

The Psychometrics of Certification



AMT

American Medical Technologists
Certifying Excellence in Allied Health

Central to any certification is the exam, and psychometricians perform a vital role in ensuring the reliability, validity and fairness of certification exams and test scores. Keeping the psychometric function in-house is another way AMT further safeguards exam integrity and provides outstanding services and support to stakeholders.

What are psychometricians?

Psychometricians practice the science of testing. They also construct tests and interpret the results for the purpose of assessing a professional's knowledge, skills, and abilities she or he might need to work in a particular job or profession.

Why are they important for an AMT certification exam?

Psychometricians are an integral part of the AMT exam program. They ensure that exams are reliable and fair, and that valid interpretations are made regarding the test scores. They also evaluate the reliability and fairness of the certification exam.

Psychometricians take into account the entire structure of the exam, the range of difficulty, the number of questions, testing time allowed and scoring process. They also apply statistical methods to record and analyze test results.

What is a typical day like for a psychometrician?

At AMT, the entire testing process is handled by just two people.

Therefore, daily tasks vary quite a bit. In general, there is a lot of data analysis.

Twice a year the exam data is reviewed for all seven certifications and detailed analyses are run at multiple levels. At other times of the year, AMT's committees of subject-matter experts (SMEs) converse and collaborate to revise and modify current exam forms and develop new ones.

In addition, every five years job task analyses are conducted for all AMT certification programs. For these, current certified members in the field are surveyed to ensure that AMT exams align with the current state of practice.

How are certification exams developed at AMT?

The development of a certification exam involves quite a few steps and people, and takes two to five years depending on the candidate population and the scope of the exam.

Generally speaking, that involves establishing standards and the qualification requirements to take the exam.

Consideration is also given to whether the exam meets accepted psychometric standards for exam development, how the exam is given and scored, and whether its rules are fair.

Who decides what a passing and failing score is?

Certification exams are criterion-referenced tests, which means candidates must meet established standards in order to pass the exam. These standards are set with a standard-setting study by a committee of SMEs. The standard-setting process has the SMEs consider the exam content, test specifications and scope of practice. They then agree upon standards or criteria that reflect an individual possesses the minimal competency for safe practice within the field. This standard is then translated statistically into a score that must be met in order for a candidate to achieve passing status.

AMT is highly respected by the credentialing community for our subject-matter and psychometric expertise and commitment to high standards. Our reputation and diligence assures employers that the AMT-certified allied health professionals they hire are competent and highly capable.

Meet AMT's Psychometricians

James Robert Fidler, PhD, is Director of Testing and Competency Assurance at American Medical Technologists. As a methodologist, his areas of concentration include psychometrics, professional certification, research design, data analysis, and applications of Rasch measurement methodology. He received his doctorate from Loyola University Chicago.

During his past three decades in the fields of psychometrics and credentialing, Dr. Fidler has provided input into a number of health and non-health related national certification programs, has authored articles in certification testing, and has been responsible for all aspects of examining certification candidates across various disciplines.

Most recently, Dr. Fidler was honored to have participated in the National Commission for Certifying Agencies (NCCA) accreditation standards revision project, serving as a member of a team reviewing standards related to psychometrics.



Nicole Risk, PhD, is a psychometrician at American Medical Technologists, a nationally and internationally recognized agency for allied health professionals. She has more than 10 years experience in psychometrics and test development, having worked as a Research Assistant at the University of Illinois at Chicago and New York University. Dr. Risk oversees data analyses and exam development for several certification programs at AMT.

Dr. Risk received her PhD in psychometrics from the University of Illinois at Chicago. She also holds a BA in psychology from California State University - Fullerton and an MA in educational psychology from New York University.

