

SPEAKER HANDBOOK

LIVE CONTINUING PHARMACY EDUCATION ACTIVITIES



Skaggs School of Pharmacy
and Pharmaceutical Sciences

UNIVERSITY OF COLORADO
ANSCHUTZ MEDICAL CAMPUS

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INTRODUCTION

Thank you for agreeing to speak at a live educational activity sponsored by the University of Colorado Skaggs School of Pharmacy Pharmaceutical Sciences. As an accredited provider of continuing pharmacy education, the School of Pharmacy follows the educational standards of the Accreditation Council for Pharmacy Education (ACPE) and is required to communicate these guidelines to all presenters. This handbook is intended to help you design your educational presentation in accordance with the ACPE standards, which emphasize the development of critical thinking and problem-solving skills applicable to the practice of pharmacy.

This speaker handbook is designed to help you plan and give your presentation by providing resources on educational design, the accreditation process, and logistics. We have provided basic information in the main text, with supporting explanations and information in the appendices. We will also provide you with a letter outlining details about your specific presentation and deadlines for submitting various materials to the Office of Continuing Pharmacy Education.

We would be glad to receive any feedback you may have on this handbook. You may send comments to sop.continuingeducation@cuanschutz.edu. Access to the ACPE Accreditation Standards for Continuing Pharmacy Education is available at: [CPE Standards Final Updated February2023.pdf](#)

DESIGNING YOUR PRESENTATION

PLANNING

The overall goal and outline for your talk should be based on a needs assessment or knowledge gap analysis for the target audience. The needs assessment/gap analysis will generally be performed by the sponsoring organization or the School of Pharmacy. The school will communicate with you regarding the target audience, overall goal, and anticipated length of the activity (contact hours). More information about developing learning objectives and program design follows this section. Below is a timeline for planning and submitting required information to the Office of Continuing Pharmacy Education for accreditation:

DUE 2 WEEKS PRIOR:

- ☐ Program title and learning objectives.
- ☐ Speaker Information Form
- ☐ Speaker Agreement Form
- ☐ Disclosure Form
- ☐ W-9 Form (If applicable)

DUE 1 WEEK PRIOR:

- ☐ PowerPoint slides
- ☐ Handout (if different than slides)
- ☐ Other educational materials
- ☐ Description of active learning activities
- ☐ Description of learning assessments

Appendix 1 contains descriptions of the required forms.

DEVELOPING CONTENT

As you plan your presentation, remember that, in general, educational content for pharmacists should relate to the five core competencies called for by the Institute of Medicine: “All health professionals should be educated to **deliver patient-centered care** as members of an **interdisciplinary team**, emphasizing **evidence-based practice**, **quality improvement approaches**, and **informatics**.” (Institute of Medicine *Health Professions Education: A Bridge to Quality*, April 2003.)

Your specific content will be determined by the competencies you want your participants to have after attending your program, and the type of CPE activity (as defined by ACPE) you are planning.

TYPES OF LIVE CPE ACTIVITIES:

Knowledge-based activities: primarily for the purpose of providing evidence-based knowledge (i.e., facts) based on evidence as accepted in the literature by health care professionals. The content must include learning activities and assessment questions designed to demonstrate recall of facts. The minimum amount of contact time for a knowledge-based activity is 15 minutes.

Application-based activities: constructed to allow participants to apply the evidence-based information learned in the program. The content must include learning activities (i.e., case

studies) to help participants apply the subject information and must be assessed. Information must be based on evidence accepted in the literature by health care professionals. The minimum amount of contact time for an application-based activity is 60 minutes.

LEARNING OBJECTIVES

Learning objectives must be developed that define what the participants should be able to do at the completion of the CPE activity. Learning objectives must be:

- Specific and measurable.
- Developed to specifically address the identified educational need.
- Addressed by an active learning activity.
- Covered by a learning assessment.

