

CE Writers' Guidelines

We are looking for courses that are timely, relevant and compelling for practicing allied health professionals. We are looking for physicians, dietitians, occupational therapists, physical therapists, respiratory therapists, social workers, EMTs/paramedics, pharmacists, laboratory technologists, radiologic technologists, certified surgical technologists, audiologists/speech-language pathologists, massage therapists, fitness professionals, athletic trainers, certified health educators, psychologists and marriage/family counselors to write articles. Prospective authors should be able to demonstrate their expertise in the subject matter through experience, education or both. To understand the tone, style and format of our CE courses, review a few of our online courses at <http://www.continuingeducation.com>.

These guidelines provide a general overview of OnCourse Learning's manuscript requirements for a 60-minute CE course. Profession-specific requirements for enduring materials are included in the relevant sections below.

The Manuscript

To be considered for continuing education, a manuscript must include the following items:

- A one-sentence statement that identifies the educational gap
- A one-sentence goal statement for the module, separate from the narrative. For example:
The goal of this program is to provide healthcare professionals with information about the incidence, etiology, identification and treatment of abdominal trauma.
- When the target audience is the interprofessional team (two or more disciplines), the content should address one or more of the core competencies for interprofessional collaborative practice (2011 Interprofessional Education Collaborative [IPEC] Expert Panel) within the activity:
 - Values/ethics for interprofessional practice
 - Roles/responsibilities for collaborative practice
 - Interprofessional communication
 - Interprofessional teamwork and team-based care
- A 125-word abstract describing the course
- Three objectives, using action verbs that require readers to demonstrate their understanding of the topic. For example:

- Identify three factors that ...
 - Discuss four interventions ...
 - Describe two ways patients ...
 - A clinical vignette (See “Tips for Writing a Clinical Vignette” below.)
 - Evidence-based information. We divide evidence-based practice (EBP) into three categories: A, B and C. Level ML, multilevel, indicates a clinical practice guideline is based on two or more levels of evidence. (See “Types of Evidence” below for an explanation.) To determine the level of evidence-based information in your module, you must evaluate the reference work (a research study, guideline or position statement, for example) from which you obtained the information. After doing that, include the level (A, B or C or ML) in parentheses at the end of the sentence in which the information appears. If the information is from an online source on the reference list, include the URL in the text. For example: “The research study [*provide the exact URL of the study*] indicates that practice X is still the appropriate method of doing Y.¹” [*i.e., the reference number to the source*] ^(Level A)
- When identifying EBP levels in the narrative:
- Limit the number of references you identify by level to eight.
 - Use references that can be verified easily (e.g., through sources such as PubMed, journal websites or Internet search). Refrain from using references that may be accessed or verified only through paid membership. Use primary references when possible.
 - Select studies or references that are most representative of the EBP levels and relevant to clinical practice.
- An introduction (lead) that packs a punch and captures the reader’s attention. If you use a case study as a lead, make it succinct and directly related to topic. Other considerations involving a case study lead. If possible, use a case study involving actual patients, but do not use real names. Inform the CE editor if your case study (or studies) involves an actual patient scenario, but do not use real names.
 - An original, researched, referenced manuscript of about 3,600 words, written in a conversational style. (This is the word count for the main text and clinical vignette only. Do not include the objectives, references or test in the word count.) If you include a sidebar (of around 150 words), the main text should be shorter — about 3,200 words. The clinical vignette should be from 400 to 450 words.
 - Radiology Technologists: 4,500 words for 0.5 CE; 6,500 words for 1.0 CE
 - Speech-Language Pathology/Audiology: courses should be a minimum of 4,500 words for 0.10 ASHA CEU
 - Surgical Technologists: 1,000 to 1,999 words for 0.5 CE credit; 2,000 to 2,499 words for 1.0 CE credit; 3,000 to 3,499 words for 1.5 CE credit; or 3,500 to 3,999 words for 1.75 CE credit.
 - Manuscripts must be provided in an electronic file created in a common word-processing program. The text must provide current, advanced, testable information on clinical or professional topics relevant for practicing allied health professionals.
 - If your CE module includes information about an off-label use of a product (i.e., the use of a product for a purpose other than that for which the FDA has approved it), provide a statement in writing informing us of that fact.
 - A complete reference list, including book or journal titles with dates and page numbers, and with footnoted citations in AMA style (10th edition). Because of space constraints, try to limit references to 25. Generally, references should be no more than three to five years old.

