

GUIDE: A decision-making process for selecting an assessment tool for diagnosis

Topic Purpose:

The purpose of this topic is to provide a decision-tree format to guide learners through key steps to use in selecting diagnostic tools. Learners should be able to work through the decision tree to decide about the strength of a tool for diagnostic purposes. This topic combines information presented in prior topics, putting it together in a decision-making process.

Video and Slides:

Length of video: 48 minutes

Content:

The video begins by presenting a flowchart that can be used for a decision-making process for choosing an assessment tool for diagnostics. After presenting an overview of the flowchart, the video explores each component of the decision-making process in more detail covering the following topics:

- Can I use this test for diagnostic purposes?
- Is there acceptable evidence of diagnostic accuracy?
- Does the normative sampler reflect the person being assessed?
- Does the test accurately measure the skill(s) relevant to the diagnosis?
- Does the test consistently measure a person's ability?
- Is this sufficient for diagnostic decision-making?
- Challenges of diagnostic accuracy?
- Summary and review

Activities:

There are two activities associated with this topic. Example answer guides are provided for each activity, but note that answers will vary depending on which tests are used in the activities.

Activity 1:

This activity provides three clinical vignettes – one related to audiology, one for adult SLP looking at apraxia of speech, and one for pediatric SLP looking at assessment for language disorder. For each vignette, the learner is asked to locate up to three potential assessments that could be used for the diagnostic purposes stated in the vignette. The learner is asked to walk through the decision-making process described in the video to determine whether or not the assessment tools they have selected are appropriate to be used. This activity helps learners to more deeply explore potential diagnostic assessment tools. Some tips to consider follow:

1. Learners need to have access to available instruments to evaluate. Instructors will want to be sure students have access to tests to review, and that they know how to look up additional information in literature searches.
2. This activity assumes learners know what potential tests to consider using, and where and how to locate potential tests to use. To help with this process, instructors might have a closed set of suggested tests identified so that students could go to a list of options and choose from that list. The list might have examples of strong diagnostic tools for that diagnosis as well as 'foils' of tests that are not good diagnostic tools for that purpose so that students could explore both positive and negative examples for a given diagnostic situation.
3. The deeper exploration called for in this activity will take students time to work through. This activity is probably better suited for a homework assignment where students have longer

periods of time to explore resources. Another option that could fit in a longer in-class lab section would be to have the learners work in groups of three with each learner responsible for exploring one test in-depth. The group members could then share with each other the results of their decision process and conclusions for the test they reviewed, resulting in each student exploring one test in detail and hearing about two additional tests. The group could then put forward a joint recommendation as to which of their three tests in their group is the strongest tool.

4. There are three vignettes included in this activity. Depending on the nature of the course or learning situation, students might be asked to work on only one or two vignettes, or similar vignettes could be developed by the instructor for different populations to ensure relevance to the student population and the clients they are serving.

Activity 2:

This activity builds on the activity from the Test Validity Rests in the Evidence topic. In the activity for the Test Validity Rests in the Evidence topic, learners were asked to complete a spreadsheet with a detailed analysis of different tests. In this activity for the decision-making topic, the learner is asked to revisit that spreadsheet, again using the decision process outlined in this topic to compare two different tests and determine the strength of their diagnostic accuracy.

Note for Both Activities:

While asking learners to locate tests and explore the manuals and related materials to discover the data used in these activities would be ideal to help them process how information is presented, alternatives to this process are available if a simpler version of this exercise is needed for time or situational constraints. For example, the instructor may provide the raw data about two or more tests in the tables for each activity so the information about the tests is readily available to the learners. The learners could then be asked to use the provided data to work through the decision-making process comparing tests to then recommend an instrument and provide a rationale based on the data. This type of abbreviated activity might also lend itself more easily to an in-class activity or to a test item on an exam.

Resource:

The resource is a detailed visual of the decision-making tree presented in this topic that should provide a handy guide to learners regarding key points to consider at each step as they work through the test selection process.