Broadening the 'Spectrum' of Our Care: Key Evidence Based Pearls to Ease the Examination of Patients with Autism Spectrum and Developmental Disorders

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Conference on Demand 2020

Disclosure

- I have no financial relationships with commercial interests to disclose

Other Important Disclosures

- Not only a PA myself, but I am also married to a PA
- Clinical and Academic PA
- Father of three boys: Age 2, 5, 7

Objectives

- By the end of this lecture the clinician will be able to:
  - Categorize the unique sensory needs of children with autism spectrum disorder (ASD) and developmental disorders (DD).
  - Identify the responses that children with ASD/DD experience during physical exams, highlighting challenges related to anxiety and specific phobias.
  - Apply behavioral techniques to assist with the use of instruments/procedures that are often problematic in the examination of children with ASD/DD.
  - Describe the common components of coping kits, visual communication tools, and anxiolytic adjunctive modalities and demonstrate the proper use of these elements during the examination of children with ASD/DD .
  - Discuss current research on the examination of children with ASD/DD, delineating components that may prove useful to clinicians and parents/caregivers.

Pre-test Question 1

- All of the following represent established approaches to facilitate the physical examination of a resistant/agitated patient with ASD/DD except:
  - A. Use of distractive tools such as those found in a coping kit.
  - B. Using specific and detailed written and verbal instructions to outline the entire procedure at all once.
  - C. Modifying the physical environment to tailor the stimuli experience (i.e.- dimming lights, providing head phones, and chewy tubes).
  - D. Providing visual cues of the procedure/exam using visual models such as dolls or stuffed animals prior to performing the procedure.

Pre-test Question 2

- All of the following are methods of alternative communication that you may see commonly used by children with ASD/DD to assist their communication and decrease anxiety/fear with health care providers during their exam EXCEPT:
  - A. Speech Generation Devices (SGD)
  - B. Picture Exchange
  - C. Functional Magnetic Resonance Imaging (fMRI) enabled speech device
  - D. Micro Switches

Pre-test Question 3

- Based on research performed on the physical examination of children with ASD/DD, which of the following techniques is NOT a preferred technique for the routine behavioral management of fear/anxiety related to physical exam:
  - A. Intermittent graduated exposure to fearful stimuli
  - B. Tell-Show-Feel-Do (T-S-F-D)
  - C. Differential reinforcement of other behavior (DRO)
  - D. General sedation

Roadmap

- Intro/Demographics/Terminology
- Sensory Concerns
- Communication Concerns
- Safety concerns (Anxiety/Fear)
- Mobility concerns
- Research
- Clinical Case Wrap Up

The Fallout of Traditional Histories in ASD/DD population

- Health care providers often fail to obtain a detailed medical evaluation relying on:
  - Parents/caregivers
  - Incomplete preexisting medical records (Cuvo, Readan, Ackerlund, Huckfeldt, & Kelly, 2010).

Importance of Performing Proper Exams

- Negative health care experiences can adversely affect children with ASD/DDs perceptions of medical care for future visits
- Targeted behavioral support can facilitate the examination of this unique patient population, preventing child:
  - Stress
  - Adverse events
  - Future aversion to medical care (Drake, Johnson,
  - Stoneck, Martinez, & Massey, 2012, p. 215)

The Reality of Medical Care in Special Needs Populations

- Children with ASD and developmental disorders (DD)
  - Often require more frequent medical care
  - Experience more difficulties during the history and physical examination than neurotypical peers (Cuvo et al., 2010).

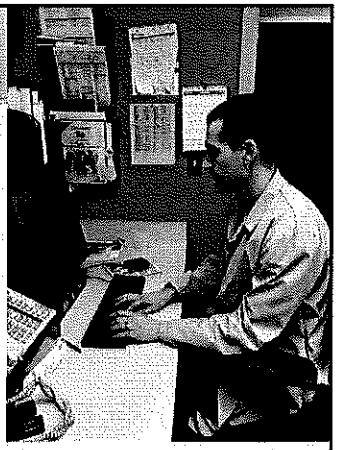
The Reality of Medical Care in Special Needs Populations

