Nonpsychiatric Medication Interventions Initiated by a Postgraduate Year 2 Psychiatric Pharmacy Resident in a Patient-Centered Medical Home

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ABSTRACT

Objective: Studies have demonstrated the benefits of incorporating comprehensive medication management into primary care, but no study describes the types of nonpsychiatric medication–related interventions provided by a psychiatric pharmacist while providing comprehensive medication management.

Method: A chart review of Center for Community Health patients enrolled in the University of Southern California Psychiatric Pharmacy Clinic, Los Angeles, between July 1, 2013, and January 10, 2014, was conducted. Progress notes were reviewed to collect medication recommendations and interventions. The number and types of interventions were compared between groups based on substance abuse history, comorbid medical conditions, number of psychiatric diagnoses, and number of medications. An anonymous survey was distributed to primary care providers (PCPs) regarding perceptions and attitudes toward a postgraduate year 2 psychiatric pharmacy resident's interventions pertaining to nonpsychiatric medications.

Results: 177 nonpsychiatric medication interventions were documented. Fifty interventions required PCP approval, and 45% of those were accepted. Having a diagnosis of diabetes ($P < .0001$), hypertension ($P < .0001$), gastroesophageal reflux disease ($P < .0001$), ≥ 9 medications ($P < .0001$), or ≥ 5 medical diagnoses ($P < .0001$) were all associated with an increased mean number of interventions. Of the PCPs, 66% viewed the psychiatric pharmacist as a resource for addressing medical interventions by providing drug information. The PCPs were agreeable to having a psychiatric pharmacist provide drug information and monitor the patient but reported mixed opinions on whether a psychiatric pharmacist should comanage nonpsychiatric conditions.

Conclusions: Psychiatric pharmacists can successfully collaborate with PCPs in primary care clinics to provide comprehensive medication management that optimizes pharmacotherapy for patients with medical and psychiatric conditions. Continued efforts are needed to promote interdisciplinary approaches to provide comprehensive medication management services for patients with both psychiatric and medical disorders.

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Comprehensive medication management provided by clinical pharmacists as part of multidisciplinary care teams has been shown to improve outcomes in the management of chronic disease states such as hypertension, diabetes, and depression.[1–3] Several studies have documented decreased medication errors, achievement of therapeutic goals, and improved patient adherence when qualified pharmacists are actively involved in multidisciplinary care teams.[4] Clinical pharmacist integration is particularly valuable for patients with multiple medical and psychiatric conditions who are taking complex medication regimens.[2,5] Studies show high rates of depression and anxiety in patients managed in primary care settings,[6–8] and these symptoms impact treatment and outcomes of chronic medical conditions. A lack of integration of behavioral health and primary care can contribute to suboptimal management of chronic medical and psychiatric conditions.[5]

Psychiatric pharmacists, with a year of training in general clinical practice and a year of specialized training in psychiatry,[9] are uniquely positioned to integrate optimal medication therapy for both psychiatric and medical conditions while collaborating with primary care teams.[5,10] In fact, psychiatric pharmacist integration in primary care clinics has been shown to improve access to medication therapy management for primary care patients with comorbid psychiatric illnesses.[8,10–13] Patient and provider acceptance and types of psychotropic drug therapy interventions have been described in several studies,[8,10–13] but the types of nonpsychiatric medication interventions are currently unknown.

LEGISLATION AFFECTING PHARMACISTS IN PRIMARY CARE PRACTICE SETTINGS

The passage of the Affordable Care Act grants citizens access to guaranteed health care coverage. Under the Act, health plans are required to provide a comprehensive package of items and services, including ambulatory patient services, mental health services, and substance use disorder services. It is anticipated that the number of insured patients will grow, leaving an already strained health care system left to welcome these newly insured patients. The recent passage of California senate bill 493 (SB 493) into law declares pharmacists to be health care providers within the state. The new law states that if pharmacists meet 2 of 3 criteria—have residency training, have worked under a collaborative practice agreement for 1 year, or have board certification in their area of expertise—they can be considered an advanced practice pharmacist.[14] An advanced practice pharmacist can participate in the evaluation and management of chronic disease states as an active care team member providing comprehensive medication management.[4]

Clinical Points

- Problems with medication adherence, efficacy, and safety were the most significant nonpsychiatric drug therapy interventions made by the psychiatric pharmacist while providing comprehensive medication management.
- Patients with diabetes, hypertension, or gastroesophageal reflux and those taking ≥ 9 medications or with ≥ 5 medical diagnoses were more likely to need medication optimization.
- Recording recommendations in the electronic health record is no substitute for direct communication between providers, and it limits the ability to establish professional rapport.

