

Survey of prescriptive authority among psychiatric pharmacists in the United States

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Abstract

Introduction: Despite the high prevalence of those with mental illnesses, there is a critical shortage of psychiatric providers in the United States. Psychiatric pharmacists are valuable members of the health care team who meet patient care needs, especially those practicing with prescriptive authority (PA).

Methods: A cross-sectional electronic survey was administered to Board Certified Psychiatric Pharmacists (BCPPs) and non-BCPP members of the College of Psychiatric and Neurologic Pharmacists. The objective of this study was to compare demographic and practice characteristics between respondents with and without PA.

Results: Of the 334 respondents, 155 (46.4%) reported having PA. Those with PA, including those with Veterans Affairs (VA) affiliated PA, had fewer mean number of years of licensure than those without PA ($P = .008$ and $P = .007$, respectively). The majority with PA practiced in outpatient settings (53.5%). Respondents with PA (including those with VA-affiliated PA) were more likely to have their positions funded by practice sites ($P < .001$). The most common referral source for medication management for those with PA were physicians although pharmacists also provided referrals in both VA and non-VA settings. Pharmacists with PA were more likely to track practice outcomes versus those without PA ($P < .001$).

Discussion: The current study confirms the variability in PA among psychiatric pharmacists. Demographics of the respondents reflect changes in residency accreditation and increased numbers of psychiatric residencies within VA facilities. Psychiatric pharmacists with PA reported treating psychiatric and medical conditions, creating added value. Psychiatric pharmacists should be empowered to track outcomes and help meet the critical shortage of psychiatric providers.

Keywords: psychiatric pharmacist, prescriptive authority, survey, Veterans Affairs

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Introduction

Mental illnesses in the United States are prevalent, leading to high rates of morbidity and mortality. Persons with serious mental illnesses die years younger than their peers, often due to inadequately treated psychiatric and other medical conditions.¹ Nonadherence with psychiatric medications is common. Compounding these challenges is a psychiatric workforce shortage, which is predicted to be around a 32% shortfall in psychiatrists by 2030, resulting in poor patient outcomes and high health care costs.^{2,3}

Psychiatric pharmacists are valuable members of the health care team. Their education and training focus on using the process of comprehensive medication management to ensure evidence-based treatment for people with mental health disorders. This includes expertise in addressing medication-related problems, such as inadequately treated conditions, drug interactions, adverse effects, and nonadherence. In a recent College of Psychiatric and Neurologic Pharmacists (CPNP) survey,⁴ the majority of psychiatric pharmacists reported completing residency training and being Board Certified Psychiatric Pharmacists (BCPPs). They reported managing drug therapy for persons with mental illnesses in inpatient and outpatient settings, in behavioral health and primary care settings, and for those with a variety of psychiatric and common medical diagnoses. They also reported having a range of clinical responsibilities, including conducting comprehensive medication management, adjusting doses, performing chart reviews, ordering labs, and initiating and discontinuing medications. Nearly 47% of respondents reported having some type of prescriptive authority (PA) through a collaborative practice agreement, Veterans Affairs (VA) scope of practice, or an alternative PA agreement (including pharmacy and therapeutics committee-approved authorizations, practice site agreements, and standing orders).

Comparisons between psychiatric pharmacist practices with and without PA have not been performed to date.

Objectives and Methods

The goal of this study was to compare demographic and practice characteristics between respondents with PA compared with those without PA. Findings from this analysis may be used to demonstrate the value of PA in increasing access for mental health care and justify the need for an increased scope of practice for psychiatric pharmacists.

Data for this analysis were obtained from a cross-sectional electronic survey study of psychiatric pharmacists. Detailed methods for this survey study have been previously described.⁴ A database obtained from CPNP was used to identify study participants, which included BCPP and non-BCPP members of CPNP and BCPP non-members of CPNP as of August 30, 2019. The survey contained 36 questions across 5 domains: clinician details/demographics, primary clinical practice facility information, primary clinical practice demographics, prescriptive authority, and professional activities.

Institutional review board exemption approval was received from the MCPHS University and University of California San Diego institutional review boards, and

approval of the project was received from the CPNP board of directors prior to survey distribution. Data were analyzed using descriptive statistics (mean, median, SD, range). Association analyses were analyzed using *t* tests and chi-square/Fisher exact tests for linear and nominal variables, respectively. All data were analyzed using IBM SPSS, version 26.