- Nationwide survey of primary care health care professional (Wexler, Holmes, Shore, & Rollins, 2015).
- Self-rated ability to care for patients with ASD
- 77% felt their ability to care for someone with ASD as:
  - Poor
  - Fair
- Essential health care procedures in this population, often rely on: (Cuvo et al., 2009)
  - Physical restraint
  - Sedation
  - Forgo procedures due to non-compliance

Clinical Scenario

- 6-year-old male patient, named Jack, presents to your outpatient clinic with chief complaint of "he feels warm" for the past 2 days per the parent. You observe as the patient is wheeled into his room by stroller/community access device that Jack is grunting, repeating the words "all done", watching a video on a tablet device, and constantly sucking on his finger. He appears agitated, makes poor eye contact with the nurse, and responds in a limited manner using "yes/no" answers to questions primarily with laminated cards his parent brought in for the examination. Your clinician coworker rolls their eyes, looks to you and says, "Well, I guess Jack is back again."

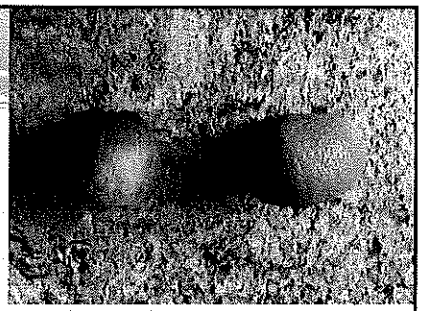
Clinical Scenario



- Your best course of action for Jack is:
  - A. Run and hide in the bathroom.
  - B. Take an early lunch.
  - C. Spend time catching up on charts and hope your colleagues see Jack instead.
  - D. Review his medical history and enter the room, discussing the history with the parent but never examining Jack due to "combativeness" and "non-compliance" during the clinical interaction.
  - E. None of the above.

Definitions

- Developmental disabilities are defined as:
  - "a diverse group of severe chronic conditions that are due to mental and/or physical impairments that affect language, mobility, learning, self-help, and independent living... [that] may include autism spectrum disorder (ASD)" (Drake et al., 2012, p. 215).
  - Difficulties in multiple domains (Zablotsky, Black, & Blumberg, 2017):
    - Learning
    - Behavior
    - Self-care



Definitions (Autism Speaks, 2018)

- Autism Spectrum Disorder (ASD)
- DSM-5 Criteria - Symptoms
  - Persistent deficits in social communication/interaction
    - Deficits in:
      - Social/emotional reciprocity
      - Nonverbal communicative behaviors
      - Developing, maintaining, understanding relationships
  - Restricted, repetitive patterns of behavior, interest, activities (2+)
    - Stereotyped/repetitive movements/speech/use of objects
    - Insistence on sameness, routines, patterns
    - Restricted, fixated interests
    - Hyper/hyporeactivity to sensory inputs
  - Symptoms are not better explained by intellectual disability or developmental delay

Demographics – ASD

- Prevalence of ASD (Autism Speaks, 2018; Monz, Houghton, Law, & Loss, 2019)
  - 2018 CDC estimates:
    - 1 in 37 Boys
    - 1 in 151 Girls
      - Boys > 4 x more likely to have ASD than girls
  - Most diagnosed after age 4
    - Reliable diagnosis as early as 2-years-old

