ADOS-2: ALL THAT GLITTERS CAN BE GOLD
EXPLORING THE “GOLD STANDARD” MEASURE USED IN DIAGNOSING AUTISM SPECTRUM DISORDERS

Amanda L. Wood, Psy.D.
Licensed Clinical Psychologist

Overview:
1. Brief history of ASD diagnosis
2. Best practice evaluation
3. Overview of ADOS-2
4. Interpreting & reporting results
5. Ensuring fidelity
6. Q & A

DSM-IV-TR DIAGNOSES
AUTISM
- Communication
- Restricted, Repetitive Behaviors
- Social Interaction
ASPERGER’S
- Communication
- Social Interaction
- Restricted, Repetitive Behaviors

DSM-5 DIAGNOSIS
AUTISM SPECTRUM DISORDER
- Social Communication & Interaction
- Restricted, Repetitive Behaviors

DSM-5 CRITERIA FOR ASD
- Deficits in Social Communication
  - Must meet all 3 criteria
- Restricted, Repetitive, Stereotyped Behaviors
  - Must meet 2 of the 4 criteria
  - Sensory sensitivities included
  - Present symptoms or history of symptoms
- Levels of Severity
  - 1 – 3 (low to high)
  - Amount of support required
- Additional considerations
  - Cognitive and/or language impairment; genetic conditions
  - Autism, Asperger’s, and PDD-NOS now diagnosed with ASD

COMPONENTS OF A BEST PRACTICE AUTISM EVALUATION
- Review of records
  - Parent/caregiver interview
  - Include ADI-R when possible
- Medical evaluation
- Direct interaction with and assessment of client
  - Behavioral observation
  - ADOS-2
- Other assessments
  - Cognitive
  - Adaptive
  - Language
  - Rating scales
- Observation of client in non-clinical setting
ADOS-2: THE GOLD STANDARD

- Semi-structured, play-based social activities or presses
- 5 modules
- Module selected based on level of language and age
- 40 – 60 minute administration

MODULES

- Toddler: 12-30 months
- Module 1: no spontaneous speech to phrase speech
- Module 2: spontaneous phrases to fluent sentences
- Module 3: spontaneous complex speech
- Module 4: complex speech older adolescents / adults

DOMAINS ASSESSED

- Language & Communication
  - Gestures, vocalizations, conversation
- Reciprocal Social Interaction
  - Eye contact, facial expressions, social responsiveness, rapport
- Stereotyped Behaviors & Restricted Interests
  - Sensory, motor stereotypy, preoccupations/repetitive behaviors
- Play / Imagination
  - Fantasy, representational, make-believe play, creativity
- Other Abnormal Behaviors
  - Level of activity, disruptive behaviors, anxiety

DIAGNOSTIC EVALUATION

- Examined by a variety of professionals
- Trained to administer, does not mean qualified to diagnose
- ADOS Trainings
  - Clinical Workshop / Training Video Program
  - Research Training Workshop
  - Trainer in Training Program
- Practice
  - Practice again
  - More practice

EXAMINER QUALIFICATIONS

- Used to inform activities within a given profession (e.g., clinical psychologist’s diagnosis, SLP’s social communication intervention)
- “Professionals using the ADOS-2 should have prior education, training, and experience that includes that use of individually administered test batteries as well as extensive exposure to ASD.” (Manual, p. 5)
- “…simple attendance at a workshop or completion of the video training package is not sufficient to ensure competent use of the ADOS-2.” (p. 6)
- “The ADOS-2 is only one component of a full diagnostic evaluation for ASD.” (p. 6)
- “Practitioners using the ADOS-2 must remember that information from this instrument should never be used in isolation to determine an individual’s clinical diagnosis or eligibility for services.” (p. 6)

PRINCIPLES OF USE
ADMINISTRATION GUIDELINES

- While activities vary across module, the general principles do not.
- “The standardization of administration lies in the hierarchy of behaviors employed by the examiner and in the kinds of behaviors taken into account in each activity during the overall coding of the instrument.” (p. 13).
- “The ADOS-2 is intended to be administered by one person, as its primary focus is on interactive social behavior between the examiner and examinee” (p. 15).
- “…coding must be completed immediately after the session” (p.15).
- Repeated administrations

