Reliability & Validity…Are You Hitting the Target?

As healthcare providers and faculty members who teach future and current healthcare providers, it is our natural tendency to want to know if what we are doing is effective. A lot of what we do in our daily lives is based on common sense, what we have learned from others, or what we have learned through personal experience or observation. Sometimes, however, common sense is not the best approach and there are often conflicting theories about what may be best or what works in a particular situation.

Unfortunately, the quality of the data we use to make judgments about effectiveness is often overlooked. However, to be of value and of use, research data must be both reliable and valid.

This month, Dr. Frank Dane presented a session on Measuring Outcomes with Reliability and Validity to help make sense of reliability and validity. He did an excellent job of describing how these two distinct, but overlapping concepts are critical to determining if data is valuable and useful.

Reliability (also referred to as reproducibility) refers to the overall consistency of a given measure and to the extent to which a measurement process produces similar results under consistent conditions. A given measure can be highly reliable, but not necessarily valid. Target A illustrates low reliability.

Validity (also referred to as accuracy) refers to the extent to which the measurement process measures what it is supposed to measure, resulting in data that reflect the theoretical concept the researcher is attempting to measure. Target B represents high reliability and validity. Target C illustrates high reliability, but low validity.

How will this information change the way you review and/or conduct studies? To learn more about reliability, validity, and other research related, go to https://www.carilionclinic.org/office-continuing-professional-development/video-presentations/research to view all OCPD Research series presentations and videos.

Shari Whicker, EdD
You may have heard of TTR1 and TTR2, our newest acronyms at the Virginia Tech Carilion School of Medicine and the innovative program associated with them. I’m pleased to report initial success with this new two-part program and tell you more about it.

We have expanded the Dean’s Colloquium, now called Transition to Residency or TTR. In the past, the two weeks prior to graduation was called the Dean’s Colloquium and was an opportunity to explore topics of interest to soon-to-be graduates, including debt repayment and financial aid, legal issues, and topics pertinent to residency.

Fourth-year students will still go through that two-week session ahead of graduation, but an additional two-week period surrounding Match Day and the Medical Student Research Symposium has been added. Both sessions are now known as Transition to Residency (The first two-week session is TTR1. The second session, TTR2).

The change in the schedule was made to allow more curricular time to cover what the Association of American Medical Colleges (AAMC) calls Core Entrustable Professional Activities (EPAs) for Entering Residency, which are 13 skills they believe students should attain in medical school ahead of residency programs. The AAMC has encouraged medical schools to reinforce the skills with upcoming graduates. You will find a complete list of EPAs and their related competencies here.

Using an existing two-week elective in March that was always interrupted by Match Day, we developed and implemented a short curriculum that included simulation and other meaningful learning activities to test the skills of our upcoming graduates.

In addition to reinforcing skills, the extra two-week period allows more flexibility for students who are part of the scramble during Match Week and the research symposium, without conflicting with a clerkship rotation schedule. We think we are the first medical school to implement such as comprehensive two-part Transition to Residency Program. Informal feedback has been positive.

I would be remiss if I didn’t acknowledge Dr. Tracey Criss, who took the lead in developing the curriculum and the 40+ faculty members who helped with developing and carrying it out.

--Cynda