

Pharmacy resident teaching in psychiatry and neurology for pharmacy programs in the United States

Victoria M. Cho, PharmD¹

Julie A. Dopheide, PharmD, BCPP, FASHP²

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Abstract

Introduction: The American Society of Health-System Pharmacists' Postgraduate Year 1 and Year 2 Residency Accreditation Standards require that residents demonstrate effective teaching skills. The College of Psychiatric and Neurologic Pharmacists' survey of pharmacy program curricula assessed resident teaching in psychiatry and neurology, however, results were not published. The objective of this article is to describe resident teaching in psychiatry and neurology curricula as reported by responses to the college's survey.

Methods: An electronic survey was sent to a curricular representative from each of 133 US pharmacy programs accredited as of July 2015. Programs were asked to report on psychiatry and neurology curricular content, faculty credentials, and types of teaching activities, including resident teaching.

Results: Fifty-six percent (75/133) of programs responded to the survey. Fifty out of 75 (67%) distinct pharmacy programs reported utilizing residents for teaching topics in psychiatry and neurology. Residents were twice as likely to teach didactic topics in psychiatry (n = 44) compared to neurology (n = 22). Three times as many residents were involved in precepting psychiatric Advanced Pharmacy Practice Experiences (n = 37) compared to neurology Advanced Pharmacy Practice Experiences (n = 12).

Discussion: Residents are involved in both didactic and experiential teaching with more residents teaching psychiatry content compared to neurology content. Authors recommend utilizing the American Society of Health-System Pharmacists' electronic resident assessment tool, PharmAcademic®, to capture the quantity and quality of resident teaching across accredited programs.

Keywords: residency, teaching, curriculum, psychiatry, neurology

¹ Clinical Pharmacist Specialist in Psychiatry, Alameda County Behavioral Health Care Services, Oakland, California, ORCID: <http://orcid.org/0000-0002-1871-6002>; ² (Corresponding author) Professor of Clinical Pharmacy, Psychiatry and the Behavioral Sciences, University of Southern California School of Pharmacy and Keck School of Medicine, Los Angeles, California, dopheide@usc.edu, ORCID: <http://orcid.org/0000-0001-7054-0588>

Disclosures: V.M.C. completed her PGY2 residency in psychiatric pharmacy at the University of Southern California and received a teaching certificate. J.A.D. serves as USC's PGY2 psychiatric pharmacy residency program director.

Introduction

The demonstration of teaching competency is a requirement in the American Society of Health-System Pharma-

cists' (ASHP) 2015 Postgraduate Year 1 (PGY1) and 2016 Postgraduate Year 2 (PGY2) Psychiatric Pharmacy Residency Accreditation Standards.^{1,2} Despite this required teaching competency, the extent and types of teaching activities that pharmacy residents provide in specific content areas such as psychiatry and neurology are not well described. In addition, both aforementioned accreditation standards require the resident to "provide effective medication and practice-related education to patients, caregivers, health care professionals, students, and the public" and "effectively employ appropriate preceptor roles when engaged in teaching students, pharmacy technicians, or fellow health care professionals."^{1,2} The ASHP 2016 PGY2 Standard for psychiatric pharmacy



residencies requires that residents demonstrate competency in providing education related to the care of patients with psychiatric and neurologic disorders.²

Training residents to become educators can involve a variety of teaching activities, including precepting students, giving didactic lectures, and leading small case conferences. Resident involvement as co-preceptors in experiential teaching can potentially increase the number of students that can be effectively supervised according to the American College of Clinical Pharmacy (ACCP) and ASHP.³⁻⁵ Utilizing residents as preceptors for Advanced Pharmacy Practice Experiences (APPE) and Introductory Pharmacy Practice Experiences students fits the layered learning model as described by ASHP.⁶ This layered learning model has been touted as an innovative approach to educate pharmacy students and residents while expanding patient care services. By learning from residents, pharmacy students gain firsthand exposure to postgraduate training. As recent graduates, resident educators may present material in a manner that students can relate to more easily compared to more senior clinicians.⁷ A positive interaction with a resident preceptor may motivate students to pursue a residency.⁷ For the purposes of developing competent educators, not just as faculty but also as clinicians who provide education to students and other health professionals as part of routine practice, residents should undergo formalized resident teaching, possibly via a structured certificate program.^{8,9} A successful experience may increase resident confidence and interest in academia.^{5,9,10} Recruitment of residency-trained pharmacists is likely to grow with continued expansion of accredited US pharmacy programs, which have increased from 72 in 1987 to 135 in 2015.¹¹

