**
- **Hackensack Meridian Hub @ Jersey Shore University Medical Center**
- **Cooper Hub @ Cooper University Medical Center**
- **Cooper Hub @ Pennsville**
- **Essex County served by Rutgers University Behavioral Health Care.**

More information on the Essex Hub can be found here: https://ubhc.rutgers.edu/clinical/community/collaborative-behavioral-health-care-project-essex-hub/collaborative-behavioral-health-care-project-essex-hub/collaborative-behavioral-health-care-project-essex-hub.xml

PPC Hub Benefits

- A child and adolescent psychiatrist available for consultative support through the Child Psych. consult line
- A psychologist/social worker available to:
  - Assist the pediatrician with diagnostic clarification and medication consultation,
  - Speak with a referred child's family regarding the child's mental health concerns and to assist in providing diagnostic clarification.
- One-time evaluation by a child and adolescent psychiatrist (CAP) at no charge to the patient when appropriate.
- Based on the recommendation of the CAP, the PPC Hub staff will work with the family to develop the treatment and care coordination plan.
- Continuous education opportunities in care management and treatment in the primary care office for the common child mental health issues: ADHD, depression, anxiety, etc.

Case Discussion

7 year old female in 1st grade

- Referred with symptoms of aggression, disruptive behavior, social Issues, and mood changes.
- Distractible, impulsive, and rage outbursts since age 2; Mom has trouble getting her to do anything, especially school work. She is negative attention seeking.
- Behavior worse since age 5; Grandma died then
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8 year old boy

- Increasing episodes of explosive anger, typically in response to frustration, home > school, several times a day.
- Formerly a good, well-liked student, is now more socially withdrawn .
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- OT evaluation demonstrated sensitivity to and difficulties processing multisensory input and misperception of certain social exchanges as threats.

Resources

ARTICLES:

- ***Frying pan to fire? Commentary on Stringaris et al.* (2018)**

Journal of Child Psychology and Psychiatry 59:7 (2018), pp 740–743

Gabrielle A. Carlson; Daniel N. Klein

Department of Psychiatry and Pediatrics, Stony Brook University School of Medicine, Stony Brook, NY; Department of Psychology, Stony Brook University, Stony Brook, NY, USA

- ***Practitioner Review: Emotional dysregulation in attention-deficit/hyperactivity disorder – implications for clinical recognition and intervention***

Journal of Child Psychology and Psychiatry 60:2 (2019), pp 133–150

Stephen V. Faraone; Anthony L. Rostain; Joseph Blader; Betsy Busch; Ann C. Childress; Daniel F. Connor; and Jeffrey H. Newcor

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