

ACCP WHITE PAPER

Guidelines for Resident Teaching Experiences

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Postgraduate year one (PGY1) and postgraduate year two (PGY2) residencies serve to develop pharmacists into skillful clinicians who provide advanced patient-centered care in various general and specialized areas of pharmacy practice. Pharmacy residencies are a minimum requirement for many clinical pharmacy positions, as well as for positions in academia. The role of clinical pharmacists typically includes teaching, regardless of whether they pursue an academic appointment. Common teaching duties of pharmacist-clinicians include giving continuing education or other invited presentations, providing education to colleagues regarding clinical initiatives, precepting pharmacy students (early and advanced experiences) and residents, and educating other health care professionals. Although ASHP provides accreditation standards for PGY1 and PGY2 residencies, the standards pertaining to teaching or education training are vague. Through the years, teaching certificate programs that develop residents' teaching skills and better prepare residents for a diverse pharmacy job market have increased in popularity; moreover, teaching certificate programs serve as an attractive recruitment tool. However, the consistency of requirements for teaching certificate programs is lacking, and standardization is needed. The Task Force on Residencies developed two sets of guidelines to define teaching experiences within residencies. The first guideline defines the minimum standards for teaching experiences in any residency-training program. The second guideline is for programs offering a teaching certificate program to provide standardization, ensuring similar outcomes and quality on program completion. One of the main differences between the guidelines is the recommendation that residency programs offering a teaching certificate program be affiliated with an academic institution to provide the pedagogy and variety of teaching experiences for the resident. Residency program directors should consider adopting these guidelines to offer consistent teaching experiences. In addition, residents should inquire about the elements of teaching in a program as an aid to selecting the training best suited to their needs.

KEY WORDS pharmacy residency, resident teaching, academia, education, resident certification, teaching certificate, postgraduate training.

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The American College of Clinical Pharmacy (ACCP) charged the 2012 Task Force on Residencies to develop a set of guidelines for resident teaching experiences. Pharmacy graduates have many options after completing their pharmacy education, and each year, more individuals choose to complete a postgraduate residency. In 2012, there was a 13% increase in graduates seeking a first-year residency, and more than 3700 pharmacy students participated in the American Society of Health-System Pharmacists (ASHP) Match process.¹ ASHP provides

residency accreditation standards for postgraduate year one (PGY1) and postgraduate year two (PGY2) residencies to set a minimum level of competency for residency programs.²⁻⁴ Outcomes and goals for a PGY1 program focus on producing a clinician skilled in the medication use process, providing patient-centered medication therapy management, leadership and management, project management, medical and practice-related education and training, and medical informatics.² After completing a PGY1 residency, a clinician may choose to complete a PGY2 residency to further hone his or her skills in a specialty area of pharmacy.⁴ The 1 or 2 years of postgraduate residency training develops clinicians into highly competent providers of direct patient care who are highly skilled in improving the medication use process, but not necessarily skilled in teaching.⁵ Although the current ASHP residency accreditation standards for PGY1 and PGY2 residencies require some teaching, the components are vague and achieved in various ways among residency programs.^{2-4, 6-8} Elective outcomes are provided within the accreditation standards for PGY2 residencies for experiences within an academic setting, which programs may selectively offer.⁴ Minimum requirements for most academic faculty positions in pharmacy practice are a Pharm.D. degree and completion of at least a PGY1 pharmacy practice residency, with some universities preferring a PGY2 specialty residency.⁹ Therefore, after completing residency training, a resident should be prepared to enter various pharmacy settings, including academia, as well as specialized areas of practice, research and development, and industry.¹⁰ With nonacademic positions, clinical pharmacists will teach as part of their job responsibilities, including providing presentations and in-services to other health care professionals and peers; precepting pharmacy students and residents; and educating patients.^{5, 10, 11}