The provider is responsible for identifying learning needs and will provide this information. From these needs the learning objectives should be developed. As a rule of thumb, you should develop 3 to 4 objectives per one hour CPE program. For more information about how to write learning objectives, see **Appendix 2**.

ACTIVE LEARNING

Active learning is a process in which the audience is actively engaged in the learning process rather than passively absorbing lecture information. All CPE activities accredited by the ACPE must now include one or more active learning activities for each learning objective in the CPE program.

Why include learning activities? If your audience is required to reflect upon and use the information you are providing, they will have greater understanding and retention of the information and be better able to apply what they learned.

Although this task may seem daunting, there are many quick, fun and easy ways to include an active learning component. Presenting a case study with audience participation, quick quizzes with audience response, trivia games, small group discussion, and role playing are just some of the ways to make the information “stick” that you have spent your valuable time preparing. Your audience will enjoy the presentation more, they will come away with more, and you will have fewer slides to prepare!

Examples of how to include active learning are included in **Appendix 3**.

ASSESSMENT OF LEARNING

A learning assessment determines if the participant has achieved the program's learning objectives. Assessment aids in retention and sometimes helps make relationships in the material clear. If you feel that a learning objective does not need to be tested, then it is probably not important enough to be an objective.

Learning assessment can be integrated into the presentation in many ways. Quizzes and exams represent one way to assess learning, but there are many others. Discussions, question-and-answer sessions, or explaining a concept to another participant are also ways to assess learning.

Assessments do not have to be turned in or formally graded, but feedback is required, and it must be provided to the participants in a timely and constructive manner. For example, if your assessment was an exam or quiz, ensure you provide the correct responses and the rationale. If assessment was based on a case study, then explain the correct evaluation.

More information about assessment is contained in **Appendix 4**. Examples of how to match a learning objective with active learning and assessment are contained in **Appendix 5**. The appendix also contains a sample of how a 1-hour presentation could incorporate these components.

INTEGRITY OF EDUCATIONAL CONTENT

A statement regarding conflicts of interest must be provided to the audience before each educational activity. This statement needs to be the second slide of the presentation after the title slide. Even if there is nothing to disclose, the slide must state this fact. Suggested sample slides have been provided in **Appendix 6**.

Learning activities which are promotional or appear to be intended for the purpose of endorsing either a specific commercial drug or other commercial product are not acceptable for ACPE accreditation.

ACPE accredited presentations must be fair and balanced, with discussion of favorable and unfavorable information on the product(s) and/or alternative treatments. The content must reflect evidence from literature accepted by healthcare professions.

The use of generic names is strongly recommended. If trade names are used, then trade names from all companies should be used, not just trade names from a single company.

Educational materials that are part of a CPE activity, such as slides, abstracts, and handouts, cannot contain any advertising, trade name or a product group message. Pictures of drug products or logos are not permitted.

SPEAKER/PROGRAM EVALUATIONS

The program will be evaluated by the participants based on:

- Applicability of the CPE activity to meet their educational needs.
- Achievement of each stated objective.
- Quality of speaker
- Usefulness of educational material.
- Effectiveness of teaching and learning methods, including active learning.
- Appropriateness of learning assessment activities.
- Perceptions of bias or commercialism.
- Other evaluation criteria may be included, depending on the type of presentation.

An individual summary report of the evaluations for the specific program will be provided to each speaker. A sample evaluation is included in **Appendix 7**.

POLISHING YOUR TALK

TIPS FOR EFFECTIVE PRESENTATIONS

We have compiled a list of pointers for speakers gleaned from participant comments over the years.