The College of Psychiatric and Neurologic Pharmacists (CPNP) curriculum paper task force asked accredited pharmacy programs to report resident involvement in didactic and experiential teaching.¹¹ This was done as part of an electronic survey on psychiatry and neurology curricula for the 2014-15 academic year.¹¹ A second survey was sent to CPNP members with board certification and an academic affiliation asking them to share their recommendations for optimal teaching of psychiatry and neurology content in Doctor of Pharmacy curricula.¹¹ The objective of this article is to describe resident teaching in psychiatry and neurology in accredited pharmacy programs as reported by respondents to CPNP's pharmacy program curriculum survey.

Methods

Unpublished data on resident teaching from the program survey of CPNP's curriculum paper entitled, "Curriculum

in Psychiatry and Neurology for Pharmacy Programs" was utilized for this article.¹¹ Data were gathered from an electronic survey sent to a curricular representative from each of 133 accredited pharmacy programs in the United States as of July 2015. Programs were asked to report on curricular content in psychiatry and neurology and to describe credentials of faculty. Curricular content was the focus of the survey, but 2 questions on resident teaching were included. The survey was approved by the University of Southern California's Institutional Review Board. Overall curriculum survey methodology has been published.¹¹

The first question pertaining to resident teaching specifically asked, "At my pharmacy program, pharmacy residents (regardless of specialty) are involved in teaching _____." Respondents could choose either PGY1 or PGY2 for resident type, and respondents were asked to indicate whether the resident was involved in psychiatry didactics, neurology didactics, psychiatry APPEs, and/or neurology APPEs; they could also specify further the focus of the PGY2 via free-text responses. Introductory Pharmacy Practice Experiences were not included as response options. To further describe resident teaching activities that were already taking place in psychiatry and neurology curricula, a free-text response was requested for the second question, "If applicable, describe resident teaching activities in the text box below (eg, the resident led journal club for APPE students)." The data collected are reported herein using descriptive statistics. The low number of responses did not allow for statistical comparisons.

Results

Seventy-five out of 133 (56%) curricular representatives completed the CPNP program survey. Previous statistical analysis of survey respondent demographics (ie, age of program, class size, location, and public/private status) was performed and determined that respondents were representative of accredited programs as of July 2015.¹¹ Fifty out of 75 distinct respondents (67%) who completed the survey answered the first question and specified that residents (regardless of specialty) were involved in teaching at their pharmacy program. There were twice as many residents providing lectures on topics in psychiatry (n=44) compared to residents providing lectures in neurology (n=22; Figure 1). There were 3 times as many residents involved in precepting psychiatric APPEs (n=37) compared to residents involved in precepting neurology APPEs (n=12; Figure 2). Interestingly, the separate CPNP member survey results showed approximately 65% (173/267) of respondents agreed curricula in pharmacy programs could be improved with more APPEs in psychiatry and neurology.¹¹