Results

Characteristics of the survey respondents have been described in detail previously.⁴ Of the 334 survey respondents, 155 (46.4%) reported having a collaborative practice agreement, VA scope of practice, or alternative PA (Table 1). There is a statistically significant difference in the percentages of respondents practicing with PA in the Northeast versus the West (13.9% vs 34.4%, respectively, $P < .05$; Figure 1).

There was a statistically significant difference ($P = .011$) in the average number of years of licensure with respondents with PA having practiced for fewer years compared with those without PA. Most respondents with PA reported practicing in an outpatient setting (53.5%) compared with those without PA, who primarily practiced in an inpatient setting (71.4%, $P < .001$). There was a statistically significant difference ($P = .009$) in the average percentage of weekly time spent in their clinical practice setting between respondents with PA ($80.2\% \pm 26.6\%$) compared with those without PA ($71.8\% \pm 29.7\%$). Statistically significant differences were also observed in higher percentages of the position funded by the clinical practice between respondents with PA compared with those without PA ($P = .001$) as well as an increased total number of pharmacists providing psychiatric care at the clinical site ($P = .024$). There was a statistically significant difference ($P < .001$) in the average number of total BCPPs employed at the respondents' clinical sites between those with PA (3.53 ± 3.33 persons) compared with those without PA (1.92 ± 2.28 persons). However, there was a statistically significant difference in the average number of total pharmacists providing psychiatric care without a psychiatric pharmacy residency between respondents with PA and those without PA ($P = .019$). Interestingly, there was no significant difference in BCPP status between those with and without PA ($P = .861$).

VA-Affiliated Versus Non-VA-Affiliated PA

To delineate the characteristics of those with PA, respondents were further divided into those with VA-affiliated PA and those with non-VA-affiliated PA; there was a similar distribution of respondents in each group (Table 2). Respondents with VA-affiliated PA were generally licensed for fewer years than those without PA

TABLE 1: Comparison of respondents of the study (n = 334)

Characteristic	Prescriptive Authority n = 155	No Prescriptive Authority n = 161 ^a	P Value
No. of years licensed, mean (SD)	12.3 (9.23)	15.3 (11.7)	.011
No. of years in mental health/SUDs, mean (SD)	9.59 (7.64)	11.51 (9.63)	.051
Practice setting, n (% of column)			<.001
Inpatient	35 (22.6)	115 (71.4)	
Outpatient	83 (53.5)	19 (11.8)	
Inpatient/outpatient	37 (23.9)	27 (16.8)	
Percentage of time in clinical setting per wk (SD)	80.2 (26.6)	71.8 (29.7)	.009
Percentage of position funded by clinical practice (SD)	73.3 (41.3)	56.5 (47.9)	.001
BCPP status, n (%) ^b			.861
BCPP	136 (87.7)	143 (88.8)	
Not BCPP	19 (12.3)	18 (11.2)	
Mean total pharmacists providing psychiatric care at the clinical site	5.10 ± 6.41	3.70 ± 4.41	.024
Mean total BCPPs employed at the clinical site ^a	3.53 ± 3.33	1.92 ± 2.28	<.001
Mean no. of total pharmacists without psychiatric residency providing psychiatric care at the clinical site	1.55 ± 3.14	2.61 ± 4.74	.019

BCPP = board-certified psychiatric pharmacist.

^aMissing data for 18 respondents.

^bRespondents may have had other board certifications.

($P=.007$). There was no difference in practice setting among those with PA with outpatient being the most frequently reported practice setting for both groups ($P=.830$). Those with VA-affiliated PA spent more time in a clinical setting (90.8% versus 69.7%, $P<.001$) and had a greater percentage of their positions funded by the clinical practice (86.6 versus 60.3%, $P<.001$) compared with non-VA-affiliated PA respondents. There was a slightly higher percentage of BCPPs among those with VA-affiliated PA ($P=.048$). There were no differences in mean total pharmacists providing psychiatric care between the

two groups; however, a higher number of BCPPs ($P<.001$) and a lower number of pharmacists without psychiatric residency ($P=.013$) were reported among those with VA-affiliated PA.

Treatment of Nonpsychiatric Illnesses

Respondents with PA were more likely to treat medical conditions within their clinical practice than those without PA (58.1% vs 25.1%, respectively, $P<.001$; Figure 2). Conversely, respondents who treated medical conditions within their clinical practice were statistically significantly more likely to have PA than those who did not treat medical conditions (67.2% vs 33.2%, respectively, $P<.001$).