SCORING

- Scores correspond to a level of autism spectrum characteristics
- Scoring items
- Converting scores
- Algorithm items totaled to determine:
  - Classification
  - Comparison score
- Module 4 Algorithm not updated at time of publication
  - Huss & Lord (2014) published revised algorithm with “Calibrated Severity Score”

CHALLENGES IN SCORING

- Few items are clear-cut (i.e., specific observation items)
  - Most items take into account behaviors throughout the evaluation
- Majority of examples vs. best example
  - Consider good and bad examples
- High-incidence vs. low-incidence behaviors
  - Consider baseline frequency of behaviors
- Double coding
  - Same aspect of a behavior cannot be counted in two different items
- Social overtures vs. social responses
  - Need to provide opportunity for initiation

POTENTIAL ADMINISTRATOR ERROR

- Module selection
  - When in doubt, choose lower module
- Coding instructions
  - Same item may differ across modules
- Rating other behaviors
  - Administration should have clear beginning and ending
- Rating based on opinion
  - Always list examples to support your rating
  - Do not consider other information when assigning ratings

POTENTIAL BIAS IN SCORING

- Social interaction is a subjective experience
  - Item descriptions and codes are designed to be objective
  - Examiner’s lack of experience
    - With ADOS, child development, and/or ASD
- Frequency of administrations
  - Not frequent enough
  - Multiple in one day
- Comparing client to others
  - Children you know, similar clients, siblings, etc.

INTERPRETING ADOS-2 SCORES

- Overall Total = level of characteristics of autism spectrum disorder
  - Toddler Module – level of concern regarding potential ASD
- ADOS-2 Classification
  - Non-spectrum
  - Autism Spectrum
  - Autism
- Comparison Score
  - Scale of 1 to 10
  - Minimal to No (symptoms) – Low – Moderate – High
REPORTING RESULTS

WHAT TO REPORT

• ADOS-2 Classification
• Comparison Score
  – Authors do not recommend reporting raw scores
• Written description of tasks and performance
  – Not a diagnosis
  – Use domains as a format
  – Include examples to support scoring
  – Focus on algorithm items

EXCERPT FROM MANUAL

Harry’s Overall Total score on the ADOS-2 Module 2 algorithm for children aged 5 years or older was consistent with an ADOS-2 Classification of autism. His ADOS-2 Comparison Score further indicated that, on the ADOS-2, he displayed a high level of autism spectrum-related symptoms as compared with children who have ASD and are of the same chronological age and language level.

KEEPING THE GOLD STANDARD GOLD

• Administration
  – Module selection
  – One examiner
  – Limit observers in room
  – Prepare / organize materials
  – Limit distractions / other toys in environment
  – Explain parent’s role
  – Clear start / stop point

• Scoring
  – Score measure immediately following session
  – Write examples/rationale for every item scored
  – Assign ratings based on behaviors observed

KEEPING THE GOLD STANDARD GOLD

• Interpreting & Reporting Results
  – Report Classification and Comparison Score only
  – No raw scores!
  – No diagnosis from ADOS results
  – Must consider multiple sources of information
  – Child can have ASD regardless of ADOS score

• Examiner considerations
  – Child development
  – Experience with ASD
  – Regularly administer
  – Continued professional development

RED FLAGS

• Tag team, back again!
• Consensus scoring
• Raw scores reported
• “One point away from autism”
• Other information considered in scoring/ADOS write up
• Did not meet ADOS cutoff, therefore does not have autism / does not qualify
• Errors related to definition and/or baseline frequency of behavior

QUESTIONS

HAVE ADDITIONAL QUESTIONS, SEEKING CONSULTATION, NEED HELP WITH YOUR CHILD?
EMAIL ME AT @ AWOOD@YOUNGMINDCENTER.ORG
OR EMAIL US AT OFFICE@YOUNGMINDCENTER.ORG
CALL US AT 602.237.6653