Do not use reference material available only online and only by subscription; most readers will not be able to access it without paying a fee. If you use an article that appears in a subscription journal that is available both online and in print, include both the URL and the print reference information, according to AMA style. That way, readers without a subscription can access the article without cost at a library. Number the footnotes consecutively in the text. Once a citation has a number, it keeps it throughout the narrative, and it should correspond to the numeric order of the reference list.

- A test: 12 multiple-choice questions with four responses each, with the correct answers indicated unless specified by the profession below. The 12-question exam cannot exceed 350 words.
 - Radiology Technologists: 10 multiple-choice questions up to 49 minutes (0.5 credit course); 20 multiple-choice questions for 50 to 74 minutes (1 credit course). For longer courses, contact opeart@oncourselearning.com for the specific number of questions required.
 - Surgical Technologists: A minimum of 10 multiple-choice questions. Contact pclass@oncourselearning.com with specific questions.
 - Social Workers: A minimum of 10 multiple-choice or true/false questions for 1 hour of credit; 15 multiple-choice or true/false questions for 2 hours of credit; 20 multiple-choice or true/false questions for 3 hours of credit; add 5 additional questions for each additional hour of credit. Contact oshtayermm@oncourselearning.com with specific questions.
- One to five points of explanation for the **correct answer** of each of the exam questions. The points of explanation should *not* be a restatement of the answer; rather they should offer new information related to the content in the module and to what the question is covering. Your explanation points should be succinct. For example:
 1. Three risk factors for suicide include:
 - a. Male gender, alcoholism and depression
 - b. Female gender, married and high income
 - c. Female gender, living in a city and on welfare
 - d. Female gender, physical illness and three children

Answer: A
Males complete suicide at a rate four times that of females. The risk of suicide in alcoholics is 50% to 70% higher than in the general population. A relationship exists between depression and suicide: The risk of suicide is increased by more than 50% in depressed people.
- A résumé or curriculum vitae for each author
- A signed OnCourse Learning author's agreement
- A signed OnCourse Learning vested interest self-disclosure form

Note: Authors must guard against plagiarism. The dictionary defines plagiarism: "To take and pass off (ideas or words of another) as one's own; to use another's production without crediting the source."* To avoid plagiarizing, you must credit the journal articles, books and websites you drew information from by citing them in the reference list. If you use someone else's exact words, put quotation marks around them, and list the source in your reference list.

*Plagiarize. Merriam-Webster.com Web site. <http://www.merriam-webster.com/dictionary/plagiarized>. Accessed June 6, 2014.

The Submission Process

Before writing a word, contact the appropriate clinical editor for your profession to discuss your idea.

<p>Audiology/Speech-Language Pathology Kathleen Fahey, CCC-SLP, PhD Clinical Speech-Language Pathology Editor 408-775-8667 kfahey@oncourselearning.com</p>
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<p>Emergency Medical Services Guy Haskell, PhD, JD, Paramedic Clinical Emergency Medical Technology Editor 812-320-395 ghaskell@oncourselearning.com</p>
<p>Laboratory Technology Catherine J. Swift, MT, (ASCP) Clinical Laboratory Technology Editor 308-390-9429 cswift@oncourselearning.com</p>
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We are looking for manuscripts that are original and practical, useful and informative for any allied health professional, yet innovative and entertaining. We look for topics that cover the “holes” in the literature, important subjects that have been missed or undercovered — what clinicians need to know before they know they need to know it. For a sense of what we publish, review a few of our courses at <http://www.continuingeducation.com>.