- ❑ Small print, or charts with many columns of numbers, may be unreadable to all but those in the first few rows of a lecture hall. We recommend using 28-point size font and up for text; 40-point size font for titles; 5-6 points per slide, with 5-6 words per point.
- ❑ Use plenty of contrast in the coloring of your slides to increase readability.
- ❑ Try not to include more than one slide per minute of presentation. Although it is always tempting to include more information, the audience will have a hard time remembering much of significance if too much information is presented too quickly, and with no time allowed for reflective thought or discussion.
- ❑ One alternative to the PowerPoint slide show handout is to provide an outline of your talk with room for notes. You can attach a list of references, Internet web addresses; provide cases; treatment algorithms; and/or guideline summaries for later reference by the participants.
- ❑ If you ask the audience a question, try to leave about 30 seconds for the participants to formulate an answer before giving the answer or calling on someone.
- ❑ Consider including a glossary of acronyms relevant to your talk. You don't want someone to wonder what the acronym DMARD stands for after talking about the drug class for 50 minutes.
- ❑ Please use primarily generic names for drugs. If you use a brand name (which is often done for clarity with the audience), it must appear next to the generic name, and all available brand names for the drug must be listed.
- ❑ Since our audience tends to be a generalist group, it helps to include a short review of the background pathophysiology related to your subject, so that everyone starts at the same level of understanding.

Practice your presentation. More than one experienced speaker has run over their allotted time because they did not practice their talk and had an unrealistic view of how long the presentation would take. Also remember to leave time for active learning activities, which do reduce time for the delivery of content. If a presentation runs over the allotted time, other speakers are delayed, and participants don't get much needed break time. Please be respectful of other faculty and the audience.

PRESENTATION CHECKLIST

A checklist has been included to help you submit documents on time and to ensure that the required elements of the presentation are included.

Important Dates

The following documents were submitted by _____	Done
▪ Program title and learning objectives	
▪ Speaker Information Form	
▪ Speaker Agreement Form	
▪ Disclosure Form	
▪ W-9 Form (If applicable)	
The following documents were submitted by _____	
▪ PowerPoint slides	
▪ Handout (if different than slides)	

Integrity of Content

A Statement of Disclosure (even if I have no relevant financial relationships to disclose) is the second slide of my presentation and precedes the delivery of educational content.	
Any real or potential conflicts due to financial relationships with commercial interest(s) have been resolved prior to the presentation.	
The content of the presentation is balanced and does not promote a specific product or commercial interest.	
No corporate logos or graphics are in my slides, handouts or other material provided for participants	
Generic names are used throughout the presentation. If trade names are used, they accompany the respective generic names and include all available trade names of the product.	
The content of the talk is evidence-based	

Learning Objectives

The learning objectives are SMART (specific, measurable, attainable, relevant, time-bound)	
The learning objectives are on the slide after the Statement of Disclosure and prior to the beginning of the educational content.	

Active Learning Activities

I have one or more learning activities associated with each learning objective.

Assessment of Learning

I have planned an assessment for each of my learning objectives and associated activities

APPENDICES

APPENDIX 1: FORMS

Educational Design and Disclosure Form. This form will be completed online with the following link https://ucdenverdata.formstack.com/forms/educational_design_form Completion of this form provides the CPE Office with the necessary information to approve and accredit the presentation. This form also includes a Disclosure of Financial or Corporate Relationships acknowledgement. If a speaker has a financial interest or other relationship with a corporate organization that may have a direct interest in the subject matter of the educational activity, a conflict of interest may be considered to exist. Such an affiliation does not disqualify a speaker from providing a presentation, but any potential conflict must be resolved before the delivery of the educational activity. To comply with this policy, each speaker is required to sign a Disclosure of Financial or Corporate Relationships Form.

Speaker Agreement: By signing this form, the speaker is agreeing to terms such as meeting the ACPE and University of Colorado educational standards for continuing pharmacy education, the amount of the honoraria, permission to record the presentation, and other specific terms related to the presentation.

W-9 Form: If a speaker is not a University of Colorado employee, a W-9 form may need to be completed to provide the University with a taxpayer identification number if the speaker is receiving an honorarium for their presentation.

APPENDIX 2: LEARNING OBJECTIVES

Learning objectives are statements that describe what the participants can expect to know or be able to do after completion of the CPE activity.

