

AAFP Guidelines for Assessment Writing

Introduction: This document is designed to assist AAFP faculty in writing assessments. In order to maintain ACCME accreditation, the AAFP must evaluate the effectiveness of CME activities. Assessments are one means of measuring changes in physician knowledge, and can measure changes in competence when case-study vignettes are used.

Multiple-choice Assessments:

The goal of multiple-choice assessments is to allow the learner to demonstrate competence in applying concepts described by the learning objectives from the associated CME activity. Following are tips, along with examples, for writing quality multiple-choice assessments:

Assessment Items should:

- Relate directly to instructional learning objectives
- Contain a case study, when appropriate, with multiple questions related to the case (competence measure)
- Avoid assessing knowledge that is controversial, especially when it is incomplete or debated
- Avoid assessing knowledge of medical trivia
- Contain questions/answer choices/explanations that are the same for both the pre-assessment and post-assessment

Questions should:

- Include only relevant information
- Contain as much of the question information as possible such that phrasing is not repeated in each answer choice (See example #3)
- Ask for the correct, not the “wrong”, answer – i.e. “Which of the following is **NOT**...”.
- Avoid absolute terms, such as *always, never, all, or none*
- Avoid imprecise terms, such as *seldom, rarely, occasionally, sometimes, few, or many*; instead, use absolute numbers (e.g. 15%, rather than *few*)
- Avoid cues, such as *may, could, or can*
- Spell out words for which you use an acronym, or abbreviation; follow with the acronym

Answer choices should:

- Be in the form of, “select the single best answer” – i.e. only one correct answer per question.
- Contain incorrect answer choices (distractors) that are accurate but do not fully meet the requirements of the question; options should never be implausible, trivial, or nonsensical
- Follow grammatically from the question, and not stand out as a result of phrasing
- Relate to each other in kind (e.g., all diagnoses, all assessments, all treatments)
- Be similar in grammar, length, and complexity, with incorrect answers (distractors) being plausible but clearly incorrect
- Avoid using *none of the above* and *all the above* (i.e. use on every item, or none of the items)
- Be listed in order (e.g. numeric, chronologic)
- Be independent of each other and should not overlap
- Be varied in the positioning of the correct answer; i.e., not all correct answers should be ‘A’
- Four to five options is optimal

Explanations should:

- Concisely but thoroughly explain why the specific answer option is correct. The explanation does not need to explain why the incorrect answer options are not correct.

Assessments – Example 1

Avoid assessing knowledge of medical trivia. Instead, create assessments that measure the application of knowledge.

Don't:	Do:
<p>Cauda equina syndrome is a condition of which one of the following systems?</p> <p>A. Cardiovascular B. Neurologic C. Gastroinassessmentinal D. Nephrologic</p>	<p>A patient has low back pain that has persisted for more than six months. Which one of the following red flags is consistent with a diagnosis of cauda equina syndrome?</p> <p>A. History of significant trauma B. Unexplained weight loss C. Saddle anesthesia D. Chronic oral steroid use</p>

Questions – Example 2

Avoid imprecise terms, such as seldom, rarely, occasionally, sometimes, few, or many. Instead use absolute numbers (e.g., 15% rather than few).

Don't:	Do:
Roughly Usually Normally Frequently	<i>"In less than 35% of the population..."</i>

Questions – Example 3

Avoid repeat phrasing in each answer section. Instead, contain as much of the assessment item as possible in the question.

Don't:	Do:
<p>Which one of the following changes is considered to be a normal part of aging in healthy individuals?</p> <p>A. Decreased cough and airway mucous clearance. B. Decreased gastrointestinal absorption. C. Decreased red blood cell count. D. Decreased thyroid function.</p>	<p>A decrease in which one of the following changes is considered to be a normal part of aging in healthy individuals?</p> <p>A. Cough and airway mucous clearance. B. Gastrointestinal absorption. C. Red blood cell count. D. Thyroid function.</p>

Answer Choices – Example 4

Avoid answer choices that are implausible or unrelated. Instead, use incorrect answers that are accurate, but do not fully meet the requirements of the problem.

Don't:	Do:
<p>A. Acute renal failure. B. Prednisone, 2-3 mg/kg daily. C. Non-Hodgkin's lymphoma. D. Urinalysis.</p>	<p>A. Acute glomerulonephritis. B. Acute renal failure. C. Nephrotic syndrome. D. Orthostatic proteinuria.</p>