In a 2006 Position Statement, ACCP recommended that residents have opportunities to learn about teaching methods as part of their overall training.⁵ An ACCP commentary in 2011 discussed the benefits of, and strategies for, incorporating teaching experiences within residency programs, as well as the various limitations and challenges of doing so.¹² Although including teaching opportunities for residents can be beneficial, various reports have recognized some inherent problems.^{10, 11, 13} Unless properly planned, teaching opportunities can

lack guidance on how to teach, how to give instruction on preparing for the experience, how to ensure focus and standardization, and how to provide evaluation and feedback on the teaching experience. Moreover, improperly planned teaching opportunities provide little direction on how to improve residents' teaching skills.^{10, 11, 13, 14} In 2001, Romanelli and colleagues described a program developed at the University of Kentucky to prepare residents to teach, which incorporated seminars on "how to teach," how to develop a teaching philosophy and portfolio, and teaching experiences in varied settings, which included formalized feedback and evaluation of the process.¹³ Residency programs have shown that these more structured programs, or teaching certificate programs, result in increased resident confidence and preparation for teaching. In addition, residents believed the experience helped them secure employment and reported they would recommend the program to other residents.^{10, 11, 15}

Incorporating teaching experiences and certificate programs has developed into a useful recruitment tool for residency programs; in fact, many programs have implemented and now offer teaching experiences and/or formalized teaching or certificate programs.^{10, 11, 15} The exact number of residency programs offering teaching experiences and/or a formalized program for teaching is not known. A survey conducted in 2007 to accredited residency programs found that 27% reported having a teaching certificate program, and a report of residency programs at academic institutions found that 53.5% offered a teaching certificate program.^{6, 7} Both reports noted that the composition and requirements of the teaching programs varied greatly with respect to educational seminars, teaching experiences, and other opportunities.^{6, 7} There is a lack of national standards or an accreditation process for teaching experiences or teaching certificate programs within residency programs.^{6, 7, 12, 16, 17}

The ACCP Task Force on Residencies examined the current literature and committee member experience to develop the following sets of guidelines for teaching experiences within residency programs. The first part of the guidelines outlines minimum components for basic teaching experiences in any residency program. The second part of the guidelines outlines minimum components for a teaching certificate program. One of the main distinguishing factors between the two sets of guidelines is the incorporation of

seminars or small group discussions to provide the resident with baseline knowledge of “how to teach.” The literature contains various notations that show the benefit of incorporating teaching seminars early in the residency year to provide the foundation and guidance for teaching experiences.^{10, 11, 13, 15, 18, 19} However, there are concerns that not all residency programs have access to qualified individuals to provide teaching seminars or that the program may not have support for programming because of the lack of a nearby or affiliated academic institution.^{10, 18} In 2002, an AACP (American Association of Colleges of Pharmacy) task force recommended that schools or colleges of pharmacy partner with residency programs to help residents develop teaching skills and to provide more intensive training in didactic and experiential teaching and assessment of learning.⁹ The consensus of the ACCP Task Force on Residencies was that a residency program offering a teaching certificate program should provide pedagogy seminars, which may be best accomplished by affiliating with a school/college of pharmacy or an academic institution for the faculty expertise and varied teaching opportunities. In applicable sections of the guidelines, we note areas of difference regarding minimum requirements for a PGY2 versus a PGY1 resident. We realize that some PGY2 residents may have completed teaching experiences and/or a certificate program in their PGY1 program; therefore, additional experiences should build on existing knowledge and training. In addition, PGY2 residents often pursue an academic career and are more likely to practice in a specialized area of pharmacy, where they may be required to do additional teaching, give presentations, and provide experiential education, compared with some PGY1-trained pharmacists.

Basic Teaching Experience Guidelines

Guideline 1

Residency programs should develop specific goals and outcomes for teaching experiences. At a minimum, the goals for residents completing a basic teaching experience should be to develop a basic knowledge of teaching and to increase their confidence and experience through a variety of teaching opportunities.

The goals and objectives for teaching experiences will differ depending on the setting and resources of the residency site. Specific

outcomes from accreditation standards established by ASHP for the residency program should be incorporated into the teaching experiences. At a minimum, goals and objectives for residents completing a basic teaching experience should include the following four main components: (i) development of a teaching self-reflection statement and portfolio; (ii) interaction with a teaching mentor; (iii) completion of pedagogical readings and discussions; and (iv) involvement in various teaching experiences. In addition, the goals and objectives should be tailored to the resident’s training level (PGY1 vs. PGY2).

Minimum goals include:

- Development of a narrative description of the resident’s concept of teaching that guides the resident’s teaching efforts and is included in a teaching portfolio that captures all teaching activities.
- Guidance from a teaching mentor, which meets or exceeds qualifications described under Guideline 1.2, to coach and provide feedback to the resident in the preparation, delivery, and assessment of the teaching experiences.
- Achievement of baseline pedagogical knowledge through readings and discussions to prepare the resident for teaching experiences.
- Exposure to and delivery of several different teaching experiences to various audiences, including small group facilitation, didactic presentations, experiential education, and case-based teaching.