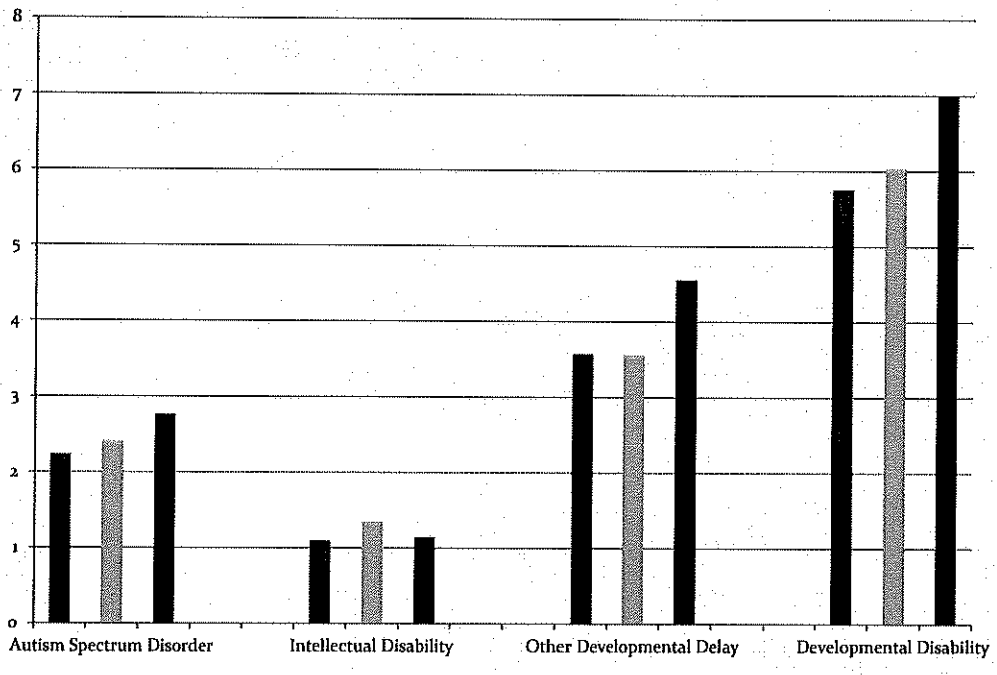
Demographics – ASD (Autism Speaks, 2018; Monz et al., 2019)

- Challenges:
  - Nearly half all children wander/bolt from safety
  - High rates of self injurious behavior
    - Head banging, arm biting, skin scratching most common
  - Highly Concomitant intellectual disability (ID)
    - 31% also have ID
    - 25% borderline ID
    - 44% average-above average intelligence
  - Medical expenditures average 4.1-6.2 times higher in ASD
  - Passage of autism insurance legislation in 48 states
    - Increased access to medical care/treatment

Demographics of DDs

- Prevalence of DDs in United States (Zablotsky et al., 2017)
  - Developmental Disability 2014-2016 in CDC Sample
    - Children aged 3-17 – Increase from 5.79% to 6.99%
    - DD- Boys (8.15%) > Girls (4.29%)
      - ASD – Boys (3.63%) > Girls (1.25%)

Relative Prevalence of ASD/DD in Children aged 3-17, 2014-2016



Adapted from Zablotsky et al., 2017

Important Terminology- Developmental Disorders (Harris, 2013)

- Please avoid:
  - Mental Retardation(MR)/"Retarded"
    - Adopted by medical societies in 1961
    - Replaced terms feeblemindedness, idiocy, and mental subnormality.
    - All are now considered pejoritive
  - APA revised preferred terminology in 2013 with DSM-5 and ICD-11.
  - In US, federal statute has replaced MR with Intellectual Disability (ID).

More Important Terminology- Developmental Disorders (Atkinson, 2013; Kaiser & Roberts, 2013).

- Developmental Delay – failure to meet typical developmental milestones within typical time range.
  - 50% delay – developmental age vs. chronological age
  - (5) – cognitive, social/emotional, physical, communicative, adaptive
- Developmental Disability- chronic medical condition impairing development such as ASD, ADHD, intellectual disability
- Intellectual Disability (ID)/intellectual disability disorders (IDD)- specific form of chronic developmental disability, originating prior to age 18, limiting intellectual functioning.
  - May include a specific genetic disability, autism spectrum disorder, or global developmental delay (Kaiser & Roberts, 2013).
- Pervasive Developmental Delay- NOS

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Anatomy and Pathophysiology of Autism (Lathe, 2006)

- MRI
  - Abnormal size of limbic structures
    - Fewer hippocampal dendrites, abnormal hippocampal volume
    - Higher neuronal density in amygdala, abnormal volume
- Histology
  - Prefrontal and temporal lobe cell columns increased in number, but smaller and fewer neurons per column
- fMRI
  - Examine blood flow and energy utilization
    - Reduced blood flow to temporal lobes
    - Asperger – abnormal functional integration amygdala and parahippocampal gyrus
- Reduced neuronal metabolite in hippocampus/amygdala and cerebellum
  - Indicates diminished metabolic activity in these areas
  - Sign. Correlation between parent rated ASD severity and limbic neuronal density
- SPECT
  - Decreased blood flow to left temporal lobe
- PET
  - Decreased blood flow to temporal lobes

