



33 W. Monroe Street, Chicago, IL 60603

**LabQ AUTHOR GUIDELINES**  
(Revised August 2009)

Requirements  
Supplementary Materials  
Additional Information  
Submission and Publication  
Reference Guidelines  
How to Write Learning Outcomes and CMLE Questions  
LabQ Author Template  
LabQ Author Checklist  
Permissions Form  
2009-2010 Lab Q Editorial Board

Thank you for your interest in writing a LabQ exercise! LabQ is a continuing education program for medical laboratory professionals. Sample exercises for all LabQ subject areas can be found at the website: <http://www.ascp.org/labq>.

A LabQ exercise must include all of the components listed in boldface type below. In addition, helpful details about the use of images, tables, laboratory results, graphs, figures, references, etc, are listed at the end. The required electronic format for the manuscript is a Word document totaling approximately 4-12 typed double-spaced pages, or 1400-4000 words.

## **REQUIREMENTS**

### **Title Page** (1 page)

- Exercise title
- Full names of authors (For multiple authors, a “corresponding author” should be designated at the time of submission. This author will receive proofs for final review before publication and will be responsible for responding to queries during the publication process and communicating with coauthors.)
- Highest degrees and certifications
- Job title or titles
- Institutional affiliation or affiliations
- Complete address (for office use only; it will not be published)
- Daytime phone number (for office use only; it will not be published)
- Fax number and e-mail address (for office use only; they will not be published)



33 W. Monroe Street, Chicago, IL 60603

### **Case History** (2-5 paragraphs)

- Describe a laboratory challenge, defined as a problem that a medical laboratory professional encounters in his or her scope of practice and that *requires at least one action on the part of the medical laboratory professional to resolve*. The unresolved laboratory challenge is always presented in the Case History section of the LabQ exercise; however, the actions required to *resolve* the laboratory challenge are presented in the Case Conclusion (listed below).
- Present a laboratory challenge related to the testing phases (pre, analytical, post) and/or to decision making.
- The challenge may describe problem situations, identification of sources of error, troubleshooting discrepant results, correlations of laboratory findings with disease states, selection of courses of action, and/or discovery of sources of common misconceptions.

### **Learning Outcomes (LO)** (4-5 bullets with learning outcomes; see How to Write Learning Outcomes and CMLE Questions)

- Learning Outcomes, eg, educational objectives, in observable and measurable terms, should state what the participant will be able to do after completing the exercise.
- All Learning Outcomes must also correlate to CMLE documentation questions (listed below). Refer to the sheet on writing Learning Outcomes in this packet for more information.

### **Discussion** (3-10 pages)

- Address general topics related to the problem presented in the specific case history, thereby giving information to help "solve the problem". Any common misconceptions, false assumptions, or differential diagnostic problems should be addressed, as should recent developments.
- Use headings and subheadings to make the material more readable and easier for the reader to locate information.
- Illustrative material is encouraged and may include images, tables, or figures (e.g., graphs, charts). Refer to additional information below.

### **Case Conclusion** (1-5 paragraphs)

- Describe the resolution(s) to the laboratory challenge/problem addressed in the Case History.

### **Summary** (1-3 paragraphs)

- Present a summary of the major points in the discussion and closing remarks on the topic.

### **References** (3-20 references)



33 W. Monroe Street, Chicago, IL 60603

- Include current references sequentially in the text and number the corresponding reference in this reference section. Most references should be less than 5 years old.
- All references must be cited and numbered consecutively.
- References must be in the style specified in the *American Medical Association Manual of Style*. See Reference Guidelines.

**CMLE Documentation Questions:** (5 multiple choice questions/answers; see How to Write Learning Outcomes and CMLE Questions)

- Provide 5 multiple-choice questions, and indicate the correct answer for each.
- CMLE Documentation Questions *must* relate to at least one Learning Outcome, and all Learning Outcomes must relate to a CMLE Question.
- The correct answer *must* be found in the discussion portion of the manuscript.
- Format the question so that there is only one correct response and all the responses are approximately the same word length. (Additional information is listed below.)

Questions that are unacceptable:

- True/false questions
- “Which of the following is *not* true... ” or “All of the following are true...*except*”.
- Do not use the phrases “all of the above” or “none of the above” or “A and B” as responses.

**Quick Stops** (1-3 statements)

- “Quick Stops” are side notes that provide tidbits of interesting information related to the topic. They can relate to a little known fact about the subject, provide additional statistics about the topic, etc.
- Do not repeat information already in the discussion.
- If a Quick Stop requires a reference, present it as the final reference of your article.
- Example:

Topic: Wound Botulism Caused by Clostridium Botulinum

Quick Stop:

1. Did you know that the term *botulism* derives from the Latin word *botulus*, or sausage?
2. A history appropriate to the type of botulism suspected is the most important diagnostic test.
3. Immunity to botulism toxin does not develop even with severe disease, and repeated occurrence has been reported.

