



# Primary Care and Neurology in Psychiatry Residency Training: a Survey of Early Career Psychiatrists

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## Abstract

**Objective** A survey of recently certified psychiatrists was conducted to obtain their feedback about the contribution of the primary care and neurology components of residency training to their professional development and to their current needs as practitioners.

**Methods** A 22-item survey was developed based on issues discussed at a forum on residency competence requirements and administered electronically to four cohorts of recently certified psychiatrists.

**Results** The response rate was 17% (1049/6083). Overall, the respondents described both their primary care and neurology experiences as helping them accomplish several goals for their professional development. The majority were satisfied with their primary care training and felt well-prepared to enter practice. The most common suggestions for improving the primary care component were better integration with psychiatry and providing longitudinal experiences and more outpatient experience. They were somewhat less satisfied with their neurology training, and only about half felt well-prepared for the neurologic aspects of psychiatry practice. The most common suggestions for improving neurology training were to provide more time in neurology with experiences that were more relevant to psychiatry such as outpatient and consultation experiences. Some also thought longitudinal experiences would be useful.

**Conclusions** These psychiatrists were generally satisfied with the primary care and neurology components of residency training and felt that they had contributed to their professional development. Their suggestions for improvement contribute to the rich discussion among training directors and other psychiatry educators about these components of residency training.

**Keywords** Residency training · Graduate medical education · Primary care/education · Neurology/education

Psychiatry residency training includes mandated clinical experiences in primary care and in neurology, and the contribution of these requirements to professional development has been often considered by the academic psychiatry community. The current requirements for training in psychiatry include four months in a clinical setting that provides comprehensive clinical care (should be met in a primary care specialty setting)

and at least two months of clinical experience in the diagnosis and treatment of patients with neurological disorders/conditions [1]. While none of the Psychiatry Milestones directly addresses primary care because those competencies are under the purview of primary care faculty, one in the medical knowledge category (MK3) addresses neurology for psychiatrists and includes knowledge of neurology, neuropsychiatry, neurodiagnostic testing, and relevant neuroscience and their application in clinical settings [2].

In April 2015, the American Board of Psychiatry and Neurology (ABPN) organized a forum on residency competence requirements for about 60 educational leaders in psychiatry and neurology, and the participants discussed various topics including the role of primary care and neurology for psychiatrists. They suggested that it would be informative to obtain feedback about these components of training from recent graduates, a group that was not represented in the literature; hence, the survey reported here was undertaken. A

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companion survey for neurologists and child neurologists was also developed.

## Methods

A 22-item survey was developed based on issues discussed at the forum on residency competence requirements and pilot-tested by the eight ABPN psychiatry directors all of whom were or had been training directors. It included a small number of demographic items, along with open-ended requests for comments. The survey was then administered to a convenience sample of ABPN-certified psychiatrists certified in 2010, 2011, 2013, and 2014 for whom valid e-mail addresses were available in the APBN database ( $n = 6083$ ). They represented 88% of diplomates certified in those four years (6083/6889). The survey was administered via the SurveyMonkey platform ([www.surveymonkey.com](http://www.surveymonkey.com)) between April 29, 2016, and July 15, 2016. The survey link was distributed by direct invitation with a single-user link, and two follow-up e-mails were sent to non-respondents one week and two weeks after the initial invitation. The study (and the companion survey for neurologists) received approval from the University of Iowa IRB, and consent was obtained from all participants. Participants affirmed that they had read the information about the survey and agreed to participate before they could proceed to the survey items.

## Results

The response rate was 17% (1049/6083). Almost all of the respondents (98%) worked in a setting that required a medical license, and 90% described their principal professional activity as patient care. The majority (65%) reported that they devoted 76–100% of their time to direct patient care, 24% spent 51–75% of their time doing so, and 12% reported 50% or less of their time spent in direct patient care.

Principal practice setting was varied: 30% reported that their principal practice setting was an academic institution, followed by private institution (21%), government institution (18%), private practice (17%), military (3%), and other (11%). Practice location was described as urban by 56%, as suburban by 30%, as rural by 11%, and as other by 3%. Of the respondents, 40% reported that the type of setting in which their principal patient care practice was located was an ambulatory care facility; 37% were in a hospital setting; 13% were in private practice; and 10% responded other.

