Mental Health and Autism Spectrum Disorder: The Elephant in the Room

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Colin J. Condron, MD - Care of the Sick Child Conference
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Disclosures

• Dr. Coplan is author of Making Sense of Autistic Spectrum Disorders: Create the brightest future for your child with the best treatment options (Bantam-Dell, 2010), and receives royalties on its sale

• This presentation will include a discussion of off-label drug use

The Myth

Neurodevelopmental Disorders

Psychiatric Disorders

Searches | Results
--- | ---
exp Autistic Disorder/ | 16657
exp Mental Health/ | 21539
1 and 2 | 21

Adam Lanza: What We Think We Know About the Apparent Newtown Shooter

Ryan Lanza reveals brother Adam Lanza was autistic, had personality disorder (Video)

Adam Lanza Diagnosed With Sensory Integration Disorder

Piet Mondrian (1872-1944)
Autism Canada’s Statement On The Sandy Hook Elementary School Tragedy 12/17/2012

- It has been reported that the shooter at Sandy Hook Elementary School had autism. In the weeks and months to come there will be much more information about his condition, but today it has never been more important to understand that autism / Asperger's is not a mental health condition. Autism is a neurological condition.....

ARI Statement on the Newtown, CT Tragedy

The staff at the Autism Research Institute is deeply saddened by yesterday’s tragic events at Sandy Hook Elementary School in Newtown, Connecticut...

Some public comments have drawn potentially inaccurate and stigmatizing conclusions about a link between the diagnosis [of autism] and a propensity for violence and lack of empathy...

Autism is not a mental health disorder - it is a neurodevelopmental disorder...

Autism Society of America Statement 12/17/2012

- No evidence exists to link autism and premeditated violence...
- Individuals with autism who act aggressively typically do so because they are reacting to a situation...
- Many of the individuals with Asperger’s syndrome who have committed crimes had co-existing psychiatric disorders...

Reality

The more…cases of insanity that I have had to deal with, the more strongly the fact has impressed itself upon me that it is fruitless to endeavor to draw up an elaborate scheme of classes, orders, and genera, into which cases of insanity are to be grouped...[T]here are wide differences between different cases, but...the differences are not abrupt...Cases will always occur partaking pretty equally of the nature of two adjoining groups, and other cases will occur which exhibit at one time the features of one group, and at another time those of another.


Outline

- Natural Hx of ASD (review)
- Psychiatric co-morbidity in persons w. ASD
- ASD and Non-ASD psychiatric morbidity in the families of children with ASD
- Family Mental Health
- Practical suggestions
- Summary
Natural History: “The temporal course of a disease from onset to resolution”
Center for Disease Control & Prevention

ASD has a Natural History of improvement over time, irrespective of intervention

Clinical Domain

<table>
<thead>
<tr>
<th>Decreasing Atypicality / Increasing Age</th>
<th>Severe / Youngest</th>
<th>Moderate / Older</th>
<th>Mild / Older</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Social Interaction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- No eye contact</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- No physical affection</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Cannot be engaged in imitative tasks</td>
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<td></td>
<td></td>
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<tr>
<td>- Intermittent eye contact</td>
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<td></td>
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</tr>
<tr>
<td>- Seeks affection “on his own terms”</td>
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<td></td>
</tr>
<tr>
<td>- Engageable in imitative tasks, although with difficulty</td>
<td></td>
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<td></td>
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<tr>
<td>- Good eye contact</td>
<td></td>
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</tr>
<tr>
<td>- Shows interest in others, but often does not know how to join in</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Easily engaged in imitative activities</td>
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<td></td>
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<tr>
<td>- Rigid; has difficulty if perceives that rules have been broken</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Difficulty with “Theory of Mind” tasks</td>
<td></td>
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</tr>
</tbody>
</table>


Theory of Mind

• Realization that other people have an internal mental & emotional state, different from one’s own
• Ability to gauge the internal mental & emotional state of others
  – Able to infer motives & predict behavior of others
  – Empathy
  – Humor

Theory of Mind

Muff

Muff is a little yellow kitten. She drinks milk. She sleeps on a chair. She does not like to get wet.

Q: How would Muff feel, if you gave her a bath?
A: Clean!