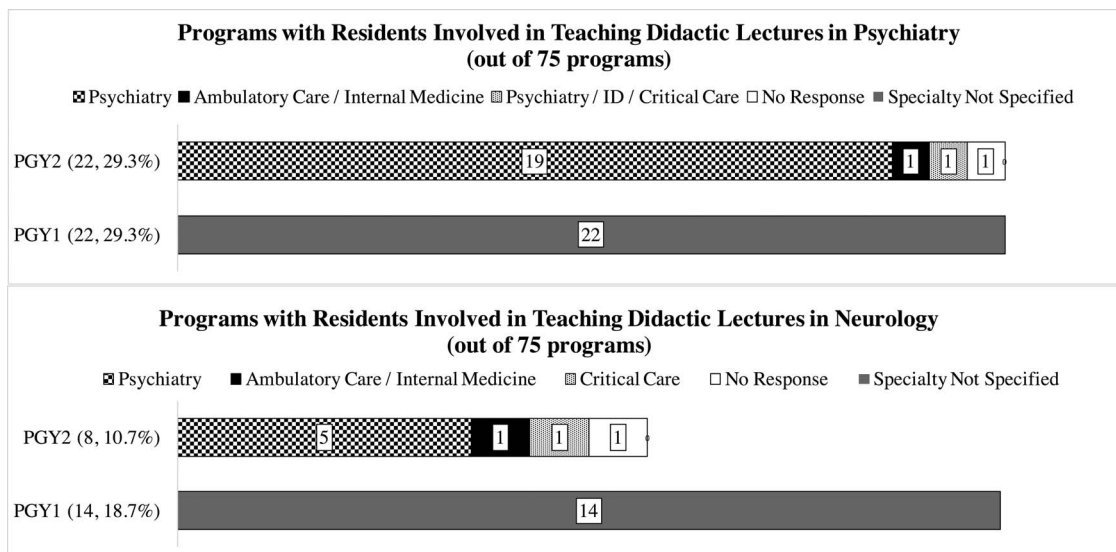


FIGURE 1: Programs (out of N = 75 distinct respondents) with residents involved in teaching didactic lectures in psychiatry (top) and neurology (bottom); ID = infectious diseases; PGY2 = Postgraduate Year 2; PGY1 = Postgraduate Year 1

Out of the 75 distinct program survey respondents, 50 answered the second question and went into further detail to characterize the different teaching activities done by the PGY1 and PGY2 residents at their respective institutions. The Table summarizes the number of responses with mention of a specific teaching activity among the 50 distinct free-text responses. Didactic lectures (n=18), leading APPE topic discussions (n=18), leading journal club discussions (n=17), and precepting APPEs (n=16) were the most common teaching activities described.

Discussion

The ASHP PGY1 and PGY2 Residency Accreditation Standards require residents to demonstrate teaching competence.^{1,2} The CPNP survey showed 50 out of 75, or 67%, of respondents actively utilize residents in pharmacy program curricula.¹¹ Residency program directors in need of teaching opportunities for residents could seek to collaborate with pharmacy programs to achieve the teaching component of the accreditation standard.