After your topic is approved, e-mail your module goal, objectives, outline and curriculum vitae in attachments to the appropriate clinical editor. The clinical editor will review your materials, let you know whether any changes are required before you begin to write, and discuss the deadline for submission of your manuscript. Once you complete your manuscript, please e-mail it to the clinical editor as an attachment.

Paid peer reviewers (experts in your subject matter) will rigorously review your manuscript. In about three to five weeks, we will notify you about their decision. If reviews are favorable, you will be asked to revise the manuscript according to their suggestions.

When your manuscript is in its final version, you will receive an edited copy for your approval. The only changes you may make at that point are those related to accuracy or clarity of information. Most courses are published on our website.

Honoraria

Honoraria are awarded on an individual basis.

For more information, contact the appropriate clinical editor for your profession listed above.

Tips for Writing Interprofessional Continuing Education (IPCE) Activities

Interprofessional Continuing Education (IPCE) should be designed to address gaps in the healthcare team's collaborative practice. Collaborative competencies are those needed in addition to individual profession competencies to provide quality patient care in the current practice environment. Collaborative practice competencies include:

- Values/ethics for interprofessional practice
 - Roles/responsibilities for collaborative practice
 - Interprofessional communication
 - Interprofessional teamwork and team-based care
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- Determine the change needed in the healthcare team's current collaborative practice (skill, strategy or performance) to achieve the desired patient outcome(s) related to the educational activity topic.
 - What is the desired healthcare team's best practice related to the topic?
 - How is the team currently interacting/performing related to that best practice?
 - What change is needed to bridge the gap between current and best practice?
 - What knowledge, skill or attitude related to the healthcare team's function will you address to close that gap?
 - What barriers exist to achieving the needed change? These may be organizational/systemic, personal or professional in nature.
 - Identify goals/objectives that include how the interprofessional team should deliver care collaboratively after completing the learning activity.
 - If one of the barriers relates to role confusion or misunderstanding, consider including a discussion to clarify roles and the desired best practice.
 - How do roles/individual professional competencies overlap, differ or complement each other?
 - When is it appropriate to make a referral to another team member?
 - What model of communication would benefit team functioning and achievement of patient-centered goals?
 - How would you approach delivery of the content to enhance understanding of the team roles and joint functioning if you were teaching the content face-to-face to an interprofessional audience? Can you adapt that to a written format?
 - Consider using case scenarios and a clinical vignette to model the desired collaborative practice competency.
 - Include test questions that require critical thinking and application of collaborative competencies.

References

Interprofessional education collaborative. Core competencies for interprofessional collaborative practice. American Association of Colleges of Nursing Web site.

<http://www.aacn.nche.edu/education-resources/IPECReport.pdf>. Published February 2011.
Accessed June 6, 2014.

Owen JA, Schmitt JH. Integrating interprofessional education into continuing education: a planning process for continuing interprofessional education programs. *J Contin Educ Health Prof.* 2013;33(2):109-117. doi:10.1002/chp.21173.

Tips for Writing a Clinical Vignette

Create a clinical vignette of 400 to 450 words reflecting information in the module that tests the reader's knowledge. Include four multiple-choice questions with a rationale for the correct answer. Below is an example.

Clinical Vignette

John King arrives in the ED at 2 a.m. with SOB. Vital signs are 154/92; temperature is 98 F, pulse is 112 bpm, and RR is 30 breaths/min. Lungs have bibasilar crackles up one-half posteriorly. Oxygen saturation by pulse oximetry is 90%, and his heart reveals an S3. The monitor shows sinus tachycardia. An initial B-type natriuretic peptide (BNP) assay is 1,650 pg/mL. He receives furosemide (Lasix) 40 mg IVP and O₂ at 3 L/min via nasal cannula. He diureses 500 mL of urine. At 6 a.m., he goes to telemetry with a diagnosis of heart failure. Admission vital signs are 122/74; temperature is 98 F, pulse is 102 bpm, and RR is 24 breaths/min. Lungs have bibasilar crackles. The monitor shows sinus tachycardia. He receives enalapril (Vasotec) 2.5 mg PO. At 10 a.m., BP is 106/60. He diureses 600 mL of urine. A repeat BNP assay is 1,100 pg/mL.

