

**I. TRAINING**

*Training is a process. ADOS-2 training is a formal, in-person workshop and ongoing practice under supervision.*

- **✓** Attend the formal training workshop at UMN or provided by a certified independent trainer. 
  ADOS-2: 2-day Clinical training and 2½-day Research training. (Clinical ADOS-2 workshop can be substituted with watching the WPS training package and observing all 4 modules being given by a reliable examiner.)
- **✓** Watch pre-course training videos provided to you by UMN. ADOS-2 videos are distributed at the Clinical training, and you are given their completed protocols and scores. Watch the administrations with notes in hand, and look through the codes afterward. For this exercise, you should focus on what notes the examiners took (because these are important observations that you should be making), and how and where different behaviors were coded. Follow up with Amy Esler (esle0007@umn.edu) if you have any questions about administration or coding.

**II. ESTABLISHING RELIABILITY**

You must establish reliability on the instrument **before you begin to collect data for the research project.** There are two factors in establishing your reliability:

- **✓** showing that you have learned the standardized administration procedures
- **✓** showing that you understand coding rules and have achieved at least 80% agreement on both the protocol and the diagnostic algorithm

Wherever possible, we highly recommend you work with someone who is already reliable on the ADOS-2 regularly while working to get reliable. First, observe a couple of their administrations. Then, with them in the room, begin to administer parts of the ADOS-2. Eventually, give the whole ADOS-2.

After each administration, go over scoring with the reliable examiner. You should plan on **at least 3 months of regular training** on the ADOS-2 before expecting to be reliable and ready to collect data using the ADOS-2.

**A. Demonstrate standardized administration procedures.**

You must demonstrate your understanding of standardized administration procedures on 3 separate administrations of modules 1 / 2 and 3 separate administrations of modules 3 / 4. **We must see you give all four modules at some point in the training and reliability process.** Demonstrations of administration procedures can include:

1. Administrations you do **during the training workshop**
2. Administrations you send to UMN (or brought with you to the training) to **review administration only**
3. Your **final reliability administration** submitted to UMN to review for administration AND reliable coding.

**B. Establish reliability with UMN training staff in coding the measures**

You must reach 80% agreement on the ADOS-2 with UMN on 3 administrations. Agreement is calculated separately for the diagnostic algorithm and for the protocol in total, and you must achieve 80% agreement on both. Administrations for achieving reliability in coding include:

1. Administrations during the training workshop
2. Your scoring of the administration on the **post-course video** we send home with you after the training workshop
   a. Send your scores for the post-course videos to Amy Esler (esle0007@umn.edu); UMN training staff will calculate reliability and email you our protocols and codes for them so you can see where you disagreed (and why).
   b. If you are not reliable on one or more of these videos, we will send you another.
   c. You must be reliable on the post-course tapes before moving to step 3, which is sending us your own video.
3. Your **final reliability administration** submitted to UMN for reliability scoring
   **Note:** We strongly recommend, before sending a video of yourself for reliability scoring, you should have at least one reliable administration with a reliable examiner (see notes in Section II, above).

**NOTE:** If you submit your final reliability administrations within 6 months of the training workshop, the workshop fee will cover our scoring and feedback. We will charge $250 per administration to score and provide feedback on ADOS's submitted more than 6 months after the training, or on additional rounds of scoring/feedback if your first submission was not reliable.

### III. PLAN B: ACHIEVING RELIABILITY WITH SOMEONE AT YOUR SITE

*If you work with someone who has established reliability on the ADOS-2*, you can complete the steps of establishing reliability with that person, as long as you are working at the same physical site and have frequent (i.e., daily) contact to talk about coding and administration issues. To establish reliability with someone at your site, you must achieve 80% agreement in coding with the ADOS-2-reliable examiner across 3 consecutive administrations of Modules 1 / 2 and 3 consecutive administrations of Modules 3 / 4. Within these 6 administrations, all 4 modules must be represented. Your ADOS-2-reliable examiner also must see you administer all 4 modules at some point during the reliability process. We recommend that you and the reliable examiner double-score administrations (that is, code an administration independently, then check your reliability with one another) until you have established 80% agreement with one another on 3 independently scored administrations of the ADOS-2. This can include the videos we have given you.

**Training Others at Your Site**

After you are reliable with us, you can then teach research group members who are in the same physical location as you are. Collaborators must be physically at the same site. Thus, though the University of Michigan and Yale are collaborating, they are **not** in the same location. Even though the University of Chicago and Northwestern University are in the same city, they are not the same site. We recommend that, with colleagues at your site, you double-score administrations (that is, code an administration independently, then check your reliability with one another) until you have established 80% agreement among yourselves on three independently scored administrations of the ADOS-2. This can include the tapes we have given you. We request that you only train people who are in your immediate research group (who are at the same site as you are and whom you see on a daily basis).

**Training People at Other Sites**
There is a process for becoming an independent trainer on the ADOS-2. This training is only available through Weill-Cornell’s training program, directed by Dr. Catherine Lord:
http://www.cornellpsychiatry.org/education/autism.html

**Maintaining Reliability over Time**

It is also important to establish procedures for maintenance of reliability. We recommend that you double-score and reassess reliability for approximately 1 of every 5 administrations of the ADOS-2, depending on how frequently you give it. The point of the ADOS-2 training is to have well-documented reliability across sites, so this is very important. It is easy for even very skilled clinicians to "drift" in scoring if there is not frequent discussion and a chance to compare independently made scores.