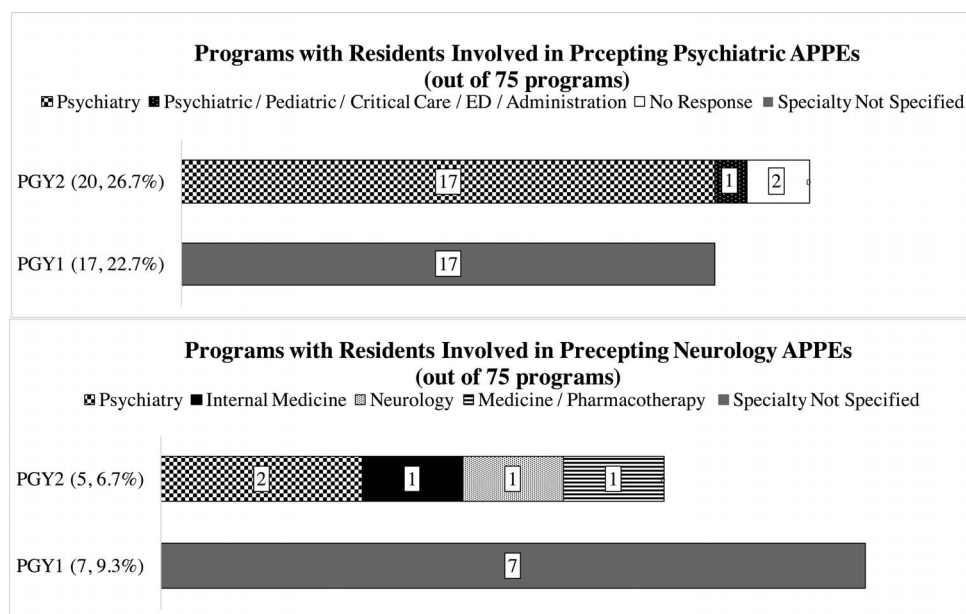


FIGURE 2: Programs (out of N = 75 distinct respondents) with residents involved in teaching psychiatry (top) and neurology (bottom) Advanced Pharmacy Practice Experiences (APPE); ED = emergency department; PGY2 = Postgraduate Year 2; PGY1 = Postgraduate Year 1

TABLE: Breakdown of free-text responses regarding teaching duties of Postgraduate Year 1 and Postgraduate Year 2 residents in psychiatry and neurology

Teaching Activity Mentioned Among 50 Survey Answers	No. of Responses With Mention of Teaching Activity (%)
APPE Experiential	
Leading APPE Topic Discussions	18 (36)
Precepting Students (Supporting and Providing Feedback)	16 (32)
Leading APPE Patient Case Discussions	8 (16)
Pre-APPE Didactics/Labs	
Lecturing in Psychiatry/Neurology Topics (Including Migraine/Pain)	18 (36)
Leading Journal Club Discussions	17 (34)
Lecturing in Topics Not Specified	10 (20)
Leading Non-APPE Case Conferences	6 (12)
Facilitating Laboratory Settings (eg, Skills, Patient Assessment, Pharmacotherapy, Patient Care Management)	5 (10)
Lecturing in Psychiatry/Neurology Topics	3 (6)
Non-APPE Experiential	
Precepting Students' and/or Leading Talks to Patient Groups	3 (6)
Mentoring Students for In-Services/Case Presentations	2 (4)
Precepting Screenings (Including Smoking Cessation Groups/Prescribing)	1 (2)
Mentoring in Special Topics Electives	1 (2)
Mentoring in Research Projects	1 (2)
Other	
No Resident Teaching in Psychiatry/Neurology	4 (8)
Participating in Resident Teaching/Learning Program (Teaching Certificate Program)	2 (4)
Teaching Only During an Academic Rotation	1 (2)
No Residents	1 (2)

APPE = Advanced Pharmacy Practice Experiences.

An ACCP white paper suggested that pharmacy residents should be actively integrated into the experiential teaching model to develop individual precepting skills.^{3,4} Additional residency teaching guidelines published in ASHP and ACCP's respective journals recommend resident exposure to precepting early in the residency year.^{5,10} Both ASHP and ACCP advise against a resident serving as the primary preceptor until later in their PGY1 year, or alternately, during the PGY2 year, especially if in a specialty area of practice.^{5,10} Only 16 out of 50 distinct free-text responses from the survey reported resident involvement in precepting APPE rotations and there was no specification of how early or late precepting was incorporated into residency training.

The CPNP program survey respondents reported 3 times as many residents involved in precepting psychiatric APPEs (n=37) compared to neurology APPEs (n=12), likely due to increased psychiatric APPE availability. The CPNP curriculum paper showed a 5:1 ratio of available psychiatric to neurologic APPEs.¹¹ A lack of neurology-focused residencies is likely another reason for less

resident teaching in neurology compared to psychiatry.¹¹ Also, the survey respondents did not specify the role of the PGY1 or PGY2 resident in precepting APPEs (ie, supervisory, copreceptor, or primary preceptor). The survey showed most residents involved in precepting psychiatry or neurology were PGY2 residents; however, there were also several PGY1 residents involved in precepting. Unfortunately, there was no consistent report of the focus of the PGY1 residency (eg, ambulatory care, acute care).