SPECIALIZED PHARMACISTS PRACTICING WITHIN PRIMARY CARE PRACTICE SETTINGS

Currently, the Board of Pharmacy Specialties certifies pharmacists at the advanced practice specialty level in 6 specialties: ambulatory care pharmacy, nuclear pharmacy, nutrition support pharmacy, oncology pharmacy, pharmacotherapy, and psychiatric pharmacy.[15] Board-certified psychiatric pharmacists have demonstrated their abilities to effectively manage psychiatric medications and have developed empathetic and compassionate interview techniques that ultimately help empower patients to become proactive in regard to their treatments.[5] This therapeutic alliance with patients can be utilized as a tool in evaluating all medical disorders, including diabetes, hypertension, dyslipidemia, and pain.

Following the identification of need for greater access to psychiatric services, the University of Southern California (USC) Psychiatric Pharmacy Clinic was established at the Center for Community Health in 2008 as a once-weekly clinic in which a psychiatric pharmacy resident operates under a physician-signed collaborative practice agreement with supervision from USC psychiatric pharmacy faculty and primary care physicians. The Center for Community Health is located in the heart of downtown Los Angeles' skid row, a 10-block area in which more than 18,000 homeless individuals reside at any given time, many of whom are diagnosed with a mental illness.[16] The clinic is designated as a patient-centered medical home, level 2, with 1 electronic health record accessible by an integrated multidisciplinary team. This model fosters collaboration between primary care providers (PCPs) (which include 4 internal medicine physicians and 2 physician assistants), a podiatrist, an optometrist, pharmacists, nurses, and other allied health professionals. Over 32,000 patients are served annually, and 85% of these patients are below the federal poverty level. This health center is a Health Center Program grantee under 42 USC 254b and a deemed Public Health Service employee under 42 USC 233(g)-(n). As such, the clinic is considered to be a safety net clinic.

The collaborative practice agreement allows for the pharmacy resident to assess and modify medications related to treatment of psychiatric disorders, as well as order and interpret laboratory values pertinent to those disorders and medications for patients enrolled in this safety net clinic. Previous survey data have demonstrated the positive patient perception of these services, as well as positive providers' perceptions on the need for and capabilities of a psychiatric pharmacist to manage psychiatric medications in the safety net clinic.[12,17,18] An additional study demonstrated the impact of a psychiatric pharmacy clinic by reporting improved Clinical Global Improvement and Patient Health Questionnaire scores and quantifying the types of psychiatric interventions most often required.[10]

PSYCHIATRIC PHARMACIST INTERVENTIONS FOR NONPSYCHIATRIC MEDICAL CONDITIONS

The National Association of State Mental Health Program Directors issued a report entitled, "Morbidity and Mortality in Patients With Severe Mental Illness." This report explains that, on average, individuals with serious mental illness have a 25-year shorter lifespan than those without serious mental illness, largely due to preventable health conditions.[19] Individuals suffering from 1 or more chronic medical conditions have a 41% increase in the risk of having any recent psychiatric disorder.[7,20] Patients with mental illness, on average, will have 2–3 times higher rates of diabetes, cardiovascular disease, respiratory disease, and infectious diseases.[19]

Individuals with mental illness, on average, have fewer routine preventative services,[21] lower rates of cardiovascular procedures,[22] and worse diabetes care.[23–25] Other factors influencing morbidity and mortality in patients with mental illness include co-occurring substance abuse (including smoking/alcohol), lack of exercise, and lack of stable housing, as many reside in transitional living facilities and homeless shelters. Seventy-five percent of patients with mental illness smoke cigarettes compared with 23% of the general population.[26]

COMPREHENSIVE MEDICATION MANAGEMENT: A PRIMARY CARE PRACTICE SETTING PHILOSOPHY

In 2010, a resource guide entitled, "The Patient-Centered Medical Home: Integrating Comprehensive Medication Management to Optimize Patient Outcomes" was released by the Patient-Centered Primary Care Collaborative.[2] Comprehensive medication management is based on the universal principles of a patient care practice in the context of other medical professions. Within the practice of comprehensive medication management, all of the patient's medications are assessed for indication (appropriateness), effectiveness, safety, and adherence. The goal of comprehensive medication management is to identify, resolve, and prevent drug therapy problems. Within this model, the patient is placed at the center of all services, and health care providers collaborate to optimize care.

Pharmacists have been identified as an essential component of comprehensive medication management within the medical home model. A clinical pharmacist–run comprehensive medication management service was implemented in 5 care model innovation clinics within the

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University of Minnesota health system to compare impact on health outcomes and cost versus clinics without pharmacists providing comprehensive medication management. Following 15 months, it was concluded that 5 clinics implementing comprehensive medication management, as opposed to standard of care services, were able to demonstrate a 14.7% change in expenditures per member per month compared to 3.7% in the control group.[1] The main drug therapy–related problems resolved by pharmacists providing comprehensive medication management included suboptimal dosage, missing drug therapy, adherence issues, or tolerability/safety management. The patient population comprised patients with the following general primary care diagnoses: diabetes, hypertension, dyslipidemia, and depression.