Theory of Mind

Camping

Six boys put up a tent by the side of the river. They brought things to eat with them. When the sun went down, they went into the tent to sleep. In the night, a cow came and began to eat grass around the tent. The boys were afraid. They thought it was a bear.

Is this a sad story, a scary story, or a funny story?
• A scary story, because the boys were scared. (PDD-NOS)
• It was a most unusual story, because you don’t often find cows in the woods. (Asperger Syndrome)
Theory of Mind

Q: How does the boy feel?
A: I don’t know, because I can’t see his mouth.

Quantifying severity of ASD - 2

<table>
<thead>
<tr>
<th>Clinical Domain</th>
<th>Decreasing Atypicality / Increasing Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Severe / Youngest</td>
</tr>
<tr>
<td>2. Language - Pragmatics - Prosody</td>
<td>- Nonverbal: no response to voice; may “act deaf” - No use of gestures, compensating for absence of spoken language - May use “hand-over-hand” to guide caregiver to desired objects</td>
</tr>
</tbody>
</table>

Quantifying severity of ASD - 3

<table>
<thead>
<tr>
<th>Clinical Domain</th>
<th>Decreasing Atypicality / Increasing Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Severe / Youngest</td>
</tr>
<tr>
<td>3. Repetitious Behaviors</td>
<td>Cognitive - Extreme distress if routines are changed or when required to transition from one task to another - Fascination with odd objects (tags, wheels, fans, etc.)</td>
</tr>
<tr>
<td></td>
<td>Motoric - Frequent, intense stereotypic movements (flapping, spinning, toe-walking, finger-tapping)</td>
</tr>
</tbody>
</table>

What’s happening in this picture?

“Two strangers got into the house and are handing out newspapers.”
What's happening in this picture? "The girl is screaming."

What's happening in this picture? "That girl is trying to steal the other girl's book."

What's happening in this picture? "The man is trying to fix the truck."

Quantifying severity of ASD - 4

<table>
<thead>
<tr>
<th>Clinical Domain</th>
<th>Decreasing Atypicality / Increasing Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Severe / Youngest</td>
</tr>
<tr>
<td>4. Sensorimotor:</td>
<td></td>
</tr>
<tr>
<td>- Intense aversion or attraction to specific classes of stimuli</td>
<td>➔</td>
</tr>
<tr>
<td>- Clumsiness</td>
<td>➔</td>
</tr>
<tr>
<td>• Auditory: Hyperacusis, covers ears, acts deaf</td>
<td>➔</td>
</tr>
<tr>
<td>• Visual: Self-stimulation (light/patterns), looks at objects from odd angles</td>
<td>➔</td>
</tr>
<tr>
<td>• Tactile: Rubbing, licking, mouthing, deep pressure, sensitive to light touch</td>
<td>➔</td>
</tr>
<tr>
<td>• Olfactory: Sniffing</td>
<td>➔</td>
</tr>
<tr>
<td>• Extreme food selectivity</td>
<td>➔</td>
</tr>
<tr>
<td>• Pain threshold</td>
<td>Same, but diminishing intensity</td>
</tr>
</tbody>
</table>

**Average Borderline ID - Mild ID - Moderate ID - Severe**

- **Superior**: 130
- **Low Average**: 50
- **Borderline**: 85
- **ID - Mild**: 60
- **ID - Moderate**: 50
- **ID - Severe**: 40
- **Profound Intellectual Disability**: 25

**Non-Verbal IQ: The biggest co-variable driving prognosis**

- **0 SD**
- **-1 SD**
- **-2 SD**
- **-3 SD**
- **-4 SD**
- **-5 SD**

**Combine atypicality and IQ scales**

- **Severe**
- **Moderate**
- **Mild**

**ASD & IQ: 2 Dimensions**

- **Severe**
- **Mild**

**Atypicality, IQ, & Age: ASD in 3 Dimensions**

**Progression of Interventions Follows the Natural History**

- **ABA-DTT**
- **PECS**
- **ABA-NET**
- **PRT, DIR**
- **Sign**
- **TEACCH**

**The higher the IQ, the faster the atypicality fades, but.....**

- **A**
- **B**
Outline

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Examining the comorbidity of bipolar disorder and autism spectrum disorders: a large controlled analysis of phenotypic and familial correlates in a referred population of youth with bipolar I disorder with and without autism spectrum disorders.