### Primary Care Training in Residency

The respondents were asked in which setting or settings they had fulfilled their primary care requirements. The most

common experiences were in internal medicine (85%; 894/1049), family medicine (22%; 235/1049), and pediatrics (24%; 247/1049) with some respondents having exposure in more than one setting. Sixty-four percent (670/1044) reported spending four months in primary care, and 36% (374/1044) spent more than four months. No additional information about how the additional time was spent was obtained.

The respondents were asked how important their primary care experience was for accomplishing certain goals for residency training, and the results are summarized in Table 1. A majority indicated that their primary care experience was quite or extremely important with regard to the following goals: consolidate identity as a physician; perform medical physical examination; recognize common general medical problems; screen for co-morbid medical conditions; conduct initial management of common general medical problems; conduct initial management of medical complications of primary psychiatric illnesses and psychiatric treatments; recognize the need for medical/surgical consultation; and provide preventive care counseling.

The respondents were also asked about their overall satisfaction with their primary care training during residency and how well they felt their primary care experience had prepared them for practice, and the results are summarized in Table 2. The majority (69%) were extremely or quite satisfied with their primary care training, 22% were moderately satisfied, and 9% were slightly or not at all satisfied. In terms of preparation for practice, the majority (62%) felt quite or extremely well-prepared, 25% felt moderately well-prepared, and 13% felt slightly or not at all prepared. One respondent wrote, “I do practice an incredible amount of medical care for my psychiatric patients and make many referrals as well. My cumulative experience as a medical student and resident were both helpful in this.” Another commented, “In general I think more medical training is better to help physicians understand the interplay of medical and psychiatric illness.”

### Suggestions for Improving Primary Care

The respondents were asked how primary care training could be improved and what other primary care experiences would have better prepared them for practice. Three of the authors (DJ, JL, and CT) independently reviewed the suggestions and generated lists of the most common ones which were compared and consolidated. Some characteristic comments were then selected to further illustrate these suggestions. The most common suggestions were to better integrate the primary care experience with psychiatry including providing longitudinal experiences and to provide more outpatient experience. Some of the child and adolescent psychiatrists would have liked more pediatrics.

With regard to the first suggestion, a respondent wrote, “Make it more relevant to psychiatry...the medicine training

**Table 1** Importance of primary care experience during residency for accomplishing objectives

Objectives	Extremely important	Quite important	Moderately important	Slightly important	Not at all important
Consolidate identity as a physician ( <i>n</i> = 1041)	41% ( <i>n</i> = 428)	26% ( <i>n</i> = 274)	18% ( <i>n</i> = 183)	9% ( <i>n</i> = 95)	6% ( <i>n</i> = 61)
Perform medical physical examination ( <i>n</i> = 1041)	47% ( <i>n</i> = 492)	27% ( <i>n</i> = 285)	16% ( <i>n</i> = 163)	7% ( <i>n</i> = 69)	3% ( <i>n</i> = 32)
Recognize common general medical problems ( <i>n</i> = 1039)	54% ( <i>n</i> = 557)	28% ( <i>n</i> = 294)	12% ( <i>n</i> = 124)	5% ( <i>n</i> = 49)	1% ( <i>n</i> = 15)
Screen for co-morbid medical conditions ( <i>n</i> = 1042)	51% ( <i>n</i> = 533)	28% ( <i>n</i> = 292)	15% ( <i>n</i> = 148)	5% ( <i>n</i> = 54)	1% ( <i>n</i> = 15)
Conduct initial management of common general medical problems ( <i>n</i> = 1038)	46% ( <i>n</i> = 481)	27% ( <i>n</i> = 277)	17% ( <i>n</i> = 174)	7% ( <i>n</i> = 78)	3% ( <i>n</i> = 28)
Conduct initial management of medical complications of primary psychiatric illnesses and psychiatric treatments ( <i>n</i> = 1040)	41% ( <i>n</i> = 427)	28% ( <i>n</i> = 291)	18% ( <i>n</i> = 184)	9% ( <i>n</i> = 96)	4% ( <i>n</i> = 42)
Recognize the need for medical/surgical consultation ( <i>n</i> = 1041)	48% ( <i>n</i> = 498)	29% ( <i>n</i> = 299)	16% ( <i>n</i> = 172)	5% ( <i>n</i> = 55)	2% ( <i>n</i> = 17)
Provide preventive care counseling ( <i>n</i> = 1031)	34% ( <i>n</i> = 355)	27% ( <i>n</i> = 278)	23% ( <i>n</i> = 236)	10% ( <i>n</i> = 101)	6% ( <i>n</i> = 61)

experiences in psychiatry residency are more driven by institutional needs than the education needs of the residents.” Another suggested, “More training in integrated care setting.” A child psychiatrist commented, “I am primarily working as a child and adolescent psychiatrist, so I wish more of my primary care training could have been focused on children rather than adults.”