## **SUPPLEMENTARY MATERIALS**

### **Images**

- Authors are encouraged to submit no more than 3 color images per exercise, preferably in high quality digital format. Submit only sharp images that capture the true color,



33 W. Monroe Street, Chicago, IL 60603

staining reaction, or feature being discussed. Split frames can be use to combine images when appropriate. Indicate crop marks for slides that will be made into split frames.

- For each image, a Key to Images must include a description of the image, the stain used (if applicable), and a quantitative magnification.
- All images must be cited in the text and numbered in order of citation.
- Original transparencies will be returned after production of the exercise is completed.
- Digital Images: Digital images should be of high quality. Use of low-power magnification is discouraged. Specific requirements follow:

Type:	Format:	Mode:	Resolution:
Color	TIFF	CMYK 400 dpi	
Halftone	TIFF	Grayscale	400 dpi
B&W line art	EPS	Vector	N/A

#### Tables

- All tables must be organized into vertical columns using the Table function in Word.
- Tables should be numbered in Roman numerals in the order they appear in the text.

#### Figures

- Provide a title and an Arabic number for each figure. Number them sequentially as they appear in the text.
- Submit each figure as a separate electronic file.
- For Blood bank contributors: If your article includes an antibody panel and/or screen, please present individual electronic documents in Excel. If you are unable to use Excel, creating tables in Word is also acceptable. We also request that you mail or fax copies of the original composites for our files.

#### Laboratory Data

- Laboratory results (patient results and reference ranges) must be provided in both conventional units and SI units in tables and in the text.

#### Permission and Copyrights

- Permission is required whenever any data (such as a figure, table, or image) is used from another published source. The copyright holder's written permission to reproduce the material must be obtained and submitted with the manuscript. It is the author's responsibility to obtain written permission for all such materials, unless the material is in the public domain. A copyright request form (Permission Form) is included in this packet.
- The ASCP will copyright all materials accepted for publication. A copyright assignment form will accompany the proofs. This is done to protect the author's intellectual property rights. It does not interfere with future use of the materials.



33 W. Monroe Street, Chicago, IL 60603

## ***SUBMISSION AND PUBLICATION***

- Electronic submission of manuscripts to [labq@ascp.org](mailto:labq@ascp.org) is required.
- Send your manuscript and any tables, images, or figures as separate attachments by the deadline indicated in your letter of agreement.
- Receipt of materials will be acknowledged promptly.
- Manuscripts are accepted for consideration with the understanding that they have not been published, simultaneously submitted, or accepted for publication elsewhere.

### **Workflow and Deadlines**

- LabQ editors work with authors to establish deadlines for manuscript submission. When authors sign the Letter of Agreement to contribute a manuscript, the deadline for manuscript submission is set. *Fulfilling this and all manuscript deadlines (including those for revision requests and author galleys) is critical to the editorial and production process. In some cases we reserve the right to reject a manuscript on the grounds of egregious tardiness.*
- Manuscripts are peer reviewed and are subject to editorial revision.

### **Honorarium**

- An honorarium of \$250 per manuscript will be paid on publication.
- If the manuscript is received before the deadline specified by the author letter of agreement, an additional \$250 will be paid.
- All accepted manuscripts will be published online. For print versions, each author receives 3 complimentary copies of the exercise after publication.

## ***REFERENCE GUIDELINES***

- References should be current (preferably less than 5 years old) and complete.
- References must be numbered sequentially as they appear in the text.
- References cited only in tables or figure legends should be numbered in accordance with the first appearance in the text of the particular table or figure.
- Use the *American Medical Association Manual of Style*, for a complete listing of reference formats. Examples of common reference formats:

### **Journals**

*1-3 Authors:*

1. You CH, Lee KY, Chey RY. Electrogastrographic study of patients with unexplained nausea, bloating, and vomiting. *Gastroenterology*. 1999;79:311-314.



33 W. Monroe Street, Chicago, IL 60603

*4 or More Authors:*

2. Solter NA, Wasserman SI, Austen KF, et al. Cold urticaria: release into the circulation of histamine and eosinophilic chemotactic factor of anaphylaxis during cold challenge. *N Engl J Med.* 1998;294:687-690.