At the end of a basic teaching experience, the resident should have the fundamental knowledge required to effectively educate others in a practice environment and be familiar with the many different roles of an educator, including lecturer, facilitator, and preceptor.

Guideline 1.1

A self-reflective statement of the resident’s values and goals of educating others will be developed and periodically revised as part of a teaching portfolio that captures the resident’s teaching experiences and scholarship of teaching.

A resident completing a basic teaching experience should develop a reflective, narrative statement of his or her concept of teaching that reflects his or her personal values and goals for educating others.^{20–22} This exercise helps the

resident use critical thinking skills to reflect on his or her teaching methods and activities, as well as objectively consider his or her past experiences in teaching to allow him or her to learn from them for future teaching opportunities.

The format of the document should be concise, about 1–2 pages in length, narrative in first-person voice, and written with the intended audience in mind. The paper should be reflective and personal.^{20–23} The resident should reflect on the qualities of previous educational sessions and what was effective and ineffective about the teaching experiences, as well as what his or her goals are for a teaching session and for students and how he or she would achieve those goals.^{20, 21, 24}

The teaching self-reflection document should be completed within 3 months of the start of the residency and reevaluated and revised quarterly—or at least at the midpoint of the residency—and after the resident's last teaching experience. Reviewing and revising the document will help the resident realize his or her growth in teaching and reaffirm his or her goals and objectives for being an educator. The self-reflection statement should be reviewed by the teaching mentor after its creation and after each revision, with a re-evaluation at the end of the residency.

Throughout the resident's basic teaching experiences, he or she should compile items related to his or her teaching in a teaching portfolio, which will then be submitted for review by the teaching mentor at the midpoint of the residency to assess progress and at the conclusion of the teaching experiences for completeness. A teaching portfolio is the documentation of one's activities and experiences in teaching.²¹ More information regarding the teaching portfolio may be found in Guideline 1.5.

Guideline 1.2

Residents should be assigned a teaching mentor to offer guidance in and evaluation of all teaching experiences.

One of the goals of the basic teaching experiences is to provide a mentor who will guide the resident in preparing for and evaluating teaching experiences. Periodic mentor-resident interactions should be planned for guidance and evaluation of teaching activities and experiences.

Ideally, the mentor for basic teaching experiences should be a faculty member of an affiliated school/college of pharmacy who has been in this

role for a minimum of 1 year. However, if this is not possible, the mentor should be the residency program director or preceptor with experience in many different teaching experiences, including formal presentations and experiential education. A PGY2 resident who satisfactorily completed a teaching certificate program during his or her PGY1 residency may also serve as an alternative teaching mentor for a PGY1 resident. It may be necessary to have a different mentor for teaching activities and experiential education. The mentor should review and be familiar with teaching methods and approaches to learning so that he or she is able to discuss and guide the resident on these topics.¹⁷ The appendices contain various resources beneficial for the mentor and the resident.

Throughout the basic teaching experiences and various teaching activities, the mentor should assume the following roles:

- Provide guidance in developing the resident's teaching self-reflection statement (or teaching portfolio for teaching certificate program participants), and periodically review the teaching portfolio for meeting the program goals.
- Provide guidance for teaching experiences, including meeting with the resident before resident teaching experiences to provide feedback in preparation for activities, attending teaching experiences, and meeting with the resident after experiences to provide formal verbal and/or written evaluation.
- Review the resident's teaching evaluations from all teaching experiences to provide an assessment of his or her teaching skills and longitudinal performance.
- Provide direction to the resident for co-precepting (PGY1 resident) or precepting (PGY2 resident) experiences.
- Provide verbal and written evaluation of the resident's teaching performances, capabilities, and growth quarterly, or at least 2 times, through the residency year.

Guideline 1.3

Reading assignments and topic discussions to provide a foundation in teaching and learning should be provided before teaching experiences.

A fundamental knowledge of teaching and learning strategies can help a resident completing the basic teaching experiences be more successful when preparing for his or her teaching

experiences. Although a formal lecture series of teaching and learning topics is ideal, it may be difficult to coordinate without an affiliation with an academic institution.¹⁰ Therefore, instruction and preparation of the resident are encouraged through the assignment of pedagogical readings and topic discussions with the teaching mentor. The resident should be assessed for completing all reading assignments and participating in scheduled topic discussions before beginning teaching experiences.

