



Since the goal of every program is to graduate competent, entry-level paramedics the evaluation items used to measure competency in the cognitive domain is crucial. Competency infers critical thinking ability that utilizes assessment and problem-solving skills beyond the ability to merely recall basic knowledge of EMS care. Exam items should be meaningful, without bias, balanced as to content (blueprinted to standards and practice), well written (correct grammar and spelling), and always have a best answer.

High stakes exams can come from several sources. Instructors may choose to write their own exam items; use or modify items from textbook test banks; utilize other test bank resources; or subscribe to vendor-based exams. In the vendor process, the exams may either be blueprinted with set validated items or programs may be provided with pre-reviewed items from which the instructor can choose specific questions.

Regardless of the method of item and exam development selected, high stakes exams require considerable effort to develop, review, analyze, and validate. Items must be continually reviewed to determine how they perform and must be updated as the science of emergency care evolves. Instructor/program developed exams should always be a group project with review, discussion, and approval of instructional faculty and the program medical director.

There are a variety of methods to analyze exam statistics depending on the evaluation format (paper or electronic), the origin (program-developed or vendor-provided), and how the exams are scored (by hand review or machine scoring). The ability to analyze exam results effectively also depends on the number of students completing an exam. College based programs often have access to testing resources in the institution which can assist in the review and analysis process

The CoAEMSP presented a webinar on Written Exam Analysis that can be found [here](#). Instructors are encouraged to use this resource to better understand the analysis process and the accreditation expectations.

Failure to demonstrate how high-stakes cognitive exams are analyzed, along with evidence of subsequent changes based on the analysis, is a common accreditation citation during site visits. To provide some structure to the review process, a new Exam Analysis Form has been developed by the CoAEMSP that allows the Program an opportunity to document the exam statistics, evaluate the results, and identify changes. [Find the Exam Analysis Form here](#). In addition to the statistics, response cells include: content areas receiving unexpected low scores; recommendations from learning prescription if applicable; changes made to exam if applicable; strategies to address low performing areas; Program Director/Lead Instructor comments; and Program and Medical Director signatures. The Exam Analysis Form can be used to evaluate and document review for any type of



exam format or structure. All high-stakes cognitive exams (e.g. any exam whose failure may result in a student being dismissed from the program) must be analyzed.

In summary, an important role of educators is to evaluate the comprehension of students on high level, critical thinking concepts in order to determine cognitive competency. Ensuring the quality of the examinations that educators use is central to that process.

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