Pathophysiology of Autism – ASD Phenotype (Lathe, 2006)

- Memory
  - Hippocampal dependent memory affected in ASD
  - Repeat training can overcome hippocampal damage/lesions and also in ASD
    - Difficulty relearning "new rules"
- Anxiety/Stress
  - Associated with hippocampal function in ASD
- Desire for sameness
  - Decreased blood flow to right amygdala/hippocampus associated with obsessive desire for sameness
- Perception of facial emotions
  - Associated with limbic atrophy, facial recognition temporal lobe
- Social interaction
  - Amygdala lesions associated with impaired evaluation of social stimuli
- Language
  - Limbic lesions associated with speech/language impairment
- Stereotypical/repetitive behavior
  - Associated with hippocampal lesions
- Sensory Deficits
  - Temporal lobe/limbic lesions associated with auditory agnosia ("hearing blindness")

Anatomy and Pathophysiology of Autism (Lathe, 2006)

- Consensus:
  - Abnormalities in the medial temporal lobe, hippocampus, and amygdala
    - Cognitive, perceptual, social and language impairments of ASD
  - Cerebellar abnormalities
    - Impaired coordination/posture/locomotion

Sensory Experience in ASD

- CGI Animated Shorts : "Listen" - by Alexander Bernard ... – YouTube – 2:41.
  - Bernard, A., & Fernandez, M.(2016, June 7). *Listen Senior Film.*[Video File]. Retrieved from https://www.youtube.com/watch?v=ibylThIMErE
  - Trip to the DMV

Sensory Experience of ASD

- Sensory processing difficulties are universally present in children with ASD (Lathe, 2006)
  - Hearing deficits in 8.6%
  - Varying visual impairments in 25%
- Sensory difficulties correlated with maladaptive behaviors (Nieto, López, & Gandía, 2017)
  - Key driver of parental stress
- Sensory disturbances may involve acoustic, visual, tactile, and pain stimuli (Lathe, 2006)
  - Heightened response
  - Reduced response

Sensory Considerations in DDs

(Developmental Delay, 2014; Brownlee, 2010; Benameur, 2018)

- Sensory integration
  - Impaired interpretation of sensory information
  - The "typical" experience
    - Non-painful stimuli - Sensory adaptation
    - Painful stimuli- sensitization
  - DD- Impaired transmission/interpretation of stimuli to the brain
  - Can involve visual, auditory, gustatory, tactile, vestibular, and proprioceptive senses

Hypersensitivity (over responsive)	Hyposensitivity (under responsive)	Impaired Sense	Accommodation in Clinic
	Poor response to visual cues	Vision	Pictures/items with high contrast
	Poor Balance/Coordination	Proprioceptive/Vestibular	Opportunities for rocking/swinging/weighted vests or blankets
	Oral seeking	Tactile/oral	Chewable tubes
Spectrum of light		Visual	Room without fluorescent lamps
Loud Noises		Auditory/vestibular	Ear plugs/Headphones/ Close door
Sensitivity to touch		Tactile	Request permission prior to touching
Bright light		Visual	Dimmed lights/visor/sunglasses

Hypersensitivity (over responsive)	Hyposensitivity (under responsive)	Impaired Sense	Accommodation in Clinic
Withdrawing from soft touch		Nociceptive/Tactile	Avoid rough stimuli
Avoidance of textures		Tactile	Avoid painful/rough stimuli
Smell		Gustatory	Avoid perfumes, colognes, or scented items
	Seek out strong tastes/odors	Gustatory	Flavored chewable tubes
	Unresponsive to loud noises	Vestibular/Auditory	Noisy toys, play loud music, running commentary

(Brownlee, 2010; Fun and Function, 2018; Developmental Delay, 2014; Newman, 2008)

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Language and DD

- High rates of concomitant speech deficits and DD (Meersman & Mathieson, 2019)
- Basic Terms
  - Speech (Mulhern et al., 2017) – ability to articulate needs or thoughts
  - Vocalizations (Mulhern et al., 2017) – act/process of producing voice sounds
  - Receptive language (Lim, 2011)
    - What the individual understands
  - Expressive language (Lim, 2011)
    - What is spoken/expressed by the individual

Language and ASD

(Lim, 2011; Mulhern, 2017)

- Key Consideration:
  - A lack of expressive language does not signify a total lack of receptive language.