Resources for various teaching and learning topics are available in the appendices. Suggested topics for review and discussion include^{9-11, 13, 18}:

- Writing learning objectives, goals, and an assessment strategy.
- Formulating effective teaching methods and strategies.
- Developing various teaching and learning styles.
- Developing a professional presentation (e.g., lecture handouts, audiovisuals, outline/script, technology, delivery style).
- Tailoring a presentation to the audience (students, peers, other health professionals).
- Precepting pharmacy students.
- Evaluating teaching experiences (student, peer, and self-evaluations).
- Evaluating student performance and providing feedback.
- Developing and using a patient case for teaching.

Guideline 1.4

Residents should participate in a variety of adequate teaching experiences to ensure their comfort and confidence in preparing, delivering, and assessing teaching activities in various settings.

A resident completing a basic teaching experience should participate in an assortment of teaching experiences to develop skills in preparation and educational delivery using diverse methods, depending on the setting. Recommended teaching experiences include delivering a formal lecture, precepting or co-precepting a pharmacy student experiential rotation, facilitating a small group discussion, and developing a patient case used for teaching.

Formal Lecture

Residents should deliver at least one formal lecture of at least 30 minutes. The potential

audience may vary according to the teaching opportunities available and may include health care professionals, pharmacy students, students in a health-related field, or patients/members of the community. To prepare for the lecture, residents should develop learning objectives, prepare a lesson plan or outline for the lecture, determine the required/recommended readings, select the most appropriate delivery method for the intended audience (e.g., slides/handout), and develop an assessment strategy to evaluate the learning objectives.

The teaching mentor should review the resident's presentation before delivery, providing verbal and written guidance as well as feedback regarding objectives, presentation content, appropriateness of literature resources used, delivery method, appropriateness of audiovisual materials (if applicable), and audience assessment questions. A second evaluator who is knowledgeable of the content (content expert) is recommended to observe and provide feedback on the presentation. The resident's performance should be assessed by a written self-evaluation of the strengths and weaknesses of the experience, the audience's evaluation of the lecture, and the teaching mentor's and content expert's evaluations. If possible, the lecture should be recorded for review by the resident. Preferably, the teaching mentor will meet with the resident after lecture delivery (within 1 week) to discuss the resident's overall performance.¹⁷

Co-precepting and/or Precepting an IPPE or APPE Student

Residents should have the opportunity to gain experience co-precepting or precepting introductory pharmacy practice experience (IPPE) or advanced pharmacy practice experience (APPE) students. PGY1 programs are encouraged to offer the opportunity for co-precepting an IPPE or APPE for PGY1 residents, preferably during the second half of the residency year. The PGY1 resident should work closely with his or her experiential mentor to gain an appreciation of and experience in the precepting role. Because most PGY2 residents will have co-precepted in their PGY1 residency, PGY2 programs should encourage a PGY2 resident to serve as the primary preceptor for at least one IPPE or APPE student and have the resident precept or co-precept for at least two IPPE or APPE blocks.^{8, 19} It may not be possible for the resident to officially be

listed as the preceptor of record because assignments are typically established by colleges or schools of pharmacy before the residency year begins.

The following are PGY1 resident co-precepting experience recommendations:

- Work conjointly with the preceptor/experiential mentor in conducting all activities and assessments.
- Develop rotation goals, expectations, and a rotation calendar with the preceptor/experiential mentor before the co-precepting experience begins.
- Assist with facilitating learning activities and topic discussions during the rotation.
- Evaluate student assignments (e.g., journal clubs, presentations, SOAP notes) under the supervision of the preceptor/experiential mentor.
- Assess student performance and provide feedback to the student in conjunction with the preceptor/experiential mentor.
- Complete and conduct evaluations of student performance with the preceptor/experiential mentor.

The following are PGY2 resident co-precepting or precepting experience recommendations:

- Independently conduct all activities and assessments with assistance from the preceptor/experiential mentor as needed.
- Develop rotation goals, expectations, and a rotation calendar before the start of the co-precepting or precepting experience.
- Conduct the rotation orientation, learning activities, and topic discussions for the student.
- Evaluate student assignments (e.g., journal clubs, presentations, SOAP notes).
- Assess student performance and provide feedback to the student.
- Complete and conduct evaluations of student performance.