Teaching certificates are increasingly offered in both PGY1 and PGY2 residencies as a way to document achievement of ASHP's teaching goals and objectives. Teaching certificates offer a method to document resident competency in diverse teaching activities (eg, small group discussions, didactic lectures), and to encourage a career in academia.^{9,10} Among the 50 free-text responses, only 2 (4%) indicated resident participation in teaching certificate programs. This number is surprisingly low and most likely is not a true indication of actual resident participation in teaching certificate programs. Asking the question

in a yes/no format rather than as a free-text response could have yielded a higher response rate.

When possible, residents should give presentations to diverse audiences (eg, students, health care providers, public) to learn how to cater presentations to different learners and to meet ASHP Standards.^{1,2,10} Designing application-based learning objectives for case conferences can assist residents with applying therapeutic concepts to actual patients and becoming effective discussion facilitators.¹⁰ Resident-led topic discussions in psychiatry and neurology offer the additional benefit of providing the opportunity to destigmatize psychiatric and neurologic conditions such as schizophrenia or epilepsy.¹¹ Ideally, all of the above activities should be documented in a teaching certificate program. A survey sent to alumni of a teaching certificate program showed more than 70% of respondents agreed the teaching certificate program reinforced their desire for clinical teaching and helped them qualify for their current or previous practice position.¹²

Regarding didactic lectures, there were twice as many residents providing lectures on topics in psychiatry (n=44) compared to neurology (n=22). The survey did not reveal which specific topics in psychiatry and neurology were taught by residents. PGY2 residents may be particularly suited to teach topics in their specialty. For example, PGY2 residents in psychiatry are well suited to teaching pharmacy students about mental health screening tools (eg, Patient Health Questionnaire-9, Generalized Anxiety Disorder-7, mental status examination, and assessment for abnormal involuntary movements). Developing competency in teaching students how to interpret psychiatric screening tools or conduct a mental status or abnormal involuntary movement examination can be considered foundational for psychiatric pharmacy residents. Approximately 150 of the 173 CPNP member survey respondents (>85%) agreed the mental status examination, neurologic exam, and psychiatric rating scales should be taught in pharmacy program curricula.¹¹ PGY2 psychiatric pharmacy residents could assist with such teaching.

Survey results indicate that resident-led topic and patient case discussions have been implemented in only 18 (36%) and 8 (16%) programs out of 50 respondents. Interestingly, only 6 out of 50 respondents (12%) mentioned resident involvement in leading non-APPE small group case conferences. Composition of the small groups was not described. Residents were more likely to be involved in journal club discussions compared to leading non-APPE small group discussions. For pharmacy residencies not affiliated with academic institutions or teaching hospitals, PGY1 and PGY2 psychiatry and/or neurology residents can

develop small group teaching skills by teaching non-pharmacy health care professionals in relevant topics.

This report has several limitations inherent to survey data including subjectivity in question interpretation, recall bias, and the cross-sectional nature of data collected. The CPNP pharmacy program survey on resident teaching in psychiatry and neurology provides a quantitative snapshot of resident didactic and experiential teaching in psychiatry and neurology, but it falls short of describing the quality of resident teaching.¹¹ Results are also limited by the 56% (75/133) overall pharmacy program response rate.

Future resident teaching analysis should better track the extent and impact of resident teaching. Pharmacy residents and program directors should document diverse teaching activities and skills development in a teaching portfolio and electronically in PharmAcademic® (McCreadie Group, Ann Arbor, MI). Employing formalized teaching certificates that require an array of teaching activities such as didactic lectures, journal clubs, case conferences, and precepting is recommended.^{9,10} Residency program director and preceptor evaluations of these activities should be completed and documented in PharmAcademic® to ensure constructive feedback for the resident and to assess the resident's progress in teaching skills development.¹⁰ Ideally, to improve electronic data collection, CPNP should collaborate with ASHP and utilize PharmAcademic® to capture the quantity and quality of resident teaching in psychiatry and neurology.

According to CPNP's curriculum paper survey, residents are involved in both didactic and experiential teaching, with more residents teaching psychiatric content compared to neurology content. Authors recommend utilizing ASHP's electronic resident assessment tool, PharmAcademic®, to capture the quantity and quality of resident teaching across accredited pharmacy programs.

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