In terms of longitudinal experience, a respondent wrote, “Having clinical rotations for all years of residency training would ensure solidifying key concepts of family and internal medicine.” Another suggested, “Spread out beyond intern year—working in a co-management clinic or experience in an integrated/collaborative model which would help expand training for both psychiatrists and primary care residents.”

With regard to outpatient experience, a respondent wrote, “More outpatient primary care exposure would have been beneficial.” Another stated, “As a practicing physician knowledge of outpatient medicine is much more useful to me.”

### Neurology Training in Residency

The respondents reported a variety of neurology experiences with the most common being on a neurology

inpatient unit (70%; 738/1049). Other settings included neurology outpatient unit (52%; 548/1049), consultation unit (48%; 507/1049) neurology intensive care unit (13%; 136/1049); and combined neurology/internal medicine unit (4%; 40/1049).

The respondents were asked how important their neurology experience was for accomplishing certain goals for residency training, and the results are summarized in Table 3. The majority described their neurology experience as quite or extremely important with regard to these goals: perform and interpret a neurologic examination, including a cognitive examination; enhance knowledge of neurologic testing (neuroimaging, neurophysiological, and neuropsychological testing); diagnose neurologic disorders relevant to psychiatric practice; conduct initial management of neurologic disorders relevant to psychiatry practice; enhance knowledge of common neurologic medications; and recognize the need for neurologic consultation.

The respondents were also asked about their overall satisfaction with their neurology training during residency and how well they felt their neurology experience had prepared them for practice, and the results are summarized

**Table 2** Primary care and neurology training: satisfaction with and adequacy of preparation for practice

Satisfaction	Extremely satisfied	Quite satisfied	Moderately satisfied	Slightly satisfied	Not at all satisfied
Overall, how satisfied were you with the primary care training you had during residency? ( <i>n</i> = 1039)	29% ( <i>n</i> = 300)	40% ( <i>n</i> = 414)	22% ( <i>n</i> = 229)	7% ( <i>n</i> = 72)	2% ( <i>n</i> = 24)
Overall, how satisfied were you with the neurology training you had during residency? ( <i>n</i> = 1042)	22% ( <i>n</i> = 228)	36% ( <i>n</i> = 370)	28% ( <i>n</i> = 289)	11% ( <i>n</i> = 120)	3% ( <i>n</i> = 35)
Preparation for practice	Extremely well	Quite well	Moderately well	Slightly well	Not at all well
Overall, how well did your primary care training during residency prepare you for your current practice? ( <i>n</i> = 1038)	23% ( <i>n</i> = 238)	39% ( <i>n</i> = 411)	25% ( <i>n</i> = 258)	10% ( <i>n</i> = 100)	3% ( <i>n</i> = 31)
Overall, how well did your neurology training during residency prepare you for your current practice? ( <i>n</i> = 1037)	17% ( <i>n</i> = 179)	37% ( <i>n</i> = 384)	29% ( <i>n</i> = 298)	14% ( <i>n</i> = 140)	3% ( <i>n</i> = 36)

**Table 3** Importance of neurology experience during residency for accomplishing objectives

Objectives	Extremely important	Quite important	Moderately important	Slightly important	Not at all important
Perform and interpret a neurologic examination, including a cognitive examination ( <i>n</i> = 1041)	43% ( <i>n</i> = 444)	34% ( <i>n</i> = 358)	16% ( <i>n</i> = 165)	5% ( <i>n</i> = 56)	2% ( <i>n</i> = 18)
Enhance knowledge of neurologic testing (neuroimaging, neurophysiological, and neuropsychological testing) ( <i>n</i> = 1040)	33% ( <i>n</i> = 347)	33% ( <i>n</i> = 342)	23% ( <i>n</i> = 235)	8% ( <i>n</i> = 89)	3% ( <i>n</i> = 27)
Diagnose neurologic disorders relevant to psychiatric practice ( <i>n</i> = 1040)	38% ( <i>n</i> = 392)	31% ( <i>n</i> = 320)	21% ( <i>n</i> = 221)	8% ( <i>n</i> = 84)	2% ( <i>n</i> = 23)
Conduct initial management of neurologic disorders relevant to psychiatry practice ( <i>n</i> = 1037)	33% ( <i>n</i> = 344)	30% ( <i>n</i> = 305)	22% ( <i>n</i> = 227)	11% ( <i>n</i> = 118)	4% ( <i>n</i> = 43)
Enhance knowledge of common neurologic medications ( <i>n</i> = 1037)	37% ( <i>n</i> = 381)	35% ( <i>n</i> = 365)	18% ( <i>n</i> = 190)	8% ( <i>n</i> = 81)	2% ( <i>n</i> = 20)
Recognize the need for neurologic consultation ( <i>n</i> = 1033)	45% ( <i>n</i> = 463)	34% ( <i>n</i> = 346)	15% ( <i>n</i> = 156)	5% ( <i>n</i> = 54)	1% ( <i>n</i> = 14)