- When considering your learning objectives, first think about the following: What do you really want the audience to take away from your presentation? What would you like them to be able to do differently than they do now? You need to make sure you are addressing a specific need identified in the “Needs Assessment”. (Identified needs will be provided by the program coordinator.)
- Write down a few thoughts and then test the applicability of these for learning objectives by answering the following: Can I teach these and assess these in the allotted time?
- Rewrite your learning objective using the three-part format: Starting with “Learners will (or will be able to) ...”
 - a. a measurable verb (that identifies what is to be demonstrated – See Blooms Taxonomy below)
 - b. a learning object (that specifies what learning will be demonstrated in the performance)
 - c. by a criterion (that sets the standard for acceptable performance)

EXAMPLE: EACH PARTICIPANT WILL BE ABLE TO DEMONSTRATE THE CORRECT ADMINISTRATION TECHNIQUE FOR TWO TYPES OF ASTHMA INHALERS BY THE END OF THE PROGRAM.

- Finalize your learning objectives by evaluating if they are SMART (specific, measurable, attainable, relevant, and time-bound). As an example, consider the learning objective above, is this learning objective SMART?

Specific? Yes, the statement tells us exactly what is expected.

Measurable? Yes, demonstration of correct technique can be observed.

Attainable? Yes, it is reasonable that all participants should be able to demonstrate the correct technique by the end of the program with correct training.

Relevant? Yes, the correct use of an inhaler is relevant to the needs of most pharmacists. Time-bound? Yes, participants should be able to attain the goal by the end of the presentation.

EXAMPLES OF MEASURABLE VERBS AS LISTED IN BLOOM'S TAXONOMY (ADAPTED FROM BLOOM, 1956)

Bloom's taxonomy of learning outcomes can be used to help write learning objectives that reflect specific learning outcomes. The table progresses from the simplest level of knowledge (recall of facts) to higher levels requiring the application and integration of information.

Learning Outcomes	Evidence of Outcomes	Terms for Outcomes
Knowledge (recall data or information)	Knows common terms, specific facts, methods or procedures, basic concepts, or principles	Define, describe, identify, label, list, locate, match, memorize, name, outline, recall, reproduce, select, state
Comprehension (state a problem in one's own words)	Understands facts, principles, interprets verbal material, graphs, tables, estimates outcomes implied in data	Convert, defend, discuss, distinguish, estimate, explain, extend, generalize, give example, identify, infer, outline, paraphrase, predict, rewrite, summarize
Application (use a concept in a new situation)	Applies concepts, principles to new situations, solves mathematical problems, constructs graphs, charts, demonstrates method or procedure	Change, compute, demonstrate, discover, make, manipulate, modify, operate, predict, prepare, produce, relate, show, solve, translate, use
Analysis (separates material into component parts)	Recognizes unstated assumptions, fallacies in logic and reason, distinguishes between facts and inferences, evaluates relevance of data, analyzes an organizational structure	Analyze, break down, compare, contrast, diagram, differentiate, discriminate, distinguish, identify, illustrate, infer, outline, point out, relate, select, separate, subdivide
Synthesis (uses parts to create new meaning or structure)	Writes well organized theme, proposes a research plan, integrates learning from different areas, formulates new scheme for classifying. objects	Categorize, combine, compile, compose, create, devise, design, explain, generate, modify, plan, organize, rearrange, reconstruct, relate, reorganize, revise, rewrite, summarize, tell, write
Evaluation (makes judgments of the value of ideas or materials)	Judges logical consistency of a written passage, adequacy with which conclusions are supported by data	Appraise, compare, conclude, contrast, criticize, describe, discriminate, explain, justify, interpret, relate, summarize, support

*Please note that verbs like know, learn, comprehend, and understand are not listed; these verbs are not easily measurable or observable. As an example, consider the following two learning objectives:

- Know the usual dose of acetaminophen for the treatment of osteoarthritis.
- State the usual dose of acetaminophen for the treatment of osteoarthritis.

