USE OF GENERALIZABILITY THEORY IN DESIGNING AND ANALYZING PERFORMANCE-BASED TESTS

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Aim of the Workshop: Performance-based testing methods are commonly used for assessment of clinical competence. Because these methods involve multiple sources of measurement error (rater stringency, task difficulty, content specificity), classical test theory does not furnish the tools needed for investigation of psychometric characteristics. In this workshop, participants learn to view assessment situations from the perspective of generalizability theory, which does supply the necessary conceptual and statistical tools to estimate the reproducibility of scores on performance-based tests and evaluate alternate approaches to test design and use of testing resources. Participants will learn to:
View assessment situations from a G-theory perspective
Interpret output from software commonly used for generalizability analysis
Evaluate the impact of alternate test designs on the reproducibility of test scores

Format: The workshop will use a seminar format covering the following topics:
1. A Sampling-Oriented Framework for Thinking about Assessment
2. Faculty Ratings of Student Performance – Raters Nested in Students Design
3. Patient Ratings of Physicians – Cases nested in Physicians Design
4. Objective Structured Clinical Exam (OSCE) – Persons by Stations Design
5. OSCEs (continued) – Persons by SPs Nested in Cases Design
6. Extended Matching Exams – Persons by Items Nested in Sets
7. Questions and Discussion of Other G-Theory Applications

Participants will receive a handout with background information on each of the above topics. Familiarity with generalizability theory is unnecessary, but attendees should have be familiar with analysis of variance for multifactor designs.

Presenters: Dave Swanson and Brian Clauser from the National Board of Medical Examiners will serve as tutors. Both have extensive experience using generalizability theory for analysis of performance-based tests.