Autism Awareness

Autism is a complex disorder. In the pre-hospital setting, it may not be obvious if the patient is experiencing an autism related symptom or another condition.
Autism Spectrum

- Autism
- Autistic spectrum
- PDD, pervasive development disorder
- Rett’s disorder 1:15,000
- Childhood disintegrative disorder 1:100,000
- Asperger’s syndrome
- PDD - NOS
Causes Autism

- 1st identified in 1943
- Cause remains unknown
- Genetic component
- Possible external or environmental triggers
- Dietary – Nutritional – Gut
- Vaccine?
- Autism is NOT caused by bad parenting
Prevalence of Autism

- 1 in 150 births in the U.S. (CDC, 2007)
- 1.5 million Americans have some form of Autism and it’s on the rise!
- Growing at a rate of 10-17% per year
- Today, 50 families in America will find out their child has Autism
- Increased rates in boys (4-8x)
- Lasts a lifetime
Pathophysiology

- Despite extensive investigation, no consistent pattern of the cause of autism has emerged.

- In fact, more than 60 different disease entities have been shown to be likely causes of autism, including genetic, infectious, endocrine, toxic, and space-occupying etiologies.
Pathophysiology

- Autism is a complex developmental disability that typically appears during the first three years of life and is the result of a neurological disorder that affects the normal functioning of the brain, impacting development in the areas of social interaction, behavior and communication skills.
Differential Diagnosis

- Fragile X – 5%
- Phenylketonuria
- Other mental retardation – 9:1,000
- Selective mutism
- Expressive language disorder
- Congenital deafness
- Congenital blindness
- Schizoid personality disorder
Signs & Symptoms Autism

- Spins objects; sustained odd play
- Aloof manner; difficulty mixing with others
- Repetitive movements; hand flapping
- Laughs, cries, shows distress – no clear reason
- Little or no eye contact; may not want cuddling
- Uneven gross – fine motor skills
- Severe language defects
- Insists on sameness; inflexible to routines
- Inappropriate attachment to objects
- Noticeable physical - Over-or under-activity
- Over-or under sensitivity to pain, light or sounds
Signs & Symptoms Autism

- **Time Related Red Flags:**
  - No babbling by 12 months of age
  - No pointing or gesturing by 12 months of age
  - No single words by 16 months of age
  - No two word spontaneous phrases by 24 months of age
  - Any loss of language at any time
A Spectrum Condition

- Low & High functioning
- Middle functioning?
- Independence level?
  - Dependent on a caregiver for life?
- Public safety & criminal justice risks
Autism Diagnosis

- Typically appears by age 3
- Diagnosis is based on observation of the person’s communication, behavior and development level
- No current medical tests
- Many behaviors shared by other disorders, so medical evaluation must be done to rule out other disabilities
Treatments Autism

- Highly structured, specialized education programs
- Medication – symptoms not a cure
- Occupational, Physical therapies, Speech and Sensory therapies
- Nutritional, dietary restrictions
- Alternative medicine approach
Common Medication for Autism

- **SSRIs** - Celexa, Prozac, and Zoloft. The high rate of effectiveness for depression, anxiety, and obsessive, stereotypical behaviors.

- **Antipsychotic medications** - such as haloperidol (Haldol), risperidone (Risperdal), Seroquel and thioridazine work by changing the effects of brain chemicals. They may help decrease problem behaviors that can occur with autism.

- **Clonidine (Catapres), Lithium**

- **Anticonvulsants** (carbamazepine), [Carbatrol, Epitol, Tegretol], valproic acid [such as Depakene]).
Safety Risks

- Accompanying medical conditions
- Medication requirements
- Behaviors draw attention – Increased 911 response
- High pain threshold, may not recognize danger
- Sensory issues
- Self stimulating behaviors & attachments
- Wandering issues
Changes in Routine

- May cause behavioral outbursts, agitation and aggressiveness
  - 911 response to residence
  - Care provider missing, illness, accident
  - Extreme reaction

Figure 5
Common Reasons for Response

- In an area where no one knows him or her
- Parent or caregiver action misinterpreted
- Caregiver becomes incapacitated
- Retail setting
- Behavior becomes escalated
- Medical emergency, fire or natural disaster
Response Risks

- May not respond to follow commands
- May invade your personal space
- Extreme reactions to change
- May not answer questions appropriately
- Parents or caregivers unprepared for emergency
- Skills gap to recognize – We are here to help
A Look at Autism

- Initial training deficit
- Autism recognition
- Differentiate between
  - Mental illness
  - TBI
  - Deaf/blind
  - MR
  - CP
Body Movements & Behaviors

- Hand flapping
- Unusual arm movements frequently when happy or excited
- Basic gestures like waving hello or good bye – may not make sense to a child with autism
- Prefer to be left alone
- Motor tics
- Hyperactivity
- Tantrums
Reactions to Stimuli