1. In telemetry, John's initial nursing assessment should include:

- a. Chest X-ray
- b. Oxygen saturation
- c. ECG
- d. Echocardiogram

Answer: B

On admission, O₂ saturation is only 90.

2. The BP on admission to the telemetry unit was lower because of:

- a. Diuresis
- b. Circulating BNP
- c. Tachycardia
- d. Oxygen administration

Answer: A

Diuresis decreases excess circulating volume and lowers BP.

3. The BP decreased after administration of enalapril (Vasotec) as the result of:

- a. Excretion of excess sodium
- b. Excretion of excess volume
- c. Systemic vasodilation
- d. Increased contractility

Answer: C

ACE inhibitors produce vasodilation, lowering BP and decreasing the workload of the failing ventricle.

4. BNP levels decrease in response to:

- a. Vasodilation

- b. Increased contractility
- c. Increased blood pressure
- d. Decreased volume

Answer: D

BNP decreases in response to diuresis and loss of excess circulating volume.

Levels of Evidence

Evidence-based practice is a conscientious, problem-solving approach to clinical practice that incorporates the best evidence from well-designed studies, patient values and preferences, and a clinician's expertise in making decisions about a patient's care. Unfortunately, no standard formula exists for how much these factors should be weighed in the clinical decision-making process. However, there are a variety of rating systems and hierarchies of evidence that grade the strength or quality of evidence generated from a research study or report. Being knowledgeable about EBP and levels of evidence is important to every clinician because clinicians need to be confident about how much emphasis they should place on a study, report, practice alert or clinical practice guideline when making decisions about a patient's care.

OnCourse Learning's Rating System:

The levels of evidence listed here have been developed with the help of nurse experts and other industry resources. We thank those who have contributed to making our system relevant and applicable to determining the levels of evidence that support our CE publications.

Evidence-based information ranges from Level A (the strongest) to Level C (the weakest). In 2013, we have added Level ML, multilevel, to identify clinical practice guidelines that contain recommendations based on more than one level of evidence:

LEVEL A: Evidence obtained from:

- **Randomized controlled trials:** the classic "gold standard" study design. In RCTs, subjects are randomly selected and randomly assigned to groups to undergo rigorously controlled experimental conditions or interventions.
- **Systematic review or meta-analysis** of all relevant RCTs. A systematic review is a critical assessment of existing evidence that addresses a focused clinical question, includes a comprehensive literature search, and appraises the quality of studies and reports in a systematic manner. Meta-analysis is a study design that uses statistical techniques to combine and analyze data from many RCTs.
- **Clinical practice guidelines:** based on systematic reviews of RCTs. Evidence-based clinical practice guidelines provide the strongest level of evidence to guide clinical practice because they are based on rigorous reviews of the best evidence on specific topics.

LEVEL B: Evidence obtained from:

- **Well-designed control trials without randomization:** In this type of study, random assignment is not used to assign subjects to experimental and control groups. Therefore, this type of research is less strong in internal validity because it can't be assumed that the subjects in the study are equal on major demographic and clinical variables at the beginning of the trial. Frequent problems with this type of study include intentional or unintentional bias in sample enrollment; nonblinding, unclear criteria for participant selection; or unreliable or invalid tools.