Relationship With Other Health Care Providers

Physicians were the most common source for the initial diagnosis for patient referrals for most respondents (92.9%) with PA compared with those without PA (65.8%, $P<.001$). Nonphysicians (nurse practitioners, physician assistants, social workers, or other master's-level providers or psychologists) were the next most common source for 69.0% of respondents with PA compared with 28% of those without PA ($P<.001$). Those with PA were more likely to receive patient referrals

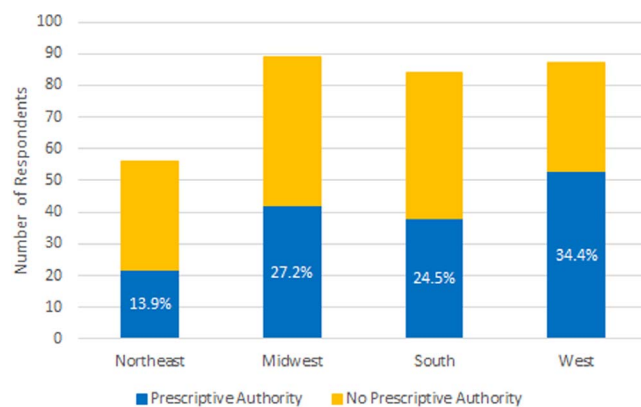


FIGURE 1: Rates of prescriptive authority by geographic region (n = 334), missing geographic data for 14 respondents, percentages for each graph represent the percentage of all prescriptive authority respondents within that region ($P<.05$ comparing Northeast vs West)

TABLE 2: Comparison of Respondents with Veterans Affairs (VA)- and Non-VA-Affiliated Prescriptive Authority (PA; n = 155)

Characteristic	VA-Affiliated Prescriptive Authority n = 77	Non-VA-Affiliated Prescriptive Authority n = 78	P Value
No. of years licensed, mean (SD)	10.3 (7.12)	14.3 (10.6)	.007
No. of years in mental health/SUDs, mean (SD)	8.19 (5.93)	11.0 (8.84)	.023
Practice setting, n (%)			.830
Inpatient	17 (22.1)	18 (23.1)	
Outpatient	40 (51.9)	43 (55.1)	
Inpatient/outpatient	20 (26.0)	17 (21.8)	
Percentage of time in clinical setting per wk (SD)	90.8 (19.2)	69.7 (28.8)	<.001
Percentage of position funded by clinical practice (SD)	86.6 (33.8)	60.3 (43.9)	<.001
BCPP status, n (%)			.048
BCPP	72 (93.5)	64 (82.1)	
Not BCPP	5 (6.5)	14 (17.9)	
Mean total pharmacists providing psychiatric care at the clinical site (SD)	5.77 (3.94)	4.45 (8.11)	.201
Mean total BCPPs employed at the clinical site (SD)	4.75 (3.61)	2.32 (2.53)	<.001
Mean no. of total pharmacists without psychiatric residency providing psychiatric care at the clinical site (SD)	0.92 (1.37)	2.18 (4.14)	.013

BCPP = Board-Certified Psychiatric Pharmacist.

for medication management from physicians (psychiatrists or other physicians) than those without PA (62.1% vs 37.9%, $P < .001$). Those with PA were also more likely to receive patient referrals from nonphysicians (nurse practitioner, physician assistant, psychologist, nurse, or care/case manager) than those without PA (67% vs 33%, $P < .001$). There was no statistically significant difference in receiving patient referrals from physicians (51.8% vs 48.2%, $P = .186$) or nonphysicians (53.4% vs 46.6%, $P = .131$) for those with VA-based PA compared with non-VA-based PA. However, there was a statistically significant difference in referrals from other pharmacists to psychiatric pharmacists with VA-based PA compared with non-VA-based PA (64.4% vs 35.6%, $P = .022$).

Tracking Practice Outcomes

Those with PA were significantly more likely to track outcomes of their practice versus those without PA (63.0% vs 38.0%, $P < .001$). There was a trend toward significance in long-acting injectable (LAI) medication administration/overseeing administration between those with PA compared with those without PA (13.5% vs 6.8%, respectively, $P = .062$). There was a statistically significant difference in administering or overseeing the administration of LAI medications between those with a VA type of PA and those with other types of PA (5.2% vs 21.8%, respectively, $P = .004$).