**Books**

*Personal Author:*

3. Kaplan LA, Pesce AJ. *Clinical Chemistry Theory, Analysis, Correlation.* St Louis, MO: Mosby; 1996:445-447.

*Editor, Compiler, or Chairman as Author:*

4. Vengelen-Tyler V, ed. *Technical Manual.* 12th ed. Bethesda, MD: American Association of Blood Banks; 1996:503-525.

*Chapter or Volume of Book:*

5. DeMay R. Exfoliative cytology. In: *The Art and Science of Cytopathology.* Chicago, IL: ASCP Press; 1996:286-287.

**Material Presented at a Meeting**

6. Fitzpatrick JE. Market information and workplace reform. Paper presented at: Annual Meeting of Association of Medical Advisors; July 21, 1998; Chicago, IL.

**Electronic Citations**

7. Health Care Financing Administration. 1999 statistics at a glance. Available at: <http://www.hcfa.gov/stats/stahili.htm>. Accessed December 2, 1999.
8. Rosenthal ST, Chen AR, Hadler LS. The safety of pertussis vaccine [abstract]. *Arch Pediatr Adolesc Med* [serial online]. 1999;150:457-460. [http://ama-assn.org/sci-pubs/journals/archive/ajdc/vol\\_150/no\\_5/abstract/htm](http://ama-assn.org/sci-pubs/journals/archive/ajdc/vol_150/no_5/abstract/htm). Accessed January 4, 2000.

**HOW TO WRITE LEARNING OUTCOMES AND CME QUESTIONS**

The desired result of any CME activity is ultimately a change in competence or performance, or in patient outcomes, to make a difference and improve patient care.

**Learning Objectives.** By definition, Learning Objectives state in observable and measurable terms what the participant will be able to do after completing a *LabQ* exercise. The stem



33 W. Monroe Street, Chicago, IL 60603

statement, "Upon completion of this exercise, the participant should be able to . . . ," indicates each Learning Objective.

*Wording:* Given the format of the *LabQ* exercise, Learning Objectives are best written to convey application of problem-solving skills gained through the exercise.

To show knowledge: "describe," " discuss," "list," state"

To show application of knowledge: "compute," "solve," "apply," "correlate," and "predict"

To show problem-solving skills: "examine," "analyze," "compare," and "differentiate"

Other helpful verbs to describe desired results in terms of behavior change: Advise, Assess, Calculate, Choose, Communicate, Consult, Contrast, Coordinate, Create, Decide, Demonstrate, Design, Detect, Determine, Develop, Devise, Diagnose, Discriminate, Distinguish, Establish, Evaluate, Formulate, Identify, Implement, Interpret, Justify, Manage, Modify, Operate, Organize, Perform, Plan, Practice, Propose, Recognize, Recommend, Select, Transform, Utilize

**CMLE Questions.** Provide 5 multiple-choice questions. The stem of the question should (1) ask a straightforward question, (2) give an incomplete statement, (3) present a scenario, or (4) describe a set of clinical findings that require the subscriber to make an interpretation. Each stem should be followed by 4 or 5 responses, only one of which is correct. Do NOT use negative question stems or related forms (phrases that ask "Which of the following cannot" or "All of the following are true except"). Indicate which is the correct response for each question. Do NOT use: true/false questions, always/sometimes/never responses, or responses that contain "All of the above" or "None of the above." Within a question, please equalize the length of the correct response and the distractors (this increases question challenge to readers).

The following are CMLE questions that correspond to the Learning Outcomes given as examples in this guide to demonstrate the process of matching the two. (The correct responses are marked with an asterisk.)

1. Learning Outcomes are
  - A) what the instructor plans to do in the classroom.
  - B) what the learner will know or be able to do after instruction.\*
  - C) the teaching/learning strategy (eg, demonstration) for a topic.
  - D) the content of a course syllabus and textbook.
  
2. For the learning outcome, "Given a film on biosafety hazards, the student will really appreciate the importance of safety procedures," what component of a well-written learning outcome is missing?
  - A) Performance action verb that is observable \*
  - B) Topic of the instruction--ie, no title for film
  - C) Conditions affecting actual performance



33 W. Monroe Street, Chicago, IL 60603

D) Evaluation item

3. The advantage of troponin I over CK-MB quantitation to aid in the diagnosis of AMI is that troponin I
  - A) has a greater clinical sensitivity for skeletal muscle.
  - B) peaks earlier in the course of AMI than CK-MB.
  - C) has a greater clinical specificity for AMI. \*
  - D) peaks later in the course of AMI.
  
4. A medical laboratory scientist performs a WBC count on a CSF specimen by counting the number of WBCs present in the 4 large corner squares and large center square of a hemacytometer counting chamber. She counts 30 cells in 10 large squares (5 squares on each side of the hemacytometer). The specimen is undiluted. What is the correct WBC count?
  - A) 60/mL
  - B) 30/mL \*
  - C) 15/mL
  - D) 3/mL

\*Adapted with permission from Snyder JR. Developing Learning Outcomes. *ASCP Management & Education LabQ MGM-6 (1999)*. Chicago, IL: ASCP Press; 1999.