Overview of Autism Spectrum disorders

Janet Lintala, DC
Autism Health! PLLC
2401 South Kanawha Street
Suite 106
Beckley, WV 25801
304-255-2550
Disclosures

Nonfinancial relationships:
• Autism Health, PLLC.
• The Un-Prescription; President of the Board
• Secretary, WV State Rehabilitation Council
• Advisory Panel to the BSA National Disabilities Awareness Committee

Financial relationships:
• NCMIC Speakers Bureau
• Author, *The Un-Prescription for Autism*, April 2016
• Speaker: Intersect4Kids
• Adjunct Faculty: National University of Health Sciences
50,000 newly diagnosed with ASD each year in the US
What’s in Your Toolbox?
My beautiful child was....

Born one month after graduation (Doctor of Chiropractic)
My beautiful child was....

Sunny
My beautiful child was....

Sunny

Irritable & whiney
My beautiful child was....

Sunny → Irritable & whiney → Aggressive & angry
• Almost no sleep whatsoever for 5 years
• Precocious language and reading
• Irritable and aggressive by 6 years of age
• Often angry and screaming
• Years of diarrhea and foul gas
• Diagnosed with Asperger syndrome at age 7 years – We were told there is no treatment and to just “put him into the school system”

• Two other sons came along, mix of Autism Spectrum issues, OCD tendencies, Tourette’s, ADHD and panic/anxiety issues
Autism Parents are told many things by doctors...

- ADHD
- ADD
- ODD
- OCD
- GERD
- ASD
- PDD-NOS
Autism Parents are told many things by doctors...

- Sensory Processing Disorder
- Anxiety
- Depression
- Schizophrenia
- Bipolar Disorder
- Intermittent Explosive Disorder
- Even “Middle Child Syndrome”!
And here is what friends, relatives and strangers at the mall say to us....

- He’ll talk when he’s ready
- He’ll eat when he’s hungry
- He just needs a good slap
- My child has tantrums, too
- I would never let my child act like that
- Stop using autism as an excuse
- He doesn’t look autistic
- He looks so normal, are you sure it’s autism?
And here is what friends, relatives and strangers at the mall say to us....

- He’s spoiled
- He’s obnoxious
- “He’s a jerk”
- You’re bad parents
- You should medicate him
- You just need to show him who’s boss
- You need to discipline him more
- Why don’t you just spank him harder?
Telling an autism mother how to raise her child...

Not your best idea!
Finding Help...

- Expensive, out-of-state “biomedical” doctors
- Autism Conferences (Parent track)
- Networking with other autism parents
- Internet

I was unable to practice for 14 years
My “PLAN B” Career
I began to train as an Autism Clinician to help my child:

- MAPS – Medical Academy of Pediatric Special Needs
- Defeat Autism Now! (DAN!) Clinician Training
- US Autism and Asperger Association Conference
- Hyperbaric Oxygen Training Courses
- Two Mentorships at the RIMLAND Center
- Hope for Autism Clinician Training
- Neurofeedback Training
Overview of Autism:

• Signs of Autism
• DSM-V Diagnostic Criteria
• Screening tools
• Diagnostic Tools
• Related conditions
• Autism Rates
• Cause and Model
• Traditional Therapies and Treatments
• Traditional pharmaceuticals
• Prognosis for adulthood
• People-first language vs. Identity-first Language
• Politically incorrect language
Diagnostic Criteria for ASD

A. Persistent deficits in social communication and social interaction

1. Deficits in social-emotional reciprocity

2. Deficits in nonverbal communicative behaviors used for social interaction

3. Deficits in developing, maintaining, and understanding relationships
B. Restricted, repetitive patterns of behavior, interests, or activities, as manifested by at least two of the following, currently or by history (examples are illustrative, not exhaustive; see text):

1. Stereotypyed or repetitive motor movements

2. Insistence on sameness, inflexible adherence to routines, or ritualized patterns or verbal nonverbal behavior

3. Highly restricted, fixated interests that are abnormal in intensity or focus

4. Hyper- or hyporeactivity to sensory input or unusual interests in sensory aspects of the environment
The DSM-V is:
* What we know
* What we see
* What we expect