- Secondary analysis of data from a family study of youth with Bipolar I D/O (probands = 157, relatives = 487)
- 30% (47/155) of Bipolar I probands met criteria for ASD
- Age at onset of Bipolar I was significantly earlier in the presence of ASD comorbidity (4.7±2.9 y vs 6.3±3.7 y; p=.01)
- Phenotypic and familial correlates of bipolar disorder were similar in youth with and without ASD comorbidity

“Is Schizophrenia on the Autism Spectrum?”

King & Lord, 2011

- “Schizotypal Personality” is distinguished by “unusual preoccupations, unusual perceptual experiences, odd thinking and speech (e.g., overelaborate, or stereotyped), inappropriate or constricted affect, behavior or appearance that is odd, eccentric, or peculiar; lack of close friends or confidants other than first-degree relatives, and social anxiety…”
- c/w Wing’s “Active but odd” ASD phenotype
“Is Schizophrenia on the Autism Spectrum?”
King & Lord, 2011

- “What arguably distinguishes schizophrenia spectrum from autism spectrum in two individuals who otherwise share all of these symptoms is the presence of paranoid ideation…”

ASD & Schizophrenia: Epidemiology

- Prevalence
  - ASD ~ 1/100
  - SCZ ~ 1/100 (lifetime risk)

- Joint occurrence of ASD and SCZ
  - Predicted (if independent): 1/10,000
  - Observed (small samples, ascertainment bias):
    - Outcome studies, children w. ASD: How many develop SCZ?
      - Howlin 2004 (N=40; none developed SCZ; underpowered)
    - Childhood Onset Psychosis: 50% had prior PDD
      - Rapoport et al 2009, Uenerga & Heferbac 2012
    - Adults with ASD: 7-35% meet criteria for SCZ
      - Howlin 2000, Stahlberg 2004; Mouridsen 2006a, b
    - Adults with SCZ: Unknown how many meet criteria for ASD

- Theory of Mind deficits are seen in:
  - ASD: Proband children & their Non-ASD parents
  - SCZ: Proband adults & their Non-SCZ parents

ASD & Schizophrenia: Epidemiology

- Two individuals who otherwise share all of these symptoms is the presence of paranoid ideation.

- Observed (small samples, ascertainment bias):
  - Outcome studies, children with ASD: How many develop SCZ?
    - Howlin 2004 (N=40; none developed SCZ; underpowered)
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- Theory of Mind deficits are seen in:
  - ASD: Proband children & their Non-ASD parents
  - SCZ: Proband adults & their Non-SCZ parents

Psychosis and Schizophrenia

- Older literature (more severe)
- Convenience samples rather than prospective cohorts

Table 1

<table>
<thead>
<tr>
<th>Reference</th>
<th>Number</th>
<th>Diagnosis</th>
<th>Age (years)</th>
<th>Prevalence spectrum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autism (1999)</td>
<td>40</td>
<td>ASD</td>
<td>18-47, mean 27</td>
<td>21% psychosis</td>
</tr>
<tr>
<td>Autism (1999)</td>
<td>60</td>
<td>Autism, 46</td>
<td>16-67, mean 24</td>
<td>17% psychosis</td>
</tr>
<tr>
<td>Autism (1999)</td>
<td>10</td>
<td>ASD</td>
<td>18</td>
<td>50% SCZ spectrum</td>
</tr>
<tr>
<td>Autism (1999)</td>
<td>10</td>
<td>Autism, IQ &gt; 80</td>
<td>18</td>
<td>23% Behavior</td>
</tr>
<tr>
<td>Autism (1999)</td>
<td>10</td>
<td>Autism, IQ &lt; 70</td>
<td>18</td>
<td>23% Behavior</td>
</tr>
<tr>
<td>Autism (1999)</td>
<td>14</td>
<td>Autism, high functioning</td>
<td>7-75, mean 35, males</td>
<td>50% SCZ spectrum</td>
</tr>
<tr>
<td>Disorganized subtype</td>
<td>None</td>
<td>None</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ref: King & Lord 2011; deLacy & King 2013