Language and ASD (Lim, 2011; Mulhern, 2017)

- "Inadequate" use of language key feature of ASD.
  - Early speech delay/regression
  - 1/3rd to ½ of individuals with ASD are unable to communicate at a level to express daily needs.
    - 25-30% of children with ASD fail to acquire speech without direct intervention
    - Possible linkage with comorbid intellectual disabilities
    - Challenges/inability to decode auditory speech

Language and ASD

(Lim, 2011; Mulhern, 2017)

- Verbal ASD children display aberrant speech:
  - Unusual word choice
  - Echololia
  - Unresponsiveness to questions
  - Lack of drive to communicate
  - Absent reciprocal "Give and take" of communication
  - Inability to understand body language, tone of voice, subtle language queues

Developmental Level and Corresponding Characteristics in ASD (Hudson, 2006)

- Level 1
  - Responds to name
  - Aware of others
  - Indicates needs through gestures
  - Prefers soothing touch
  - Enjoys rhythm/repetition
  - Orients to facial expression
- Level 2
  - Acquires language
  - Engages in discovery/inquisition
  - Imitation/play
  - Prefers structure/limits
  - Requests help/communicates needs
  - Gains control of body/motor skills

Developmental Level and Corresponding Characteristics in ASD (Hudson, 2006)

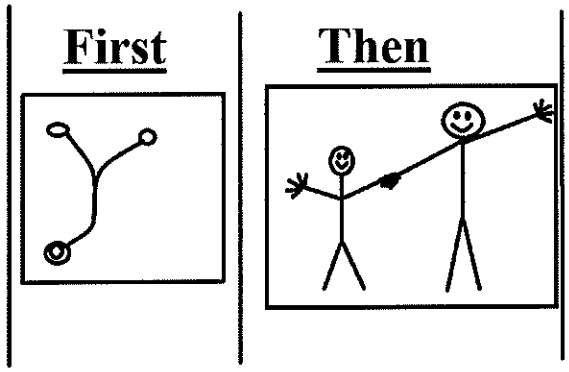
- Level 3
  - Develops imagination
  - Mimics adults
  - Able to provide detail
  - Understands rules/orders
  - Greater awareness of body
  - Increase language
- Level 4
  - Seeks details
  - Tells others rules
  - Maintains routines
  - Makes plans, more structured
  - Gains reasoning skills

Developmental Level and Corresponding Characteristics in ASD (Hudson, 2006)

- Level 5
  - Establishes goals
  - Aware of peer opinions
  - More advanced problem solving
  - Weighs options/outcomes
  - Abstract thinking
  - Understands sequence of events
  - Makes personal choices

Objects of Reference

- Visual representation of the tasks asked of the individual (Goldbart et al., 2014).



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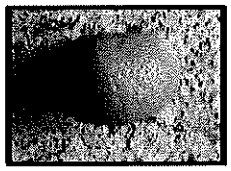

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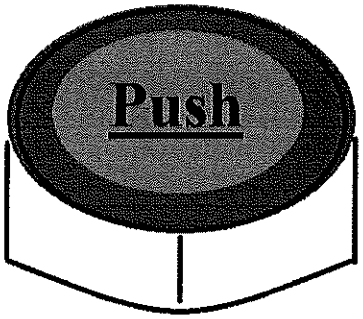
Micro Switches

(Cable, 2015; Lancioni, O'Reilly, & Basili, 2007)

- Applying tactile pressure to an electronic switch
  - Wobble
  - Pressure
  - Pull
  - Pedal type inputs (Lancioni, O'Reilly, & Basili, 2001)