- **Clinical cohort study:** an examination of groups of people who have common characteristics or exposure experiences to compare outcomes in those exposed versus outcomes in those not exposed (e.g., development of heart disease after exposure or nonexposure to 10 years of secondhand smoke).
- **Case-controlled study:** use of an observational approach in which subjects known to have a disease or outcome are compared with subjects known not to have that disease or outcome. Subjects are matched on characteristics so that they are as similar as possible except for the disease or outcome. Case-control studies are designed generally to estimate the odds (using an odds ratio) of developing the studied condition or disease, and can determine if an associated relationship exists between the condition/disease and risk factors.
- **Uncontrolled study:** studies that do not control participant selection or interventions (e.g., a convenience sample, such as patients on a given unit, may be studied because they are only group reasonably available).
- **Epidemiological study:** studies that observe people over a long time to determine risk or likelihood of developing diseases. These studies include retrospective database searches or prospective studies that follow a population over time.
- **Qualitative study/quantitative study:** descriptive, word-based phenomena, such as symptoms, behaviors, culture and group dynamics. Quantitative studies use statistical methods to establish numerical relationships that are correlational or cause and effect.

LEVEL C: Evidence obtained from:

- **Consensus viewpoint and expert opinion:** a study that obtains agreement about specific practices from all clinical experts on a review panel. Expert opinion involves obtaining agreement from a majority of clinical experts on a review panel. *Note: This level of evidence is used when there are no quantitative or qualitative studies in a particular area.*
- **Meta-synthesis:** a systematic review that synthesizes findings from qualitative studies using an interpretive technique to bring small study findings, such as case studies, to clinical application.

LEVEL ML (multilevel): clinical practice guidelines, recommendations based on evidence obtained from:

- More than one level of evidence as defined in OnCourse Learning's rating system.

Evidence-based Practice Resources:

- Agency for Healthcare Research and Quality Evidence-based Practice Centers (www.ahrq.gov/clinic/epc)
- The Cochrane Collaboration:
 - Cochrane Reviews (www.cochrane.org/cochrane-reviews)
 - Evidence-based healthcare (www.cochrane.org/about-us/evidence-based-health-care)
- National Guideline Clearinghouse: (www.guideline.gov/index.aspx)

References for EBP:

Alfaro-LeFevre R. *Critical Thinking, Clinical Reasoning, and Clinical Judgment: A Practical Approach*. 5th ed. Philadelphia, PA: Elsevier-Saunders; In Press, 2013.

Ebell MH, Siwek J, Weiss BD, et al. Strength of recommendation taxonomy (SORT): a patient centered approach to grading evidence in the medical literature. *Am Fam Physician*. 2004;69(3):548-556. <http://www.aafp.org/afp/2004/0201/p548.html>. Published February 1, 2004. Accessed June 6, 2014.

Evidence-based medicine toolkit. American Academy of Family Physicians Web site. <http://www.aafp.org/online/en/home/publications/journals/afp/ebmtoolkit.html>. Accessed June 6, 2014.

What is evidence based medicine? University of Illinois at Chicago University Library Web site. <http://www.uic.edu/depts/lib/lhsp/resources/levels.shtml>. Updated April 17, 2014. Accessed June 6, 2014.

Levels of evidence. Centre for Evidence-Based Medicine Web site. <http://www.cebm.net/index.aspx?o=1025>. Published March 2009. Updated September 16, 2013. Accessed June 6, 2014.

Melnyk BM, Fineout-Overholt E. *Evidence-Based Practice in Nursing & Healthcare: A Guide to Best Practice*. Philadelphia, PA: Lippincott Williams & Wilkins; 2005.

Newhouse RP, Dearholt SL, Poe SS, Pugh LC, White KM. *Johns Hopkins Nursing Evidence-Based Practice Model and Guidelines*. Indianapolis, IN: Sigma Theta Tau International; 2007.

Strength of Recommendation Taxonomy (SORT): a patient-centered approach to grading evidence in the medical literature. American Academy of Family Physicians Web site. <http://www.aafp.org/afp/2004/0201/p548.html>. Published February 1, 2004. Accessed June 6, 2014.

Understanding research study designs. University of Minnesota Bio-Medical Library Web site. <http://www.biomed.lib.umn.edu/guides/understanding-research-study-designs>. Accessed June 6, 2014.