Monogenic conditions associated with both ASD and Schizophrenia Spectrum

<table>
<thead>
<tr>
<th>Disease</th>
<th>n (ASD)</th>
<th>n (SCZ)</th>
<th>Neurobehavioral phenotype</th>
<th>Location</th>
<th>Gene</th>
<th>Gene product function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fragile X syndrome</td>
<td>20-30</td>
<td>NR</td>
<td>21% psychosis</td>
<td>55q12.2</td>
<td>FMR1</td>
<td>Negative regulator of translation</td>
</tr>
<tr>
<td>Prader-Willi syndrome</td>
<td>10</td>
<td>10</td>
<td>15q11.2</td>
<td>mDN</td>
<td>15q11.2</td>
<td>Regulates metabolism of other unknown RNAs</td>
</tr>
<tr>
<td>Autism spectrum</td>
<td>20-40</td>
<td>10</td>
<td>15q11.2</td>
<td>mDN</td>
<td>15q11.2</td>
<td>Regulates metabolism of other unknown RNAs</td>
</tr>
<tr>
<td>Rett syndrome</td>
<td>10</td>
<td>10</td>
<td>Xq28</td>
<td>MECP2</td>
<td>Xq28</td>
<td>MECP2</td>
</tr>
<tr>
<td>Autism spectrum</td>
<td>20-40</td>
<td>10</td>
<td>Xq28</td>
<td>MeCP2</td>
<td>Xq28</td>
<td>MeCP2</td>
</tr>
</tbody>
</table>

Ref: King, Bryan H. Revisiting the relationship between autism and schizophrenia toward an integrated neurobiology. Annual Review of Clinical Psychology. 9:555-87, 2013
ASD and SCZ: Shared Psychopharmacology

- Neuroleptics
  - The only FDA approved drugs for ASD
  - Originally developed for SCZ

- Oxytocin
  - OXTR and OXT’s in ASD and SCZ
  - Shared clinical effects: repetitive behaviors, affect recognition, ToM, and social cognition

If ASD and SCZ are etiologically related: Why isn’t comorbidity higher?

- Timing
  - Critical periods (e.g., monocular visual deprivation; hypothyroidism)

- Systems impacted / Site of Lesion(s)
  - Neuronal proliferation, migration, cortical folding, synaptic function, local & regional connectivity

- Severity
  - Perhaps severity of ASD risk for developing SCZ
  - But severe ASD can also mask psychiatric d/o’s, including SCZ

- Lack of recognition
  - Genetic eval not usually done in SCZ
  - Expectation effects? (ADOS cannot distinguish ASD from SCZ)

Genetic relationship between five psychiatric disorders estimated from genome-wide SNPs

Cross-Disorder Group of the Psychiatric Genomics Consortium


Network Topologies and Convergent Aetiologies Arising from Deletions and Duplications Observed in Individuals with Autism


PLOS Genetics, June 6 2013

192 genes form an interconnected cluster

Patients with copy number variations within this cluster possess on average, 3 CNV’s

Many of these genes are implicated in psychiatric disorders in humans (anxiety, e.g.), and/or behavioral abnormalities in animal models (abnormal nurturing behavior, e.g.)
There appears to be no question that a phenotypic continuum links the SCZ and autism spectra; moreover, it incorporates neuropsychiatric deficits associated with all of the classic neurodevelopmental disorders [ID…DD… ASD…ADHD, and SCZ]. Affected persons display some subset of symptoms from this neurodevelopmental superset, in individually varying phenotypes likely molded by pleiotropy, different types of genetic defects, and epigenetic mechanisms.

"Our son turned 13 last year. We are noticing that…the world interacts very differently to an autistic child vs. an autistic man."

Parent of teen with ASD

Progression of Interventions

http://www.foxnews.com/story/2007/04/20/relative-says-virginia-tech-shooter-was-autistic/

http://specialchildren.about.com/2007/04/20/was-the-virginia-tech-shooter-autistic-or-not.htm
Will neurodiversity diagnose George Sodini with autism?

Last night…..a man entered a gym in the vicinity of Pittsburgh Pennsylvania. He walked into a room where a "Latin impact" aerobics class was being held. He turned out the lights and drew a gun out of his gym bag. He started shooting, killing three women and then killing himself…. 

Sodini had written: ‘The biggest problem of all is not having relationships or friends, but not being able to achieve and acquire what I desire in those or many other areas….Everthing stays the same regardless of the effert I put in...’