We have provided a checklist to help you keep track of your reliability process.

If you have any questions about Reliability attainment, please contact Amy Esler.

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How to Submit a Video for Reliability Scoring

Administration Guidelines for ADOS-2 Video Submission

We have put together the following guidelines to help you when considering whether you are ready to send a taped administration of the ADOS-2 to score for reliability. Remember, we are looking at whether you are following standard administration procedures and whether your coding is calibrated correctly. We also will look at your tape to assess good clinical practice including, for example, whether you are managing a child’s behavior appropriately, working to obtain a valid sample of behavior, are sensitive to parents who may be upset about their child’s development. We want to support you in your work and hope that these tips are helpful.

Be sure to submit: 1) a video with the entire administration, and 2) a copy of your scored protocol and algorithm.

These are things you must keep in mind when administering the ADOS-2:

You should aim to complete your ADOS-2 in about 45 minutes. We will not accept a Module 1 administration under 30 minutes long, because although you could run through all of the tasks in that time, you likely have failed to administer all of the presses involved in each task and to allow ample time to observe the child’s behavior. We also do not want to see an ADOS-2 administration that is longer than an hour. You will have likely exhausted the participant! The overall administration time of the ADOS-2 should be no longer than about an hour. Administrations under 30 minutes and over 75 minutes will not be reviewed.

Be clear about when you start and stop the ADOS-2. Only those behaviors observed during the course of the ADOS-2 administration are coded.

The person who is attempting to become research reliable on the ADOS-2 must be the person who administered the ADOS-2 to the participant, and must also be the person who took notes during the time of administration and subsequently completed the codes based solely on their individual observations. Consensus coding scores cannot be submitted.

We should be able to see and hear both you and the participant clearly throughout the entire ADOS-2 administration. In the unlikely event that something significant occurs off-camera, it would be important to include a notation describing what you observed.

We should see you present and use all of the standard materials necessary for each of the activities included in each of the specific modules you are administering. We should not see other materials that are not part of the ADOS-2 used during your administration. All tasks and activities should be administered.

Carefully consider if you have administered the correct module. Remember that selecting an incorrect module can result in misclassification. Review the language expectations for each module in the manual before you administer the ADOS-2 and take a careful language sample during the ADOS-2. Doing so will help ensure that you have chosen the correct module for the individual’s expressive language at the time of the ADOS-2 administration. If you have given the wrong module, your video will be returned without review.
Parents must be present in the room for Module 1, and in most cases, for Module 2. They should not be in the room for Modules 3 and 4. The only exception to this would be if you were administering Module 3 to a young child (i.e., under age 6), in which case it would be appropriate to have the parent or caregiver present.

A participant’s first language must be English. English should be the primary language spoken at home. There are translated versions of the ADOS-2 that can be used by fluent administrators of that language (see WPS website for additional information).

When selecting your video to submit for reliability, remember that the participant whom you completed the ADOS-2 with must meet criteria on the ADOS-2 for ASD or autism and have an autism spectrum disorder diagnosis. There are no exceptions to this.

Finally, please check your video for the following:

- A video picture that shows the examiner, child, and caregiver (Mod 1 & 2). If at all possible, use a tripod when recording to minimize camera movement.

- Sound quality that is easily heard when the video is played at a moderate volume. Occasional moments of muffled sound quality may be acceptable, if there are any parts of the administration that you feel may have been difficult to hear (e.g., if a noise outside the room muffles part of a response), please try to ensure that your notes are clear so that, if codes should differ, your notes reflect any information that be missed).

- Playback is smooth (e.g., there are no scratches on the disc that interfere with DVD playback or cause the video to skip).

- It is always a good idea to check with us on the format of your video (e.g., DVD, MP3, etc.) before you send it to make sure our equipment is compatible.
ADOS-2 Reliability Checklist

Pre-Course Administration tape made and given to trainer at workshop for review and brief feedback on administration procedures (indicate module number in blank)

ADOS-2 Module 1 or 2 submitted: _____
ADOS-2 Module 3 or 4 submitted: _____

Modules given during ADOS-2 Research Training workshop

ADOS-2 1 / 2 _______                        ADOS-2 3 / 4 _______

View post-course video, taking notes and scoring on a blank protocol.

Record your reliability with the completed protocols, provided.

ADOS-2 Module 1 or 2 Percent agreement: Protocol ______
                               Algorithm ______
ADOS-2 Module 3 or 4 Percent agreement: Protocol ______
                               Algorithm ______

Submit video of your own ADOS-2 administrations Amy E. for scoring. **Be sure that we have been able to see you administer all 4 modules.** In other words, if your administration review video was a Module 1, and you administered part of a Module 1 during the training workshop, then you should submit a video of yourself giving a Module 2.

Video of Module 1 / 2 submitted. _____

Video of Module 3 / 4 submitted. _____

We will calculate your reliability and write you a letter describing the results and, if necessary, providing recommendations for administration and scoring.

If you have achieved reliability, we will send you a Certificate of Reliability.