- Deficits in developing, maintaining, and understanding relationships
- Deficits in social-emotional reciprocity
- Insistence on sameness, inflexible adherence to routines
- Restricted, fixated interests abnormal in intensity or focus
- Stereotyped or repetitive motor movements
- Hyper- or hyporeactivity to sensory input

This is what you see...
Autism - First Biologically Distinct Subtypes Of Brain Development Uncovered

MIND Institute UC Davis 2011

“The discoveries are similar to those of the first biological subtypes of cancer in the 1960s, which provided access to a better understanding of causes and effective treatments, cure and prevention, in addition to huge changes in public health policies...” (Medical News Today)
"One group of children has precocious growth of the brain. The pattern only appears in boys (but not all boys – JL) with autism and is mainly observed in children whose parents say they regressed into autism.”

Medical News Today
“Many other children with autism, including all girls evaluated, appear to have a normal trajectory of brain growth, though their autism appears in the first 12 months. The biological cause of autism in these children is likely to be quite different from those with abnormal brain growth.”

Medical News Today
Some evidence supports an Immune subtype of Autism


Some evidence supports an Inflammatory subtype of Autism


Cytokine profiles by peripheral blood monocytes are associated with changes in behavioral symptoms following immune insults in a subset of ASD subjects: an inflammatory subtype?

*Jyonouchi H, Geng L, Davidow AL.*
One of the major roadblocks to understanding the causes of and finding effective treatments for autism is that it has diverse outcomes.

• Some individuals have seizures, but others do not.
• Some have troubling gastrointestinal problems, but others have none.
• Some have severe developmental delays, but others have normal or even enhanced IQs.
• This heterogeneity raises the possibility that there are several types of autism, with a variety of causes.
• This complexity limits both scientific progress and the development of effective treatments.
• Thus far, research on autism has not produced precise definitions of autism subtypes based on biomedical and behavioral characteristics.
Signs of Autism Spectrum Disorder

- Not respond to their name by 12 months of age
- Not point at objects to show interest (point at an airplane flying over) by 14 months
- Not play "pretend" games (pretend to "feed" a doll) by 18 months
- Avoid eye contact and want to be alone
- Have trouble understanding other people's feelings or talking about their own feelings
- Have delayed speech and language skills
- Repeat words or phrases over and over (echolalia)
- Give unrelated answers to questions
- Get upset by minor changes
- Have obsessive interests
- Flap their hands, rock their body, or spin in circles
- Have unusual reactions to the way things sound, smell, taste, look, or feel

From CDC Website
Signs of Autism Spectrum Disorder

• No big smiles or other warm, joyful expressions by six months or thereafter
• No back-and-forth sharing of sounds, smiles or other facial expressions by nine months
• No babbling by 12 months
• No words by 16 months
• No back-and-forth gestures such as pointing, showing, reaching or waving by 12 months
• No meaningful, two-word phrases (not including imitating or repeating) by 24 months
• Any loss of speech, babbling or social skills at any age

Copyright 2016 Janet Lintala, DC All rights reserved.
Screening for ASD

The American Academy of Pediatrics (AAP) recommends screening all children for autism at the 18 and 24-month well-child visits.

Most pediatricians have parents fill out a 23-point questionnaire called the M-CHAT (Modified Checklist for Autism in Toddlers).

A free resource that gives the likelihood of ASD is the E2 form on autism.com.
Do we need gender-based screening for ASD?

Findings suggest autism manifests differently in girls.

Copyright 2016 Janet Lintala, DC. All rights reserved.
“Everything we thought was true of autism seems to only be true for boys.”
Kenneth Pelphrey, Researcher
Are We Missing the Females?

Females:

• Have more imagination
• Less repetitive behavior
• Friendship quality and empathy are more on the level of typically developing boys of same age
• Their “restricted interests” blend in better - nature and animals
• Are diagnosed later
• Fall into ADD, OCD, eating disorder categories

Copyright 2016 Janet Lintala, DC  All rights reserved.
Are We Missing the Females?