Asking the learner if he/she knows the usual dose requires only a “yes” or “no” answer. Having the learner state the usual dose allows us to assess whether the learner has attained the objective.

MORE EXAMPLES OF LEARNING OBJECTIVES:

Knowledge-based:

At the conclusion of this presentation, the learners will be able to...

- List six antidepressant medications used for the treatment of hot flashes.
- Identify five factors associated with adherence to second-generation antipsychotic used for schizophrenia.
- State the three most common organisms that cause uncomplicated bladder infections.
- Explain the relationship between learning objectives, active learning, and assessment.

Application-based:

- Demonstrate the correct technique for two types of asthma inhalers used in current practice.
- Recommend an appropriate dyslipidemia treatment plan for reducing cardiovascular risk in a primary prevention patient.
- Implement a regimen to transition a patient with type 2 diabetes to insulin therapy. Recommend changes to a patient’s medication regimen based on given lab test results.

APPENDIX 3: ACTIVE LEARNING

Each learning objective that you identify must be accompanied by an active learning exercise.

It's a good idea to introduce active learning early in the presentation to "warm-up" your audience to the expectation of participation. A pre-test or active polling (described below) is a simple, non-threatening way to establish an interactive atmosphere. Including an activity at least every 10 minutes helps to keep the audience engaged; this could be as simple as inserting a slide with a question as a review of the material presented. There are many other ways to include active learning in your program. A few are described below. Be creative.

The table below provides suggestions for activities based on the type of program you are providing and the intended learning outcome.

Type of Program	Learning Outcomes	Examples of Active Learning Activities
Knowledge- based	Knowledge	visuals, examples, analogies, illustrations, trivia, games ⁺ , fill-in-the-blank worksheets, writing exercises
	Comprehension	pre/post testing, matching, discussion, association, games, one minute paper*, muddiest point, memory matrix
Application- based	Application	role play, simulations, practice exercises, think-pair- share [#] , case studies, create a flowchart
	Analysis	problem case studies, discussion, debates, standardized patient
*Trivia Game: games such as Jeopardy, Millionaire, Wheel of Fortune		
*One minute paper/thinking exercise: Give a question and have the audience write everything they can think of about the topic in one minute and then lead a discussion of the results.		
[#] Think pair-share: work in pairs, think about the subject, then share with partner		
Adapted from Phillips, L. The Continuing Education Guide: The CEU and other Professional Development Criteria. 1994.		

Polling is one of the easiest methods of active learning and is especially good at the beginning of the session. Ask a question to the audience and discuss the response.

Committed Polling is an application of the above. Ask everyone in the room to stand-up, then make a statement about your topic such as "If you agree that ... you can sit down." By observing who is left standing, you can get an idea about how many in your audience see things differently than you do.

Multiple Choice Questions: Prepare a slide with an MCQ. Give everyone a set of colored cards and have the audience respond with the color card associated with each answer (red for a, blue for b, orange for c, etc.). Even better if you have an Automated Response System, but it is good to be prepared for equipment failures. If there is more than one right answer, tell the audience, but explain why one answer is better than another.

Group Discussions: discuss a topic or case in small groups with one person as a speaker who will present the groupsdiscussion/ideas. If the group is large or the information is becoming redundant, move things along by having groups respond only if they have something new to contribute.

APPENDIX 4: ASSESSMENT OF LEARNING

A learning assessment determines if the learner has achieved the program’s learning objectives.

Assessment of some objectives may be as simple as observing participation in the associated learning activities. For example, if you have role playing scenarios, as you walk around the room and observe the activity you are assessing whether the audience is utilizing the information provided in the presentation. Remember that feedback is an important component of assessment, so after the role-playing activity, have a discussion with the group.

Assessment can also be more formal, such as a post presentation examination. It is a good idea for some representative of the audience field to test your questions; this should not be an expert who already knows the material. The complexity of the objective should determine the number of questions. It is not necessary to have the same number of questions for each objective. Test length is determined by the complexity of your material; however, too few questions may lead to an unfair assessment if one or two questions are answered incorrectly.