Picture Exchange

Ganz et al., 2014; Lancioni et al.,2007; Meersman & Mathieson, 2019

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- Picture exchange techniques comparable effectiveness speech generation devices in children with comorbid ID (Ganz et al., 2014)

Speech Generation Devices (SGDs)

(Hagan and Thompson, 2013)

- Advanced means of communication that uses touched symbols to trigger recorded messages.
- Mimic verbal speech
  - Speakers
  - Increase communication competence in children with ID
  - Studies also showing effectiveness in children with multiple disabilities and ASD

Speech Generation Devices (SGDs)

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Speech Generation Devices (SGDs)

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Sign Language (Vandereet et al., 2013)

- Impairments in fine and gross motor functioning may limit the use of sign language in children with ID
  - ***Sign language may be an adjunct for communication, provided:
    - Baseline cognition is relatively high
    - Fine motor skills are advanced enough to allow hand manipulation to form signs consistently

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Anxiety (Gillis, Natof, Lockshin, & Romanczyk, 2009).

- Anxiety and fear associated with medical evaluation is increased in the pediatric ASD/DD population.
  - Specific phobias affect
    - 44% of children with ASD
    - 5% of typically developing children (Gillis et al., 2009)
- Minimizing anxiety to medical instruments and procedures higher yield even in ASD/DD population (Gillis et al., 2009).

Mountain of Emotion

(Hudson, 2006)

-Child "meltdown"
-Extreme behavior/emotions
-Fight or flight

-Child overwhelmed
-Environment loaded with stimuli
-Lack understanding

↓

-Remind child of coping technique
-Talk through cues
-Adult intervention
-Encourage positive aspects

↓

-Give space and quiet
-No intervention besides safety

-Child Calms down
-Begins to relax

↓

-Adult review of episode
-Strategize for future episodes

Phobias in ASD/DD

- Communication tools and distractive items may decrease anxiety/stress and assist the clinician with performing an exam (Drake et al., 2012).

Distraction Tools (Breslin & Liu, 2015; Drake et al., 2012)

- Examples:
  - Coping kits
  - Social stories/Written schedules
  - Sensory input activities
  - Other visual communication techniques
- Limit auditory and verbal instructions to short verbal commands

Distractive Items/Techniques

- Otoscope light onto a child's hand, moving forward and back to display the lights scope (Narula-Isaac, 2005)
  - Repetition of this routine beneficial in ASD
- Chewable toy (Drake et al., 2012)
- Light-up spinning fan toy (Drake et al., 2012)
- Bubble wand (Weltman, 2007).
- Tablet/Smartphone

Other Distractive Items in Coping Kit

- Sand
- Ear plugs / ear phones
- Visors/ hats
- Fidget toys
- Weighted vest / weighted blanket
- Soothing music
- Lava Tubes (bubbles/floating objects)

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Mobility/Examination

- ASD (Breslin & Liu, 2015).
  (Recommendations adapted from article assessing motor skills in school)
  - Attire
    - Logos on clinician clothing may be distracting/point of perseveration
    - Child clothing preferences may be related to tactile input
      - Shirt tags
      - Loud clothing
  - Equipment
    - Substitute for different color/texture if distracting or child is tactile sensitive
  - Rely on support personnel

Mobility/Examination

- DD (Palisano et al., 2009)
  - Gross Motor Function Classification System
    - Level I – Walks without limitations at school, outdoors, etc
    - Level II- Walks in most settings. Environment/setting may use wheelchair based on preference
    - Level III- Walks with handheld device (cane/crutches/walker) Wheelchair outdoors, environment.
    - Level IV- Wheeled mobility in most settings. Self mobility using powered mobility options. Adaptive seating, assisted transfer.
    - Level V – Wheeled mobility in almost all settings. Self mobility severely limited even with assisted technology. Physical assistance from 1-2 others for transfers.

How do we determine the unique needs of every child???

ASD/DD Needs Assessment

- Ideal:
  - Quick
  - Easy
  - Parent/caretaker facilitated
  - Administered at the point of entry/triage for medical care
  - Non-invasive
  - Inexpensive
  - Take into consideration communication, anxiety and mobility for each child.

