



Maintaining a Valid and Reliable Exam

When you demonstrate readiness to begin a career in infection by taking the a-IPC™ exam, or proficiency in infection prevention by taking the CIC® exam, you can feel confident that the exam is valid and reliable. A valid exam has three constructs. Content validity means that the test accurately measures knowledge and skills you use in your job. Construct validity means that each exam question measures what it aims to measure. For example, questions about disinfection do not inadvertently measure skills in other domains. Criterion validity is measured by comparing a person's performance on the test to their job performance. At CBIC we are continuously working to make sure the exam is valid.

To ensure content validity, every four to five years CBIC performs a Job Task Analysis (JTA) or Practice Analysis in which infection preventionists currently practicing are asked about the skills that are most important in day to day work. The most recent JTA was done in 2020 and over 1,400 IPs from around the world responded to inform us about the skills they need to do their jobs. Following the survey, Test Committee volunteers wrote new questions and a revised exam with new specifications that is anticipated to be piloted later this year.

Construct validity is measured each time a certificant takes an exam. On each exam there are approximately 15 items that are not scored, but as you record your answers, CBIC is obtaining statistics about how these questions perform. This process informs us if the question is too easy or too hard. Each year, CBIC compiles the statistics associated with each question and evaluates whether questions that did not perform well should be retired or rewritten. Every time a question is rewritten it is not scored and goes through the process again to make sure it is a valid question.

Establishing criterion validity is a bit more challenging. Do high scoring infection preventionists perform better than those that do not pass the exam? That is our hope. One effort that the CBIC Board of Directors has taken to establish criterion validity is the commissioning of an independent study about the performance of CICs on the job currently underway at Johns Hopkins University.

As you know, a reliable exam means that given the same skill set, the test works to consistently determine that those that pass have the knowledge, skills, and abilities needed for the job. If the same person with the same skill level retakes the exam, the result would be the same. However, if the same person takes a preparation course, participates in a study group, or improves their test taking skills, they acquire the needed skills and may pass the exam! The exam performs reliably so that we can be sure those who pass are in possession of the knowledge, skills, and abilities to lead infection prevention programs.

With appreciation,

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