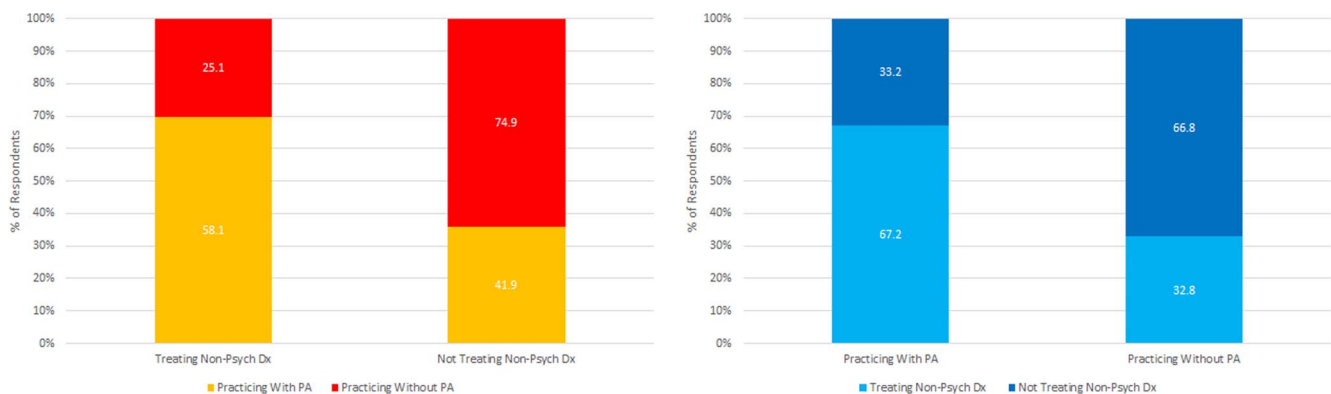


FIGURE 2: Comparison of rates of prescriptive authority (PA) and treatment of medical illnesses, (left) rates of treating medical illness in those with and without PA, (right) rates of PA in those treating and not treating medical illnesses (Psych Dx = psychiatric diagnosis)

Additional Characteristics of Non-PA-Based Practices

Among individuals who reported not directly prescribing medications themselves, but providing treatment recommendations to other health care providers, 64.1% reported having a 75% to 100% acceptance rate of their treatment recommendations. Additionally, 31.1% reported having 50% to 74% of their treatment recommendations accepted. There was no statistically significant difference in acceptance of recommendations based upon age group ($P=.451$).

Among those who reported practicing in the outpatient setting without PA, the main reasons stated for this were (1) site administrators not being supportive (5.4%), (2) site providers not being supportive (3.3%), and (3) lack of resources to implement such a practice (2.7%). Among those who reported practicing in the inpatient setting, the main reasons for not having PA were (1) clinical site not interested (18.0%), (2) billing does not support a PA-based practice (12.3%), and (3) the state does not allow inpatient pharmacist PA (3.6%).

Discussion

Currently, 49 states allow PA by pharmacists, but there is wide variation in the scope of practice.⁵ A recent paper by Sachdev and colleagues⁵ describes the extent of pharmacists' PA across the United States. States vary in their regulation of PA based on pharmacists' credentials, additional qualifications, application process, board of pharmacy oversight, practice location, types of medications, provider notification, and ability to initiate versus modify medications.⁵ This variation is seen in this study in which more respondents from the West had PA compared from the Northeast, for example. It is reasonable to assume that, as pharmacists' scopes of practice allowed by individual states expand, those with PA may also increase.

In this study, those with PA had been in clinical practice an average of 3 years less than those without PA; this difference appears to be primarily driven by those with VA-affiliated PA. Since 2007, to be accredited by the American Society of Health-System Pharmacists, psychiatric pharmacy residencies became postgraduate year 2 (PGY2) programs and provided a quick pathway for specialization and board certification.⁶ Furthermore, in 2013 and 2015, the VA provided stimulus funding to increase the number of PGY2 psychiatric pharmacy residencies, which dramatically increased the number of programs nationwide. More psychiatric pharmacy positions were developed within the VA, which further stimulated the growth of the number of specialists. These factors most likely increased the number of newer, mostly