Females:

- Girls and boys with autism play differently.
- Even though diagnostic guidelines may specify a disinterest in socializing, autistic girls show a much greater desire to connect.
- They observe and imitate
- The brain of an autistic girl may be more like the brain of a typical boy than that of an autistic boy
Cultural Considerations

“Of note are cultural considerations in the evaluation of a child with possible autism. Cultural and familial differences exist in expectations regarding eye contact, play, social interaction, and pragmatic use of language.”

Medscape
In addition to screening for ASD

“Assessment of motor and self-care skills in children with autism is recommended to address clumsiness and sensory issues.”

Medscape
In addition to screening for ASD, assessment of motor and self-care skills in children with autism is recommended to address clumsiness and sensory issues.

“Assessment of motor and self-care skills in children with autism is recommended to address clumsiness and sensory issues.” Medscape
The solution for an “Official” Diagnosis:

“Comprehensive Psychological Evaluation” with a Psychologist
The DSM organizes each psychiatric diagnosis into five dimensions or axes:

**Axis I:** All psychological diagnostic categories except mental retardation and personality disorder

**Axis II:** Personality disorders and mental retardation

**Axis III:** General medical condition; acute medical conditions and physical disorders

**Axis IV:** Psychosocial and environmental factors contributing to the disorder

**Axis V:** Global Assessment of Functioning or Children's Global Assessment Scale for children and teens under the age of 18
Is Autism Treatable or Curable?

Autism itself is not treatable or curable, but it is possible to support vibrant health for children and adults with autism.

I tell patients to stay away from any professional who claims they can cure ASD.
Differential Diagnoses

• Minamata disease (mercury poisoning)
• Moebius syndrome
• Angelman syndrome
• Nonketotic hyperglycinemia (NKH)
• Epilepsy
• Infantile spasms
• Habit disorder
• Tourette disorder
• Infantile hydrocephalus
• Language disorder - Mixed, phonologic, receptive, or stuttering
Differential Diagnoses

• Anxiety Disorder: OCD
• Child Abuse & Neglect
• Cornelia De Lange Syndrome
• Cri-du-chat Syndrome
• Fragile X Syndrome
• Toxicity, Lead - Children with lead poisoning may demonstrate neurobehavioral changes.
Age of onset

• “Autistic disorder manifests in early childhood.”

• “Many parents report normal development in their child until age 2 years before noticing the deficits in social and communicative skills.”

Medscape
Associated conditions

- GI dysfunction
- Pica
- Immune dysfunction
- Allergies, sensitivities
- Attention
- Sleep Disturbances
- Hyperactivity

- Anxiety
- Seizures
- Mood Disorders
- Tic Disorders
- Intellectual Disability
- Sensory Processing disorder
“Some children with autism have an identifiable genetic condition that affects brain development. These genetic disorders include Fragile X syndrome, Angelman syndrome, tuberous sclerosis and chromosome 15 duplication syndrome and other single-gene and chromosomal disorders. While further study is needed, single gene disorders appear to affect 15 to 20 percent of those with ASD.” (Autism Speaks)
<table>
<thead>
<tr>
<th>Year</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980’s</td>
<td>1 in 10,000</td>
</tr>
<tr>
<td>1990’s</td>
<td>1 in 2500</td>
</tr>
<tr>
<td>1990’s</td>
<td>1 in 1000</td>
</tr>
<tr>
<td>2000’s</td>
<td>1 in 168</td>
</tr>
<tr>
<td>2000’s</td>
<td>1 in 110</td>
</tr>
<tr>
<td>2012</td>
<td>1 in 88</td>
</tr>
<tr>
<td>2014</td>
<td>1 in 68</td>
</tr>
<tr>
<td>2016</td>
<td>1 in 68</td>
</tr>
</tbody>
</table>
“ASDs are almost 5 times more common among boys (1 in 42) than among girls (1 in 189) and they are reported in all racial, ethnic, and socioeconomic groups.”

-The Centers for Disease Control, US
There are 4 or 5 males for every female on the spectrum. Fact?
Likely Myth: It’s may be more like 2:1

Autism is more severe in girls. Fact?
Likely Myth: We’ve just been catching the “Peacock Girls” that present more like boys!
A complex set of interactions leads to autism
TODAY'S CAUSE OF AUTISM IS ...