The experiential mentor should observe the PGY1 or PGY2 resident's performance and interactions with the student throughout the rotation and provide oral and written feedback on precepting skills throughout and at the end of the rotation. The resident should also perform a written self-evaluation of the strengths and weaknesses of the experience. A student evaluation of the resident's performance at the conclusion of the IPPE or APPE should be conducted by the experiential mentor and reviewed, together with the other evaluations, with the res-

ident, preferably within 1 week after the IPPE or APPE.

Small Group Discussion

In addition to the aforementioned teaching experiences, residents should gain experience facilitating a small group discussion, defined as at least five individuals present. The potential audience may vary according to the opportunities available and may include students, pharmacists, pharmacy technicians, other health care professionals, or patients/members of the community. To prepare for the small group discussion, a resident should develop learning objectives, identify and distribute required/recommended readings, prepare a lesson plan or outline/handout for the discussion, develop questions to encourage discussion, and determine a method to assess the learning objectives.

The teaching mentor should review the resident's discussion lesson plan/outline before the small group facilitation to offer verbal and written guidance as well as feedback on the objectives, lesson plan/outline content, questions for discussion, appropriateness of literature resources, and assessment methods. Assessment of the resident's performance should include a written self-evaluation of the strengths and weaknesses of the discussion, the audience's evaluation of the discussion, and the teaching mentor's evaluation. Preferably, the teaching mentor should meet with the resident after the small group discussion within 1 week to discuss the resident's overall performance.

Patient Case Development

Patient cases can be useful for educating students and health care professionals by illustrating teaching points and assisting with the application of knowledge in both the didactic and experiential teaching settings. Residents should develop at least one patient case for teaching. The resident should identify a patient case suitable for teaching an audience about managing a disease. The resident should build a complex, progressive disclosure-type patient case for problem-based learning that includes teaching points for the target audience to gain from. The teaching mentor should conduct an assessment of the case, and written and verbal

feedback of the resident's overall performance should be provided.

Guideline 1.5

Clear criteria for the satisfactory performance and achievement of basic teaching experiences should be developed. The resident's performance should be assessed through the mentor's evaluation of both the teaching portfolio and the resident's teaching experiences (including teaching style, methods, and effectiveness).

Satisfactory performance and achievement of the goals and objectives for the basic teaching experiences should be assessed at the end of teaching experiences. The teaching portfolio should be the documentation system for the resident's experiences throughout the residency year. The portfolio can be a stand-alone product or a dedicated section of the residency portfolio. The teaching portfolio should include, at a minimum:

- Table of contents.
- Self-reflection statement on teaching (or teaching philosophy for teaching certificate programs).
- Teaching artifacts from experiences (e.g., handouts, copies of slides, objectives, assessment methods).
- Evaluations of teaching experiences (e.g., preceptor, peer, student, and self-evaluations).
- Supplemental instruction/courses completed in instructional design and methods.
- Other items related to teaching (e.g., educational committee service, scholarship of teaching, awards or other recognition, thank you notes, student or resident advisees).

The teaching portfolio should begin with a teaching self-reflection that is drafted at the start of the residency and updated throughout and at the end of the teaching experiences. All teaching experiences should be described in the portfolio, and when appropriate, learning objectives, handouts, slides, and assessment questions should be included. Mentor, student, peer, and self-evaluations of each teaching experience should be filed as well.^{10, 12, 21}

Teaching Certificate Guidelines

Guideline 2

Residency programs offering a formalized teaching or certificate program should be affili-

ated with a school/college of pharmacy or academic institution and develop specific goals and outcomes for the teaching certificate program. At a minimum, the goals for residents completing a teaching certificate program should be to obtain the fundamental knowledge required to effectively educate others and to gain confidence in their abilities to provide education and function in an academic environment.

The goals and objectives of a teaching certificate program will differ depending on the setting and resources of the residency site. An affiliation of the residency program with a school/college of pharmacy or academic institution is essential to provide instruction, experiences, and mentoring at the level expected from a teaching certificate program. The appendices contain references to assist in and strategies for developing this affiliation. Specific outcomes from ASHP-established accreditation standards for the residency program should be incorporated into the certificate program. Goals and objectives for the teaching certificate program should encompass at least four main components: (i) development or modification of a teaching philosophy/portfolio; (ii) interaction with a teaching mentor; (iii) active participation in pedagogy seminars; and (iv) involvement in varied teaching experiences. In addition, the goals and objectives should be tailored according to the resident's training level (PGY1 vs. PGY2).