Sound familiar? Well, this is someone with computer skills and social impairments who was frustrated by celibacy. Perhaps neurodiversity could diagnose him with autism as they have diagnosed Bill Gates..."
“...Of course, most persons who suffer from loneliness regardless of whether or not they are autistic will not go out on a shooting spree, but it is frustrating. This man was clearly deranged. He may or may not have had an autism spectrum disorder, but I feel in order to be fair neurodiversity should take the bad with the good. If they are going to preach about what a gift autism is and say that Bill Gates, Stephen Spielberg, Einstein, Jefferson, etc. prove that autism is such a gift because these individuals have or had it, why not say that Sodini may have been autistic also.”


Emerging Perspectives on Adolescents and Young Adults With High-Functioning Autism Spectrum Disorders, Violence, and Criminal Law
Lerner, M et al; J. Am Acad of Psychiatry and the Law Online, 4/2012

• “Link between ASD and violent crime is inconclusive and is supported by only 11 of 147 studies on the subject

Emerging Perspectives on Adolescents and Young Adults With High-Functioning Autism Spectrum Disorders, Violence, and Criminal Law
Lerner, M et al; J. Am Acad of Psychiatry and the Law Online, 4/2012

• A recent small-sample study indicated a reduced incidence of law breaking among individuals with high-functioning ASD, but...an increased history of violent behavior and criminal damage... In other words, while the overall rate of criminal behavior diminished, violent behavior and damage associated with this behavior increased...

Emerging Perspectives on Adolescents and Young Adults With High-Functioning Autism Spectrum Disorders, Violence, and Criminal Law
Lerner, M et al; J. Am Acad of Psychiatry and the Law Online, 4/2012

• There may be unique features of ASDs that are important to consider when violent crime is committed by individuals with HFASD:
  - Theory of Mind
  - Emotional Regulation
  - Moral Reasoning
  - Lack of cross-disciplinary, non-biased data (clinical series; informative censoring, etc.)

Outline

• Natural Hx of ASD
• Psychiatric co-morbidity in persons w. ASD
  ➢ ASD and Non-ASD psychiatric morbidity in the families of children with ASD
• Family Mental Health
• Practical Suggestions
• Summary
ASD (Autism, PDD-NOS, AS)

- "Broad Autistic Phenotype"
  - Social Impairment
  - Communication Impairment
  - Restricted, repetitive behaviors & interests

- Anxiety Disorders
- Obsessive-Compulsive Disorder
- Depression, Bipolar Disorder
- Alcoholism
- Schizophrenia

Non-ASD Psych D/O

- Anxiety Disorders
- Obsessive-Compulsive Disorder
- Depression, Bipolar Disorder
- Alcoholism
- Schizophrenia

Presentation in Childhood (Coplan, J., 2010: Making Sense of Autistic Spectrum Disorders, Fig. 3.2)

Parents of Children with ASDs: Depression or Bipolar D/O

IAN Research Report #7 - October 2008: Parental Depression History
http://www.iancommunity.org/ion/ian_research_reports/ian_research_report_oct_2008

Tics, TS

IAN Research Report #1 - May 2007
http://www.iancommunity.org/cas/ian_research_reports

Parents & Siblings of Children with ASDs: Issues of Attention and Mood (self-report survey)

IAN Research Report #1 - May 2007
http://www.iancommunity.org/cas/ian_research_reports

Stephen W; MRN 08-0485

SK, MRN 12-0824
Family Mental Health

(“We give our children roots and wings” — Hodding Carter)

Family Mental Health is a key ingredient in outcome for all children, but especially for the child with developmental disability, who is less able to work around obstacles arising from family dysfunction than a child with normal development.