BEING RIGHT-HANDED
The cause of autism today is ...
Bacon
Autism Spectrum Disorder must be recognized as a spectrum of diseases, each of which may have a distinct cause and disease process.

Paula Goines, B.S., Paul Ashwood, Ph.D., and Judy Van de Water, Ph.D.
Neurobehavioural effects of developmental toxicity

Philippe Grandjean, Philip J Landrigan

Neurodevelopmental disabilities, including autism, attention-deficit hyperactivity disorder, dyslexia, and other cognitive impairments, affect millions of children worldwide, and some diagnoses seem to be increasing in frequency. Industrial chemicals that injure the developing brain are among the known causes for this rise in prevalence. In 2006, we did a systematic review and identified five industrial chemicals as developmental neurotoxicants: lead, methylmercury, polychlorinated biphenyls, arsenic, and toluene. Since 2006, epidemiological studies have documented six additional developmental neurotoxicants—manganese, fluoride, chlorpyrifos, dichlorodiphenyltrichloroethane, tetrachloroethylene, and the polybrominated diphenyl ethers. We postulate that even more neurotoxicants remain undiscovered. To control the pandemic of developmental neurotoxicity, we propose a global prevention strategy. Untested chemicals should not be presumed to be safe to brain development, and chemicals in existing use and all new chemicals must therefore be tested for developmental neurotoxicity. To coordinate these efforts and to accelerate translation of science into prevention, we propose the urgent formation of a new international clearinghouse.

Introduction

Disorders of neurobehavioural development affect 10–15% of all births,¹ and prevalence rates of autism spectrum disorder and attention-deficit hyperactivity disorder seem to the nervous system in adults, mostly in connection with occupational exposures, poisoning incidents, or suicide attempts. Additionally, more than 1000 chemicals have been reported to be neurotoxic in animals in
Did acetaminophen provoke the autism epidemic?
Good P.
Traditional Therapies and Treatments

MedScape:
“Individual intensive interventions, including behavioral, educational, and psychological components, are the most effective treatments of autistic disorder.”
Traditional Therapies and Treatments

• “Medicines for Treating Core Symptoms”
• ABA
• Treatment for Associated Psychiatric Conditions
• Complementary Treatments for Autism
• Applied Behavior Analysis (ABA)
• The Early Start Denver Model (ESDM)
• Pivotal Response Therapy (PRT)
• Verbal Behavior Therapy
• Floortime
• Relationship Development Intervention (RDI)
• Training and Education of Autistic and Related Communication Handicapped Children (TEACCH)
• Social Communication/ Emotional Regulation/ Transactional Support (SCERTS)
• What Treatments Are Available for Speech, Language and Motor Impairments?
There’s usually a tool missing from most lists...

Treatment for Underlying Medical Conditions and Dysfunction
Traditional Pharmaceuticals

“Although 70% of children with autism spectrum disorder receive medications, only limited evidence exists that the beneficial effects outweigh the adverse effects.”

Medscape
American Academy of Pediatrics:

“Medications have not been proven to correct the core deficits of ASDs and are not the primary treatment.”
Traditional Pharmaceuticals

- “The second-generation antipsychotic agents Risperidone and aripiprazole (Abilify) provide beneficial effects on challenging and repetitive behaviors in children with autism spectrum disorder, although these patients may experience significant adverse effects.”

- “Risperidone and Abilify have been approved by the FDA for irritability associated with autistic disorder.”

- “The second-generation antipsychotic agent ziprasidone (Geodon) may help to control aggression, irritability, and agitation.”
Abilify is also used to treat symptoms of mood swings, aggression and irritability associated with autistic disorder in pediatric patients aged six years or more.

Abilify uses a different mechanism from other drugs that have been approved for the same symptoms. The majority of antipsychotics shut down dopamine receptors. Abilify works by making the receptors work properly.
Geodon

• It is approved by the U.S. Food and Drug Administration (FDA) for the treatment of schizophrenia, and acute mania and mixed states associated with bipolar disorder.

• Ziprasidone is also used off-label for depression, bipolar maintenance, mood disorders, anxiety, aggression, dementia, attention deficit hyperactivity disorder, obsessive compulsive disorder, autism, and post-traumatic stress disorder.
SSRIs

Selective serotonin reuptake inhibitors (SSRIs) are commonly prescribed for children on the autism spectrum.