Minimum goals include:

- Creation or modification of a teaching philosophy that guides the resident's teaching efforts and is included in a teaching portfolio that captures all teaching activities.
- Guidance from a teaching mentor, which meets or exceeds qualifications described under Guideline 2.2, to facilitate resident learning on teaching methods and topics and to coach and provide feedback to the resident in the preparation, delivery, and assessment of the teaching experiences. For a PGY2 resident, a teaching mentor should challenge the resident to further expand his or her knowledge of teaching and learning.
- Active participation in pedagogy seminars that provide baseline knowledge to prepare the resident for teaching experiences and discuss academia and the roles and responsibilities of faculty and preceptors.
- Exposure to and delivery of several different teaching experiences, including small group

facilitation, didactic presentations, experiential education, and case-based teaching.

At the end of a teaching certificate program, a resident should possess an understanding of the skills necessary to succeed in an academic setting, specifically as a faculty member in a school/college of pharmacy, and be comfortable and skillful in fulfilling a variety of roles as an educator, including lecturer, facilitator, and preceptor.

Guideline 2.1

A teaching philosophy reflective of the resident's values and goals of educating others will be developed and periodically revised as part of a teaching portfolio that captures the resident's teaching experiences and scholarship of teaching.

A resident completing a teaching certificate program should develop a teaching philosophy. A teaching philosophy serves to present a summary of the resident's values and purpose of teaching and learning to the target audience (goals and objectives) and encourages self-reflection to enhance the resident's ability to contribute positively to the learning community. The teaching philosophy will build on a teaching self-reflection as described in Guideline 1.1. If a PGY2 resident completed a teaching self-reflection in a PGY1 residency, it should be reviewed when developing his or her teaching philosophy.

The format and timeline for completing and evaluating the teaching philosophy by the teaching mentor can be found in Guideline 1.1. The style of the philosophy can be a series of personal anecdotes and examples written in first person, or it can be more formal, with ideas and opinions that form the basis of the resident's understanding of how students learn.

A teaching philosophy statement should have four main categories^{20, 25}:

- Goals and values as a teacher and for the students.
- A description of approaches and methods for teaching activities.
- Assumptions about teaching and learning (justify the style of your teaching).
- Assessment measures to determine teaching effectiveness for self and students.

The following questions can serve as a guide in the draft process^{20, 22, 25}:

- Why do I teach?
- What do good teaching and effective learning mean to me?
- Do I have a particular style for teaching, and how would I describe it?
- What are various teaching styles, and which do I find effective or prefer?
- What unique qualities do I bring as an educator?
- What do I expect from my students, and how do I foster critical thinking?
- What can my students expect from me?
- How do I know my teaching methods are effective? How will learning be assessed?
- What strategies make teaching and learning come to life?
- What can I do to continue my own growth and development in teaching?

As part of the teaching certificate program and in determining satisfactory completion of the program and teaching goals for the residency, the resident should compile items related to his or her teaching in a teaching portfolio and submit the portfolio for review by the teaching mentor at the midpoint and end of the residency. More information regarding the teaching portfolio can be found in Guidelines 1.5 and 2.5.

Guideline 2.2

Participants in teaching certificate programs should be assigned a teaching mentor to offer guidance for and evaluation of all teaching experiences.

A resident completing a teaching certificate program should have a specified teaching mentor to facilitate resident learning on many different teaching methods and topics; to guide the resident in preparing, presenting, and evaluating teaching experiences; and to provide feedback on teaching experiences to foster resident growth. Periodic mentor-resident interactions should be planned to allow a discussion of teaching methods and approaches to learning and to provide guidance and evaluation of teaching activities and experiences.¹⁷ More details regarding mentor-resident interactions are given below.

The teaching mentor for a resident in a teaching certificate program should have experience in both the academic and experiential settings. However, a resident may be assigned more than one teaching mentor if one mentor cannot fulfill

requirements for the academic and experiential experiences.¹⁷ Formal qualifications for teaching mentors include:

- Academic: A faculty member with at least 3 years of teaching experience in an ACPE-accredited institution or a minimum of 1 year of teaching experience with completion of a teaching certificate program.
- Experiential: A preceptor with at least 3 years of experiential teaching experience.