younger practitioners in the specialty with PA via the VA scope of practice. Additionally, practitioners who are older or have an established practice may be less inclined to pursue establishing PA, especially if the PA would not result in improved workflow or patient outcomes. It should be noted that more than 85% of our respondents had BCPP, which could have influenced the results. As specialty certification, such as BCPP, is a requirement for PA in many states, this large number of BCPPs may have affected the rate of PA seen in this survey sample as well as the number of BCPPs who practiced in the VA setting. It does lead to an interesting finding of the notable number of pharmacists with PA who are not BCPPs providing psychiatric care. This is something worth examining more closely to determine the role of these individuals in the overall provision of mental health treatment, which would include an evaluation of their residency, training, and work experience.

The National Association of Boards of Pharmacy⁷ developed proposed language for a model act regarding pharmacists' PA. Additionally, the Centers for Disease Control and Prevention⁸ publishes a resource guide to help pharmacists develop collaborative practice agreements to improve the management of chronic disease. This guide⁸ provides draft language with recommended elements and a template that can be used to create a collaborative practice agreement between a physician and a pharmacist to standardize practices across states. These resources underscore the need for consistent regulations of pharmacist PA across the United States and may help to explain the variability in PA seen in this survey.

The value of adding psychiatric pharmacists with PA into practice is important to address, both clinically and financially. In this study, those with PA were more likely to treat medical conditions in their practice setting compared with those without. Evaluating the differences between PA and non-PA psychiatric pharmacist practices can promote widespread development and integration of psychiatric pharmacists into health care teams to help meet the needs of patients with mental illness. PA for treating psychiatric and medical conditions may be the added value that can justify the advanced scope of practice. Those with PA also spent statistically significantly more time in the clinical setting and had a higher percentage of their positions funded by the clinical site than those without PA. These trends are also seen for the VA- and non-VA-affiliated PA groups. Clinical sites may be more likely to request more time in the clinical setting and fund positions at a greater rate for those with PA due to their increased scope of practice. Higher numbers of BCPPs were employed at clinical sites for those with PA and those with VA-affiliated PA. This could indicate the perceived added value by those clinical sites by including psychiatric pharmacists on the patient care team,

especially those with PA. Interestingly, a greater number of pharmacists who had completed a psychiatric residency were employed at clinical sites among those with PA and VA-affiliated PA. This trend may reflect the increased expansion of psychiatric pharmacy PGY2 resident and clinician positions within VA settings as described.

Nearly all psychiatric pharmacists with PA received referrals from physicians, but more than two-thirds also received referrals from nonphysicians. This demonstrates that psychiatric pharmacists work with multiple health care providers, including other pharmacists, and there may be opportunities with nonpsychiatric pharmacists for collaboration. It is not surprising that those with PA had significantly higher numbers of referrals from physicians and nonphysicians and may suggest that there are increased opportunities for direct patient care management and increased value from this interdisciplinary teamwork.

Those with PA were also more likely to track outcomes, but it is unknown whether this was a requirement of the position for continued funding or optional.⁹ Regardless, psychiatric pharmacists should be encouraged to track clinical outcomes when providing direct patient care to demonstrate the overall value of psychiatric pharmacists on the health care team. Additional data that demonstrate the value of psychiatric pharmacists is essential to continue to build the business case to site providers and administrators who are not supportive of PA.

In addition, future studies that demonstrate whether there is correlation between legislative actions and the number of pharmacists with PA would be beneficial. This would help clarify if regulatory changes allowing for pharmacist PA actually increase the availability of health care providers to treat patients, especially within psychiatry. Changes in payment regulations recognizing pharmacists as providers should also help increase the number of pharmacists with PA providing direct patient care. In addition to regulatory limitations, barriers to expansion of PA, such as those identified here, should be reviewed and, whenever possible, eliminated. Psychiatric pharmacists should work closely with other health care professionals and their professional organizations to help overcome these barriers.

Conclusion

Psychiatric pharmacists are valued by collaborating providers for the care they provide to patients with a wide range of psychiatric and medical disorders. The current study demonstrates the high variability of PA and clinical activities among psychiatric pharmacists. These

results may be used to help develop best practice models and design studies that demonstrate the value of psychiatric pharmacists on the patient care team. Expansion of psychiatric pharmacist services, including PA, should be considered as a viable addition to the care provided to patients with mental illness, especially in areas where there is a shortage of such services.

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