- Wide spectrum that appear to be abnormally over or under active
  - Textures normally considered soft - Painful
  - Odors that are pleasing – may result in gagging
  - Normal sounds; vacuum, motor cycle – may be upsetting or even painful
  - Self injurious behaviors – may be calming, soothing
Self Inflicted - Injurious

- Banging of the head
- Rocking or lurching body
- Skin picking
- Self biting
- Head punching – slapping
- Head/body to object banging
- Poking themselves
- Nail – hair removal
- Teeth banging
Autism Behavior
When Sick or Injured

- Atypical response to pain or physical injury
- Instead of crying or running to a caregiver, might continue activity in which resulted in the injury
- Mood alteration, may be the only clue
- In some cases, the child appears to be “calmer,” this may be the only flag to illness or injury
Responding to Autism Related Emergency

- Approach in a quiet, non-threatening
- Seek and use available information from persons on scene
- Talk calmly
- Use simple & clear instructions
- Allow for delayed response
- May need to rephrase and repeat questions
- Ask if the person has an ID card
- Avoid touching if possible
- Evaluate for injuries
- Maintain safe distances
- Be alert for sudden outbursts
- Be aware of sensory issues – fight or flight
- Resist impulse to act quickly
Is Sensory Over-Stimulation A Factor?

- Look for outward behaviors
- Move the person to a QUIET place
- Calm creates clam
Reduce Sensory Influences

- Sirens, Lights, Radios & Portables
- Crowds
- Odors
- Touch
De-escalation

- Use time, don’t rush it
- Use space, posture and positioning – buffers
- Best approach to avoid litigation - media
De-escalation - Communication

- They may not understand request – command
- Non-verbals, body language - no clue!
- Attracted to shiny objects, pens – may reach or grab for them
- Sensory overload – Anxiety
- Communication – Verbal vs. Pictures
Diffuse the Situation

- Back up
- Non-threatening positioning
- Contact resources
- Family contact
- Familiar object they like

❖ Last resort – You may need to restrain
Tips
Behavior Specialist

- “If you are a Firefighter – EMT who doesn’t know the child you are already behind the game!”
- Usually when an autistic child engages in self-injurious behaviors there is a sensory issue going on
- The person may be craving some tactile input such as; deep pressure or scratches
- Touching a child in this state will set them off
Restraint

- Restrain with knowledge
- Restrain with adequate resources
- Hypotonia, low muscle tone
- Seizures
- Positional Asphyxia – position on side
- Continued resistance
- Continue to communicate & model
Restraint

- The LEAST RESTRICTIVE MEANS OF CONTROL must be employed

- Technically (and legally), verbal communication is the "least restrictive" means of control
Verbal De-escalation Can be Successful

- "validates" the patient's feelings by verbally identifying the behaviors the patient is exhibiting, and attempts to help the patient recognize these behaviors as being threatening
- openly communicates, explaining everything that has occurred, everything that will occur, and why the imminent actions are required
- respects the patient's personal space
Restraint

- PHYSICAL CONTROL should occur ONLY after failure of verbal control
- Only "REASONABLE FORCE" may be used when applying physical control
- "REASONABLE FORCE" is also required to be a SAFE amount of Force
- Never hesitate to wait – at a safe distance for adequate assistance
Restraints
Positional Asphyxia

- Unusual – exertive muscular activity, excessive lactic acid produced
- Body usually responds to correct by hyperventilating. Normal breathing impaired
- Depleted storage of sugar in the body
- State of extreme, excessive catecholamine production (Adrenalin OD). Weakens respiratory muscles even more
- Heat & Heart stress – Increased O2 demand
- Respiratory muscles – 1st to FAIL
Dangerous Wandering

- Leading cause of law enforcement contact
- 911 calls
  - Traffic
  - Stranger in the house
- *Attraction to water!!!*
- Alzheimer’s disease parallel
- Wandering prevention
- Project Lifesaver
Checklist – Community Program

- Name, physical description
- Parents, other caregivers contact information
- Attractions, locations, water sources
- Sensory, medical issues and requirements, if any
- Method of communication, if non-verbal, best method
- ID wear
- Likes, dis-likes, approach and de-escalation techniques
- Community Outreach – PD, FD, EMS
ID & Information Handouts

- Photo ID
- Bracelet, anklet
- Clothing tags
- Tattoos
- Informational handout
  - preferences

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Autism & Assessments

- Take longer
- Echolia
- Produce misleading statements
- Often victim of crimes
Processing Information

- Inability to quickly process and respond
- Poor listener
- Unable to deduce what other are thinking
- Repeats words, statements
- Body language and mannerisms
- Laugh or giggle inappropriately
- Sophisticated echulaha
- Difficulty recognizing slang terms or jokes
- Very concrete thinkers, truth slayers
- May not recognize non-verbal clues
Emergency Information Forms