in Table 2. The majority (58%) were extremely or quite satisfied with their neurology training, 28% were moderately satisfied, and 14% were slightly or not at all satisfied. In terms of preparation for practice, 54% felt quite or extremely well-prepared, 29% felt moderately well-prepared, and 17% felt slightly or not at all prepared.

### Suggestions for Improving Neurology Training

The respondents were asked how neurology training could be improved and what other neurology experiences would have better prepared them for practice. The same process that was used to analyze the primary care responses was followed to identify the most common suggestions and select illustrative comments. The most common suggestions were to provide more time in neurology with experiences that were more relevant to psychiatry such as outpatient and consultation experiences. Some also thought longitudinal experiences would be useful.

Some illustrative comments about what neurology experiences would be more relevant to psychiatrists were “Inpatient work was arduous and not clinically relevant. Outpatient neurology would be much more useful.” “More focus on outpatient and consultative work.” “Focus more on neurology for psychiatrists. For example, headache and seizures.” “It would be great to see more neuropsychiatric conditions (like frontal dementia, Pick’s disease, pseudo bulbar palsy); unfortunately, most of the cases were stroke.”

With regard to longitudinal experience, one respondent wrote, “More neuro rotations spread throughout the residency rather than having all of neuro in PGY 1 and 2 year.” Another observed, “It needed to be more hands on in learning to apply the knowledge. Neurology rotations later in training would be better.” Another suggested, “Presentation of more information regarding management of neurological issues throughout training.”

### Discussion

Overall, recently certified psychiatrists described their primary care and neurology experiences as helping them accomplish several goals in their professional development. They were generally satisfied with their primary care training during residency and felt well-prepared to enter practice. The most common suggestions for improving the primary care component were better integration with psychiatry and providing longitudinal experiences and more outpatient experience. They were somewhat less satisfied with their neurology training (57% compared to 69% extremely or quite satisfied), and only about half felt extremely or quite well-prepared for the neurologic aspects of psychiatry practice. The most common suggestions for improving neurology training were to provide more time in neurology with experiences that were more relevant to psychiatry such as outpatient and consultation experiences. Some also thought longitudinal experiences would be useful. No follow-up questions about what experiences could be shortened or eliminated to free up more time for primary care and/or neurology were asked. The companion survey of practicing neurologists yielded suggestions for enhancing the psychiatry component of their training [3], suggesting that it would be mutually advantageous for psychiatry and neurology faculty to work together on these aspects of their residencies.

The low response rate is a limitation of the study, although it was similar to that for a companion survey of neurologists and child neurologists done at the same time (17% here compared to 16%) [3]. Another limitation is that the survey only included certified psychiatrists; however, the great majority of recent graduates (> 90%) seek and obtain certification [4]. Asking the respondents about how primary care and neurology training could be improved and what other experiences would have better prepared them for practice, rather than asking for more general observations, may have introduced some bias in their feedback about these experiences.

This feedback from practicing psychiatrists contributes another perspective to the rich discussion among training directors and other thought leaders in psychiatric education about the goals of the primary care and neurology components of residency training. These discussions have taken place in the context of broad considerations of psychiatry as a specialty, specifically the role of psychiatrists in providing primary care [5–12] and the implications of developments in the neurosciences which encompass a broad array of basic and clinical processes [13–22]. The survey results reported here support the importance of these training components and the need for careful attention to their implementation to meet the needs of psychiatrists in the twenty-first century.

### Compliance with Ethical Standards

The study was approved by the University of Iowa Institutional Review Board. Consent was obtained from all participants.

**Conflict of Interest** On behalf of all authors, the corresponding author states that there is no conflict of interest.

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