A teaching mentor has valuable knowledge and expertise that can be shared with residents through several different roles. The teaching mentor should plan regularly scheduled meetings (a minimum of 4 times/year) with the resident to fulfill the responsibilities listed in Guideline 1.2 and to develop and execute a plan for teaching activities. For PGY2 residents, the teaching mentor should provide opportunities for the resident's involvement in course development and academic committees, when possible.

Guideline 2.3

Teaching certificate participants should actively participate in a series of interactive seminars that offer education on core pedagogy topics before teaching experiences.

The teaching certificate program, with the assistance of an affiliated school/college of pharmacy or academic institution, should include formal instruction through interactive seminars and required readings with the goal of preparing the resident for teaching experiences. This instruction will provide a foundation for the resident on core pedagogy topics before the resident engages in teaching responsibilities. The seminars applicable to teaching experiences should occur before the resident begins teaching.

Resources to prepare for the pedagogy seminars are available in the appendices. In addition to the suggested topics detailed in Guideline 1.3, subjects for lectures/seminars include, but are not limited to, the following.^{9-11, 13, 17, 26}

- Creating a teaching philosophy and maintaining a teaching portfolio.
- Engaging in interprofessional education.
- Developing and administering courses (e.g., designing a course, creating a syllabus, grading criteria, maintaining grades and records).

- Using and developing an assessment strategy (e.g., writing and analyzing assessment questions, using grading rubrics and objective-structured clinical examinations or OSCEs [objective structured clinical examinations]).
- Creating an experiential rotation and precepting pharmacy students.
- Dealing with difficult students and situations (e.g., professionalism, academic dishonesty).
- Learning the academic roles and responsibilities of a faculty member and/or preceptor (e.g., tenure- vs. nontenure-track positions; practice/science departments; administration; credentialing; three domains—teaching, scholarship, service).

The seminars should engage the resident through active learning strategies and include a presentation of the problems that may be encountered, thereby fostering problem-solving skills. Ideally, teaching mentors should attend the seminars to give ample, time-appropriate feedback and to encourage additional discussion of topics in the mentor-resident meetings.

Postgraduate year two residents should assist in facilitating the interactive lecture series, when possible. Additional reading assignments and topic discussions should occur between the PGY2 resident and the mentor to continue professional development and prepare residents for advanced teaching experiences and possibly an academic career.

Guideline 2.4

Teaching certificate participants should take part in a variety of adequate teaching experiences to ensure the resident's comfort and confidence in the preparation, delivery, and assessment of teaching activities in various settings.

A resident participating in a teaching certificate program should engage in an assortment of teaching experiences to develop confidence and skills in preparation, educational delivery, and student assessment using diverse methods, depending on the setting. Recommended teaching experiences are found in Guideline 1.4, and additional information and experiences are provided below.

Formal Lecture

Residents should deliver at least one formal didactic lecture, and it is strongly encouraged

that they deliver at least two for comparison and evaluation of growth. The specifications and preparation process for the lecture are similar to those in Guideline 1.4. However, because the delivery of lectures is a major component of most higher-level academic institutions, it is recommended that at least one formal lecture be given to a student audience within an academic institution, either to pharmacy students or other health care students, for the teaching certificate program. For PGY2 residents, it is recommended that the topic of the lecture be within the resident's specialty area. For a teaching certificate program resident, another presentation that is delivered to another audience is encouraged. Examples of other audiences include pharmacists, pharmacy technicians, nurses, medical interns/residents, other health care professionals, and the community.

The recommended assessment process for the formal lecture can be found under Guideline 1.4.

Co-precepting and/or Precepting an IPPE or APPE

Precepting of students is required for many pharmacy positions, regardless of whether the position contains an academic faculty appointment. All residents should have the opportunity to gain experience co-precepting or precepting IPPE or APPE students. Recommendations for the co-precepting of PGY1 residents and precepting of PGY2 residents can be found under Guideline 1.4.

In addition to the basic teaching experience recommendations, PGY1 and PGY2 residents completing the teaching certificate program should create or review a syllabus for an IPPE or APPE before the start of their co-precepting or precepting experience and develop rotation goals, expectations, and a rotation calendar. During the IPPE or APPE, the resident should conduct the orientation to the rotation, learning activities, and topic discussions with the student in conjunction with the preceptor/experiential mentor. The rotation responsibilities are encouraged to be completed independently by a PGY2 resident, but for a PGY1 resident, they should be done in collaboration with the preceptor/experiential mentor.