Serotonergic drugs are reportedly beneficial for improving behavior in autism. MedScape
The DSM-5 criteria for ASD do not mention:

- Aggression
- Irritability
- Agitation

They are not core deficits of ASD
The DSM-5 criteria for ASD do not mention:

- Aggression
- Irritability
- Agitation

They are not core deficits of ASD.

You’ll learn where this comes from and how this can be reduced or eliminated naturally.
“No pharmacologic agent is effective in the treatment of the core behavioral manifestations of autistic disorder, but drugs may be effective in treating associated behavioral problems and comorbid disorders.”
Traditional Pharmaceuticals

“No pharmacologic agent is effective in the treatment of the core behavioral manifestations of autistic disorder, but drugs may be effective in treating associated behavioral problems and comorbid disorders.” MedScape

We will learn the surprise cause of these behavior problems!
Adverse Effects and Treatment Efficacy

Children with autistic disorder appear sensitive to medication and may experience serious adverse effects that outweigh any beneficial effects.
Prognosis for Adulthood

• No known cure

• Some may improve and “lose the diagnosis”; estimates range from 3-25%

• Most children with autism lack social support, meaningful relationships, future employment opportunities or self-determination
Prognosis for Adulthood

• Most adults with ASD are very dependent on their families or other support services.

• Few live alone, have close friends, or stable employment
A 2011 study comes to the conclusion that:

“Longitudinal research following individuals with ASD into adulthood generally paints a bleak picture of outcomes, suggesting that 60-75% of people with autism have poor adjustment in adulthood.”
“Autistic Culture”

“An autistic culture has developed, with some individuals seeking a cure and others believing autism should be accepted as a difference and not treated as a disorder.”  Wikipedia
Now Politically Incorrect

- Defeat
- Cure
- Treat
- Recover
- Prevent
- Warrior
- Sufferer
- Tragedy
- Mental Illness
- Disorder
- Affliction
- Puzzle Pieces
Newer Language

• Neurodiversity
• Neurominority
• Neurodiverse
• Wired Differently

http://neurocosmopolitanism.com
“Person-first” language vs. “Identity-first” language

<table>
<thead>
<tr>
<th>Person-first:</th>
<th>Identity-first:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Individual with autism</td>
<td>• Autistic individual</td>
</tr>
<tr>
<td>• Child that has autism</td>
<td>• ASD child</td>
</tr>
<tr>
<td>• Adult on the autism spectrum</td>
<td>• ASD adult</td>
</tr>
<tr>
<td>• He is on the spectrum</td>
<td>• “I am autistic”</td>
</tr>
</tbody>
</table>

(Used by families, friends, neighbors and employers)

(Preferred by autistic people themselves)
Higher rates of suicidal thoughts

“Compared with the general population, adults with Asperger’s syndrome were nearly 10 times more likely to report suicidal thoughts. They were also significantly more likely to have these thoughts than people with one, two, or more medical illnesses, or people with a psychotic illness.” Healthday News

"Adults with Asperger syndrome often suffer with secondary depression due to social isolation, loneliness, social exclusion, lack of community services, under-achievement and unemployment."
Simon Baron -Cohen
Shorter Life Span

A recent study suggests that individuals on the autism spectrum may live 18 fewer years than the general population.

Tatja Hirvikoski, Ellenor Mittendorfer-Rutz, Marcus Boman, Henrik Larsson, Paul Lichtenstein, Sven Bölte

The British Journal of Psychiatry Mar 2016, 208 (3) 232-238; DOI: 10.1192/bjp.bp.114.160192
“Persons with autism seem to have a higher mortality rate at younger ages compared to average individuals. This is particularly true for mortality that is related to seizures or infection.”

Autism speaks
Unique Medical Needs

“It is, therefore, important for the autistic population to receive good medical care from health care professionals who have knowledge and experience in addressing their unique medical needs.” Autism speaks
Resource for your Toolbox:  http://tinyurl.com/73dyhkt
(Glossary of terms from Autism Speaks)
Any Questions?