References

- Use AMA style (refer to the *AMA Manual of Style*, 10th edition)
- List footnoted citations under a “References” heading. Number citations consecutively in the text. Once a citation has a number, it keeps it throughout the narrative.
- List general references not specifically cited in the text under a “Bibliography” heading.
- Abbreviate journal names according to AMA style.
(i.e., according to the National Library of Medicine abbreviations. For more information, go to www.nlm.nih.gov/pubs/factsheets/constructitle.html).

Examples of References

Up to six authors, list them all

Hron G, Kollars M, Binder BR, Eichinger S, Kyrle PA. Identification of patients at low risk for recurrent venous thromboembolism by measuring thrombin generation. *JAMA*. 2006;296(4):397-402.

More than six authors, list first three, then et al.

Carpenter CC, Fischl MA, Hammer SM, et al. Antiretroviral therapy for HIV infection in 1997. Updated recommendations of the International AIDS Society-USA panel. *JAMA*. 1997;277(24):1962-1969.

Books (entire book)

Weedon D. *Weedon's Skin Pathology*. 3rd ed. London, England: Churchill Livingstone Elsevier; 2010.

Dooley JS, Lok AS, Burroughs AK, Heathcote EJ, eds. *Sherlock's Diseases of the Liver and Biliary System*. 12th ed. Hoboken, NJ: Wiley-Blackwell; 2011.

Books (chapter in edited book)

Schenk EA. Management of persons with neurological problems. In: Phipps WJ, Manahan Donovan F, Sands JK, Marek JF, Neighbors M, eds. *Medical-Surgical Nursing: Health and Illness Perspectives*. 7th ed. St. Louis, MO: Mosby; 2002:1787-1865.

CDs, DVDs, audiotapes, videotapes: (list author first if provided)

Wound Healing. [videotape]. Irvine, CA: Concept Media; 2006.

Online material

In citing data from a website, include the following elements (if available) in the order shown: Author(s), if given (often no authors are given). Title of the specific item cited (if none is given, use the name of the organization responsible for the site). Name of the website site. URL [provide URL and verify that the link still works as close as possible to publication]. Published [date]. Updated [date]. Accessed [date].

Examples of online material

Online journals

Burt RK, Loh Y, Pearce W, et al. Clinical applications of blood-derived and marrow-derived stem cells for nonmalignant diseases. *JAMA*. 2008;299(8):925-936. <http://jama.ama-assn.org/content/299/8/925.full>. Published February 27, 2008. Accessed June 6, 2014.

* Please refer to the **unique identifier** example for formatting of an online journal with an assigned doi (digital object identifier) (<http://www.doi.org>).

Websites

Guidelines and recommendations: interim guidance about avian influenza (H5N1) for U.S. citizens living abroad. Centers for Disease Control and Prevention Web site. <http://wwwnc.cdc.gov/travel/page/avian-flu-americans-abroad.htm>. Published March 24, 2005. Updated January 13, 2011. Accessed June 6, 2014.

Dissertation or master's thesis

Caruso E. *An Examination of Organizational Mentoring: The Case of Motorola* [dissertation]. London, England: University of London; 1990.

Newspapers

Name of author (if given), title of article, name of the newspaper, date of the newspaper, section (if applicable) and page numbers.

Steinmetz G. Kafka is a symbol of Prague today; also, he's a T-shirt. *Wall Street Journal*. October 10, 1996:A2, A6.

Poster/paper/abstract presented at a meeting or conference (not yet published)*

Greenspan A, Eerdeken M, Mahmoud R. Is there an increased rate of cerebrovascular events among dementia patients? Poster presented at: 24th Congress of the Collegium Internationale Neuro-Psychopharmacologicum (CINP); June 20-24, 2004; Paris, France.

Khuri FR, Lee JJ, Lippman SM, et al. Isotretinoin effects on head and neck cancer recurrence and second primary tumors. In: Proceedings from the American Society of Clinical Oncology; May 31-June 3, 2003; Chicago, IL. Abstract 359.