The role of the experiential mentor and evaluation of the resident's performance with co-precepting and/or precepting can be found under Guideline 1.4.

Small Group Discussion

Recommendations for residents facilitating a small group discussion appear in Guideline 1.4. Residents completing a teaching certificate program should consider facilitating at least two small group discussions for comparing and evaluating growth.

Patient Case Development

Recommendations for residents developing a patient case for teaching and learning are found in Guideline 1.4.

Optional Teaching Activities (highly suggested for PGY2 residents)

Many other teaching opportunities may exist for residents to practice teaching and learning knowledge, skills, and attitudes. The activities are recommended as appropriate according to the resident and residency program. Other potential activities include:

- Involvement in course development and academic committees. Resident participation in curriculum, assessment, or other academic committees will further assist the resident in applying the knowledge gained during teaching seminars. The teaching mentor should assist the resident in understanding academic issues and related committee activities through regular meetings, at least twice a year, to discuss the issues and allow the resident to ask questions.
- Facilitation of vignette-based instruction or role-playing. The resident may have the opportunity to be involved in other teaching activities, including facilitating vignette-based instruction, role-playing, or patient simulation. Before the activity, the resident should create learning objectives and identify required/recommended readings and guidelines related to the therapeutic content. A case should be created that includes diverse disease states targeting many different audiences (e.g., patients, caregivers, health care providers). The resident should use inquiry-, problem-, or team-based learning to facilitate the movement of students or the audience through the case to encourage the problem-solving and critical thinking skills that will illustrate the desired teaching points. Finally, the resident should develop

questions from the learning objectives to assess the vignettes presented. The teaching mentor should review and provide feedback during each step of the process and provide an evaluation of the experience at its conclusion.

- Delivery of a presentation at a local, regional, or national meeting. The resident may have the opportunity to deliver a presentation at a local, regional, or national meeting. The teaching mentor should assist the resident in developing learning objectives, outline/lesson plans, and assessment questions, as well as review and provide guidance and feedback on the presentation outline and content. The resident should practice the presentation before the meeting, with evaluation and feedback from the teaching mentor. The teaching mentor should review and provide feedback during each step of the process and provide an evaluation of the experience at its conclusion.

Guideline 2.5

Clear criteria for the satisfactory performance and achievement of the teaching certificate goals should be developed. The resident's performance should be assessed by the degree of involvement in the pedagogy seminar series, mentor evaluation of the teaching portfolio (including teaching philosophy, teaching materials, and evaluations of teaching experiences), and mentor evaluation of the resident's teaching experiences (including teaching style, methods, and effectiveness).

Satisfactory performance and achievement of the goals and objectives for a teaching certificate program should be assessed at the conclusion of teaching experiences. The teaching portfolio should be the documentation system for the resident's experiences throughout the residency year. Guideline 1.5 includes the components of the teaching portfolio. The portfolio should be a stand-alone product for a teaching certificate program.

The teaching mentor and/or residency director should evaluate the teaching portfolio for the following:

- Completeness of all required materials.
- Clear, consistent, and concise formatting to program requirements.
- Quality of materials used in teaching.
- Inclusion of reflective statements for personal improvement.

- Growth in teaching, as documented in evaluations.

Summary

Teaching is an important part of any clinical pharmacist's duties. The purpose of the guidelines developed by the 2012 ACCP Task Force on Residencies was to define minimum expectations for teaching experiences within postgraduate residency programs, including minimum standards for teaching certificate programs, to ensure quality and consistent outcomes between residency programs. We strongly encourage residency program directors to adopt the guidelines for teaching experiences and teaching certificate programs. Residency program directors wishing to offer a teaching certificate program should seek to develop a relationship with an academic institution to meet the requirements set forth in the guidelines. The Task Force on Residencies recommends that student pharmacists and PGY1 residents examining PGY1 and PGY2 residencies, respectively, inquire about teaching experiences and the components of teaching certificate programs to ensure the availability of quality experiences that are consistent with the guidelines.

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Appendix 1. Resources For Preceptors

Teaching Courses/CE for Preceptors

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Pharmacist's Letter. Preceptor Training CE. Available at www.pharmacistsletter.com. Accessed March 2012. NOTE: Subscription required. Previous offerings include Delivering Effective Feedback, Preventing and Managing Difficult Learning Situations

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Appendix 2. Resources For Preceptors

Self-Reflection and Teaching Philosophy

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