Individual Mental Health as a contributor to family mental health

• Parents of children with ASD: High frequency of neuropsychiatric disorders (esp. anxiety, depression)
• Limits adult’s ability to achieve full differentiation
• Limits adult’s ability to respond in a flexible manner to the extraordinary demands from child w. ASD

The Real Elephant in the Room

Child w. ASD + Parent with MH D/O =

Signs of Family Mental Health

• Cognitive, Emotional, and Tactical Flexibility
  – Shifting alliances (adults vs. kids, “boys vs. girls,” etc.)
  – Shifting roles (role of “hero” or “in the doghouse”)
  – Shifting solutions (one size does not fit all; “equitable” vs. “equal”)
  – Shifting combinations for activities. All legitimate combinations should come up once in a while.
• Sense of humor / playfulness / resilience

Danger Signs

• Inflexibility
  – Fixed roles
  – Fixed solutions
• Hypervigilance
  – Lack of trust in care providers
• Social Isolation
  – “Circle the wagons” mentality
  – “Nobody helps us!”
Vignette #1

• “Obedience is very important to me.”
  – Father of 10 y.o. boy with ASD
  • Father has untreated anxiety d/o
  • Works in law enforcement
  • Keeps unsecured firearms in the home
  • Perceives his son with ASD as “a predator,” because “everything is all about him”

Vignette #2

• “Nobody helps us.”
  – Mother of 14 y.o. boy with ASD
  • Family has no social supports
  • Child is on homebound instruction
  • Spends hours / day watching violent video games
  • Threatens to “kill” the examiner during home visit

What you can do in the office

Probe Questions
(In ascending order of intimacy)

• Do you and your partner ever go out as a couple? When was the last time?
• Who else do you have as supports?
• What have you told your other children / parents?
• Tell me a little bit about yourself / how you were raised / your own mental health?

House Rule #1

• Get both parents to come in for the interview & informing session
  – Have a sofa if possible, and watch the body language
  – “What do you think about what your spouse just said?”

House Rule #2

• No medication unless parents agree to behavioral and MH evaluation for their child and/or themselves, if you deem it necessary
Medication cannot cure developmental or behavior problems. However, medication can sometimes alleviate biologically-based symptoms, such as inattention, impulsivity, anxiety, depression, cognitive rigidity, agitation, disruptive, or self-injurious behavior. Medication alone is frequently less effective than medication plus behavioral or mental health services. Therefore, in addition to administering psychoactive medication to your child, Dr. Coplan may recommend behavioral and/or mental health services as part of your child’s treatment plan as follows: …..

**House Rule #3**

• The family is a system ➔ The unit of treatment is the family
• Assess mental health of all players
• Assess relationships among the players
• Fostering the family’s ability to move forward is my #1 goal. The child’s parents & siblings will be involved with my patient long after I have left the stage.

**Outline**

• Natural Hx of ASD
• Psychiatric co-morbidity in persons w. ASD
• ASD and Non-ASD psychiatric morbidity in the families of children with ASD
• Family Mental Health
• Practical Suggestions
  ➔ Summary

**Summary**

• ASD has a natural history for improvement over time, insofar as the atypical features are concerned, but…
• Co-morbid mental health issues present a progressively greater challenge
• ASD in a child is a red flag for developmental and/or mental health disorders in parents / siblings

**Summary**

• To be successful, intervention needs to be multimodal and family-centered
  ➔ Mental health intervention
  • Child: Self-awareness, self-esteem, self-regulation
  • Parents: Address their own MH issues
  • Family: Take a family-system approach
    ➔ Flexibility / Resilience within the family structure
    • Siblings are at high risk for genetically based morbidity, and/or collateral damage due to family system dysfunction
  • Educational / Vocational services
  • Psychotropic Medication - often
Need for Adult Services

- Social Skills Groups
- Social Stories
- DTT
- VB
- OT
- NET, PRT, DIR
- SLP
- TEACCH

Vocational Support
Educational Support
Community Living Skills
Mental Health Services
Caregiver Support

Summary

- Need for Adult Services
  - Clinics for "Long-Term Survivors of Childhood ASD" patterned after Long-Term Survivors of Childhood Cancer
    - Mental Health
    - Job coaching
    - Social contact
    - Family / Caregiver support (parents, partners)
    - Developmental screening of offspring

Resources

- Married with Special Needs Children; A couples’ guide to keeping connected. Marshak LE and Prezant, FP. Woodbine, 2007
- Voices from the spectrum. Parents, grandparents, siblings, people with autism, and professionals share their wisdom. Ariel, CN and Naseef, R (eds). Jessica Kingsley, 2006
- The American Association of Marriage and Family Therapy http://www.aamft.org/iMIS15/AAMFT/
- The Bowen Center: http://www.thebowencenter.org/

Thank you