Need to be updated frequently!
Rescue TIPS

- Expect anything
- 0 – 100 MPH
- Adults just as likely to act like kids and hide
- Check under beds, in closets
- Sensory issues – Equipment
- Bolt risk
- Stim behaviors – in your personal space
Rescue Video

- Exterior & interior windows locked, nailed or barred
- Plexiglass or Lexan windows
- Fences may have locks
- House unkept
- Doors locked from the inside
- Fecal smearing
Aerial Rescue

- Use EXTREME Caution – Your Safety 1st
- Consider platform
- Person may aggress towards rescuer
- Always assure your secured
- Bolt risk after rescue
- Assign a person to stay with the patient
Emergency Response
Upgrade Triage

- Use the parent – caregiver as a resource!
- Patients may jerk away from basic care 7 touch
- Evaluate thoroughly for secondary injury
- Tools, equipment for job may create sensory overload
- Early notification to ED
- Quiet space – odors – waiting room
- Same provider – be flexible
- Don’t assume all HCP know a lot about Autism
Communication Problems

- Language problem – expressive vs. receptive
  - Takes cues & clues from responder
  - Will do what it takes to keep a friend
  - May produce a false assessment
Communication Success

- Avoid technical terms
- Use familiar people to introduce responder
- Use photos or visual aids
- Use fine rote memory skills, ABA technique
- Verbal bullet points
- Chronological list
PECS
What's your name? ¿Cómo te llamas?.
adress? dirección?
phone number? número de teléfono?
My birthday is Mi cumpleaños es el día

driver's license licencia de conducir
Do you take medicine? Toma la medicina?
Are you pregnant? Usted está encinta?
Do you have diabetes? Tiene usted la diabetes?

ID card Tarjeta de identificación

blood pressure: presión sanguínea
lie on back tendorse de espalda
Do you have allergies? Te tiene alergia?

Medicine you can't take? Hay medicinas que no puede tomar?

Did someone hurt you? ¿Lo lastimo alguien?
Were you wearing a seatbelt? ¿Usted usaba su cinturón?
Have you been drinking? Ha estado bebiendo?

hospital hospital

How long has this been going on?
Cuan Largo ha estado pasando?

minutes minutos
hours horas
Days Dias

won't hurt no duele

bathroom baño, inodoro

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Special thanks to Paramedic Michelle Djuren, without her, this would not have been possible. THANK YOU!
Other Communication Methods

- Facilitated communication
  - Computer board
- Sign language
- Pictures
- Written
Sexual Abuse

- Naïve often passive nature
- Women especially vulnerable
- Adult care staff, family member or others encourage aberrant behavior, reward it or teach that it is normal
- Eye contact
  - Avoid it, no social value
- Sex and sexuality education
Pre-hospital Assessment

- Assure Scene Safety!!!
- Assess environment
- Any clues of PMH?
- Any signs of abuse?
- ABC’s
- GCS – What is the baseline, measurable…
- Vital signs – can be challenging, capillary refill
- Head to toe survey for injuries
Assessment - Appearance

- Person or Child found running around naked
- Bruising – injury, abuse, self-inflicted
- Injury patterns
- Sensory issues – bandage, splint, stethoscope
Tips for Assessment

- Use parent, caregiver for resource
- Ask “Yes/No” unrelated questions to determine dependability
- Check that patient is not clued by the last thing heard
- Ask open ended questions, requiring narrative response
- Allow time to respond – MORE than you think
- Follow your gut feeling
EMS Treatment

- AMS – consider all the causes
- Airway, Airway, Airway
- Restrain as a last resort
  - Positional Asphyxia
- Parent, caregivers – Resource - Resource
- Be flexible, make the difference
- Medications – may have idiosyncrasy reaction
Interactions With Persons With Autism

- Be calm
- Turn off or dim lights
- Give extra space
- Close doors to reduce the noise
- Use your body or objects to block line of sight of an object the person may be obsessed with
- Room odors
- Offer change of clothes
- Control temperature
- Simple language
- Speak slowly
Interactions With Persons With Autism

- Allow time for them to respond
- Give praise & encouragement
- Be flexible, be creative
- Movement activities – engage them
- Exercise caution with restraint
- Remember Positional Asphyxia – Check AIRWAY status
- Remove extra people from the area
- Seek additional resources
Imagine…..
- If you were unable to communicate
- If you were in pain but couldn’t tell anyone
- If you felt distracted, frustrated, obsessed, and frightened, but you didn’t know why
- Feeling this way every day

Imagine….. Trying to live with an Autism Spectrum Disorder!
References

- Charly Miller - RESTRAINT ASPHYXIA the SILENT KILLER, http://www.charlydmiller.com/RA/restrasphyx01.html
- Wildwood School Schenectady NY - http://wildwood.edu/
Questions
Thank You!
Adult Care Facilities

- Work force underpaid; under trained?
- Attractive to abusers; easy access to victims
- Underreported: victim may not report incident or recognize the criminal act
- Lack of credibility as victim - witness