The table below lists some types of learning assessment.

Activity Type	Suggested Learning Assessments
Knowledge-Based Presentations	Test recall of facts: <ul style="list-style-type: none">• Questions on session content (e.g., multiple choice, true/false)• Pre- and post-tests• Other use of questions, tests, quizzes• Games that promote recall of facts and information
Application-Based Presentations	Test interpretation of: <ul style="list-style-type: none">• Case studies• Interactive scenarios• Exercises that allow participants to apply new skills

APPENDIX 5: LINKING OBJECTIVES, ACTIVE LEARNING AND LEARNING ASSESSMENT

ACPE requires that speakers and program planners “close the loop” that starts with the “Needs Assessment”, progresses to development of learning objectives, uses active learning techniques to improve retention, and finishes with assessment of participant learning in relation to the learning objective.

The table below illustrates some examples of how to “close the loop”.

Knowledge-based Learning Outcome	Knowledge-based Active Learning Activity	Knowledge-based Assessment Method
Identify five factors associated with adherence to second- generation antipsychotic used for schizophrenia.	After addressing the objective, give participants 1 minute to write an answer to the question “What are five factors associated with adherence to second- generation antipsychotic used for schizophrenia?”	Observe participation and lead a brief discussion of their responses
Application-based Learning Outcome	Application-based Active Learning Activity	Application-based a Assessment Method
Demonstrate the proper use and counseling points of asthma inhaler devices currently used in practice	Have a pharmacist-patient role play to utilize the steps and skills involved with each person having the opportunity to do each role	Faculty circulates during the activity and leads a discussion of observations at the activity conclusion

EXAMPLE STRUCTURE OF A ONE HOUR EDUCATIONAL PROGRAM

10 minutes	Lecture
5 minutes	Activity (multiple choice, T/F questions, matching, fill-in-the blank activity) Assessment (discussion with correct responses)
10 minutes	Lecture/Demonstration
10 minutes	Activity (role playing, small group discussion, simulation, problems, case studies) Assessment (discussion with correct responses)
10 minutes	Lecture
5 minutes	Activity (multiple choice, T/F questions, matching, fill-in-the blank activity) Assessment (discussion with correct responses)
10 minutes	Summary/Conclusions/Feedback/Program Evaluation

You may wish to use the table below to link the learning objectives, active learning activity and Assessment method as you plan your continuing pharmacy education presentation.

Learning Outcome	Active Learning Activity	Assessment Method
1.		
2.		
3.		
4.		
5.		

Example 1: Sample slide with no financial relationships to disclose.

First Name Last Name

Statement of Disclosure

I have no relevant financial relationships with commercial interests pertaining to the content presented in this program.

Example 2: Sample slide with financial relationships to disclose

First Name Last Name

Statement of Disclosure

I have the following financial relationships:

<u>Company Name</u>	<u>Affiliation</u>
Company A	– research support
	– consultant
Company C	– speaker's bureau
	– other relationship

APPENDIX 7: SAMPLE EVALUATION

Once the presentation has been completed, the presenter will provide attendees with a hyperlink or QR code to direct them to the designated platform to claim credit. CE credit and evaluations for the presentation are completed in [Lecture Panda](#). Speakers are welcome to provide the CPE Office with additional questions they would like to include in their presentation evaluation. However, all presentations will include the following ACPE CPE evaluation questions. The speaker will be provided with the anonymous survey feedback two weeks after their presentation.

1. The presentation met my educational needs.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

2. The speaker used effective teaching methods (including active learning).

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

3. The instructional materials (i.e., slides, handouts, online resources) were useful.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

4. There was adequate time to confirm my understanding through Q & A or other means.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

5. The content was presented in a balanced and equitable manner.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

6. The presentation met the stated learning objectives:

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

7. The presentation style helped me understand the topic.

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

8. Comments for the speakers:

9. What else would you like to learn about this topic?