Initial Assessment (Hudson, 2006)

- Childs Name:
- Medical Diagnosis:
- Reason for medical visit:

- Excels in these skills:
- Activities in which the child enjoys:
- Activities the child avoids:
- Motivators:
- Stress triggers:
- Adaptations already in place:
- Communication system in place:
- Known Sensory issues:
- Special Diet/food allergies:
- Optional add ons:
  - Mobility Needs:
  - S.W.O.T

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Training Compliance with PE (Cuvo et al., 2010)

- Applied Behavioral Analysis (ABA)
- 6 subjects, aged 3-6 y.o., ASD, PDD-NOS
- Medical Office setting
- Developed tailored procedures based on the reasons for non-compliance.
- 10 component, 10-minutes physical exam performed by PA (pretest)

Training Compliance with PE (Cuvo et al., 2010)

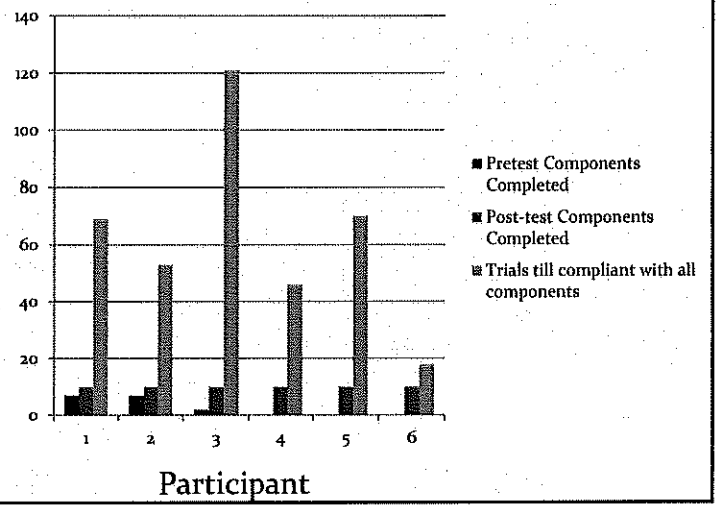
- Participants watched 9-min DVD modelling successful exam
  - Dinosaur puppet narrated steps of exam praising good behavior
  - Close ups of medical equipment
  - Target responses modelled

Training Compliance with PE (Cuvo et al., 2010)

- Each exam/training session
  - Contact desensitization – gradual exposure to non-preferred stimuli
  - Shaping – address skill deficits
  - Differential reinforcement of other behavior (DRO) – use of preferred reinforcers
  - Escape extinction – aversive stimuli present for at least 10 seconds

Training Compliance with PE (Cuvo et al., 2010)

- Results
- All participants eventually completed all 10 exam components
- Most problematic exam components:
  - Lung
  - Mouth/throat
  - Nose
  - Ear



TEACCH (Orellana, Martínez-Sanchis, & Silvestre, 2014)

- Treatment and Education of Autistic and related Communication Handicapped Children Model Study
  - Study aim – reduce use of unnecessary general anesthesia and high dose sedation during dental procedures using TEACCH
  - Participants with Aspergers, ASD, and PDD-NOS
  - N= 72
    - Children (n=38) – 4-9 years, Adults (n=34)- 19-41
  - 10-component dental exam
  - Pre-test
  - Five training sessions
  - Post-Test

TEACCH (Orellana et al., 2014)

- Successive training approaches
  - Tell-Show-Feel-Do (T-S-F-D) – For example...
    - Tell what's going to happen, Show what they will do, Feel instrument, Do the exam technique.
  - Interact with exam equipment/instruments and with dentist
  - Visual pedagogy – 20 step-by-step photos
  - A-V modeling – live modeling videotaped and played back
  - Behavioral trials – step through 10 component exam
  - Auto modeling – photos of subjects modeling behavior used later in practice sessions

TEACCH (Orellana et al., 2014)

- Results
  - Higher cognitive functioning pts showed larger improvements in exam completion and behavior.
  - Pre-test – 73% of children and 67% adults showed reluctant behavior
  - Post-test- 81.6% of children and 100% of adults showed positive behavior

Coping Kit Study

(Drake et al., 2012)

- Coping kits were used by clinical staff to:
  - Reduce anxiety
  - Distract
  - Provide additional communication to children with ASD/DD
- Improved willingness to cooperate through an observed change in child behavior in 79% of cases (19/24).