Package insert

Cialis [package insert]. Indianapolis, IN: Eli Lilly & Co; 2012.

- Once these presentations are published, they take the form of a reference to a journal, book or other medium in which they are published.

Unique identifier

Unique identifier numbers now are being assigned to articles by most journals. The *AMA Manual of Style* indicates the number should be used rather than a URL when one is available. It eases finding a journal article with a web search even if the journal moves its location on its website.

DOI.org is another place users can enter the number and find a reference. Many older references do not have one, but most in the last two to five years do.

For references in continuing education modules *without* unique identifier numbers, use the following format for references:

Bensimon G, Lacomblez L, Meininger V, ALS/Riluzole Study Group. A controlled trial of riluzole in amyotrophic lateral sclerosis. *N Engl J Med.* 1994;330(9):585-591.
<http://www.nejm.org/doi/full/10.1056/NEJM199403033300901>. Published March 3, 1984.
Accessed November 11, 2015.

References in continuing education modules *with* unique identifier numbers, use the following format for references:

Bensimon G, Lacomblez L, Meininger V, ALS/Riluzole Study Group. A controlled trial of riluzole in amyotrophic lateral sclerosis. *N Engl J Med.* 1994;330(9):585-591.
doi: 10.1056/NEJM199403033300901.

U.S. Federal Administrative Regulations:

Importance of fruits and vegetables. *Fed Regist.* 1995;60(51):14202-14209. To be codified at 7 CFR §300.

U.S. Federal Statutes:

Comprehensive Environmental Response, Compensation, and Liability Act. 42 USC §9601-9675 (1988).

Part 418: hospice care. Subpart C — conditions of participation: patient care: interdisciplinary group, care planning and coordination of services. Centers for Medicare and Medicaid Services Web site. <http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&sid=818258235647b14d2961ad30fa3e68e6&rgn=div5&view=text&node=42:3.0.1.1.5&idno=42>. Accessed November 11, 2015.

Tips for Writing Test Questions

- Keep the questions, answers and points of explanation brief: a maximum of 1,000 words total.
- Make all questions multiple choice with four possible options, “a,” “b,” “c” and “d.”
- Remember that test questions should measure mastery of the objectives. After you have finished writing the test, go back to the objectives and be certain that the test includes questions that relate to each objective.
- Make sure the correct option is derived directly from the narrative and clearly defensible as the best answer.
- Be certain that the three incorrect options are plausible.
- Do not write “multiple-multiple” questions — that is, those that present a list of options, then ask the test taker to choose “a and b,” “a, b and c,” etc.
- Avoid writing the options “None of the above” and “All of the above.” Also, do not phrase questions in the negative (for example, using a phrase such as, “all of the following EXCEPT”).
- Limit yourself to one question that involves statistics, number of cases or the like. Examples: “What percentage of ventilated patients develop ventilator-associated pneumonia?” “How many cases of HIV/AIDS were recorded in the U.S. in 2008?” “What is the prevalence of migraine among U.S. women?”
- Use the same terminology in the test as in the narrative. (For example, if the narrative refers only to “hypertension,” use “hypertension,” not “high blood pressure,” in the test.)
- Be sure the order of your questions matches the sequence of information in the narrative. For example, test question 1 should correspond to the information that appears in the narrative first.
- Avoid using words in the correct option that are also found in the stem (the first part of the question). Doing so provides “clues” to the correct answer.
- Make sure that your options are not mutually exclusive. For example, if option “a” reads, “Slows the heart rate” and option “b” reads, “Increases the heart rate,” these two options are mutually exclusive. The test taker can be reasonably certain that “c” and “d” are extraneous and that either “a” or “b” is the correct answer.
- Be sure that one or more of your options are not included in another option. For example, if option “a” reads, “Affects the heart rate” and option “b” reads, “Slows the heart rate,” option “b” is actually included in option “a.” Thus, if “b” is a correct response, “a” is also.
- Include an answer key.