Exposure-based interventions in children with ASD (Gillis et al., 2009)

- Population
  - Mean age of 8.4 years
  - Majority non-verbal (10/18)
  - ASD school setting
- Results:
  - Repeated exposure to a clinical setting to fearful stimuli during a routine exam decreased fear-related behaviors
    - 83% of participants (15/18)
    - 3 remaining participants still fearful
    - Still showed progress after 38, 42, and 62 visits
    - Did not complete protocols, but still made progress

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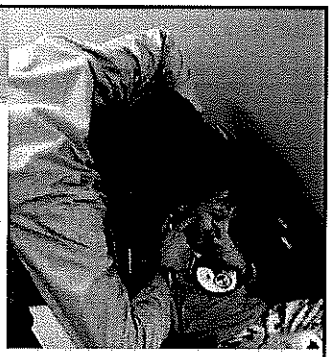
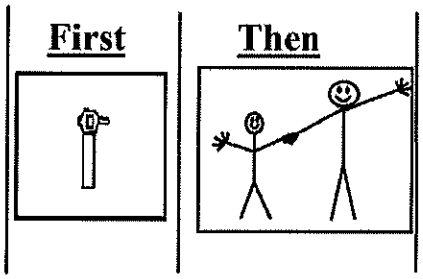
Clinical Scenario Revisited

- Jack, 6-year old
- Needs assessment completed
  - Sensory
    - Oral hyposensitivity/seeking
    - Light hypersensitivity
  - Communication
    - Non-verbal, uses visual communication
  - Mobility
    - Stroller/Community Access Device
  - Anxiety
    - Hates ENT exams

Putting it all together



- Accommodations made
  - Lights
  - Chewy tube
  - Examine in stroller
  - Specialized Techniques used
    - Custom First-Then Board
    - T-S-F-D
    - Repetition
    - Video reward after completion



Post-Test Question 1

- All of the following represent established approaches to facilitate the physical examination of a resistant/agitated patient with ASD/DD except:
  - A. Use of distractive tools such as those found in a coping kit.
  - B. Using specific and detailed verbal and written instructions to outline the entire procedure all at once.
  - C. Modifying the physical environment to tailor the stimuli experience (i.e.- dimming lights, providing head phones, and chewy tubes).
  - D. Providing visual cues of the procedure/exam using visual models such as dolls or stuffed animals prior to performing the procedure.

Post-test Question 2

- All of the following are methods of alternative communication that you may see commonly used by children with ASD/DD to assist their communication and decrease anxiety/fear with health care providers during their exam EXCEPT:
  - A. Speech Generation Devices (SGD)
  - B. Picture Exchange
  - C. Functional Magnetic Resonance Imaging (fMRI) enabled speech device
  - D. Micro Switches

Post-test Question 3

- Based on research performed on the physical examination of children with ASD/DD, which of the following techniques is NOT a preferred technique for the routine behavioral management of fear/anxiety related to physical exam:
  - A. Intermittent graduated exposure to fearful stimuli
  - B. Tell-Show-Feel-Do (T-S-F-D)
  - C. Differential reinforcement of other behavior (DRO)
  - D. General sedation

Summary –

- These are simple techniques
- Effective resources are inexpensive
- Donate your time (a.k.a.- hit the breaks) (M. Bellatuono, Personal Communication, November, 28, 2018)
- Identify and address sensory needs/ triggers-crucial to smooth outcomes. DON'T REINVENT THE WHEEL, ASK PARENTS!
- One child unnecessarily sedated/restrained/traumatized is one too many
- Small efforts make big differences in special needs
- Bail out your colleagues – grab these charts- help these kiddos!

One last thought…

"I don't want to be autistic. But I am, so don't be mad. Be understanding." – Carly Fleischman

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Questions???

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