The primary objective of this study is to describe the nonpsychiatric medication interventions made by the psychiatric pharmacy resident during the provision of comprehensive medication management for patients referred for management of mental health diagnoses. This study will provide new information on medication therapy issues uncovered through collaboration of a psychiatric pharmacist and primary care teams. The secondary objective is to assess primary care providers' opinions and perceptions of optimization of nonpsychiatric medications by psychiatric pharmacists.

METHOD

Primary Objective

A chart review of patients enrolled in the USC Psychiatric Pharmacy Clinic at the Center for Community Health was conducted. In 2008, a collaborative practice agreement was established at the Center for Community Health that describes the role and responsibilities of the psychiatric pharmacist in managing psychiatric diagnoses of patients enrolled in primary care services within the clinic. Primary care providers have the ability to refer any patient with an established psychiatric diagnosis to the psychiatric pharmacy clinic for medication management. The collaborative practice agreement was updated to include established psychiatric rating scales in July 2010. In July 2013, updates included the new *DSM-5* diagnoses, newer psychotropic medications, and the patient care process of comprehensive medication management. All patients referred to the weekly USC Psychiatric Pharmacy Clinic between July 1, 2013, and January 10, 2014, were screened for inclusion and exclusion criteria. Patients > 18 years of age, referred to and seen at least once at the clinic were included. Patients who were referred but who never presented for face-to-face interview were excluded, as were patients who received consultations who were not currently enrolled in the clinic. Data were extracted from the electronic health record. Baseline demographics collected included age, race, gender, number of psychiatric diagnoses, number of comorbid medical conditions, number of medications, and history of substance abuse.

Progress notes for encounters between July 1, 2013, and January 10, 2014, entered by the psychiatric pharmacy resident were reviewed for documentation of medical interventions. Medication-related problems pertaining to nonpsychiatric medications were recorded. Any nonpsychiatric medication–related problem documented in the progress note was stratified according to type. These types included (1) medication reconciliation (verification of medications patient is actually taking including the dose and schedule), (2) appropriateness (proper indication/diagnosis, compelling indications for medications), (3) efficacy (adequate dose to manage symptoms), (4) tolerability (side effects and management), (5) safety (laboratory findings, contraindications, boxed warnings, drug-drug interactions, drug-disease interactions), and (6) convenience (concerns affecting adherence). These subtypes of interventions were designated to mirror the basic practice principles of comprehensive medication management described in the Patient-Centered Primary Care Collaborative' s guide.

The number of interventions accepted by the PCP was assessed by review of PCP SOAP (Subjective, Objective, Assessment, and Plan) notes. The PCP responses to interventions were stratified into 1 of 3 categories: (1) accepted as proposed, (2) partially accepted (adjustment made by PCP but not exact recommendation given by PharmD), and (3) not accepted, or patient lost to follow-up (no subsequent MD visit following PharmD visit).

Factors associated with a higher likelihood of interventions from the psychiatric pharmacist were determined by comparing the number of interventions among like and dissimilar groups. For example, the number of interventions in patients with multiple psychiatric diagnoses was compared to that in patients with only 1 psychiatric diagnosis. Psychiatric diagnoses were defined as any psychiatric disorder (as defined by *DSM-5* criteria) diagnosed by a physician, psychiatrist, or psychologist.

The number of interventions in patients with a history of substance abuse was compared to that in patients without a history of substance abuse. Substance abuse was defined as dependence/abuse of alcohol, marijuana, cocaine/crack, heroin, phencyclidine, lysergic acid diethylamide, inhalants, or other illicit street drugs.

Comparisons of the number of interventions were also analyzed for groups divided by number of medical diagnoses (≤ 4 versus ≥ 5 medical diagnoses) and number of medications (≤ 8 medications versus ≥ 9 medications). Cutoffs were determined with guidance from the Centers for Medicaid and Medicare Services criteria for medication therapy management services. Furthermore, differences in number of interventions were analyzed for groups divided by various comorbid medical conditions: pain, diabetes, hypertension, dyslipidemia, obesity (body mass index ≥ 30 kg/m^2), gastroesophageal reflux disease, and asthma/chronic obstructive pulmonary disease.

Secondary Objective

An anonymous provider survey was administered by an impartial administrative assistant at the monthly Center for Community Health clinic provider meeting. The

Table 1. Baseline Demographics of the 44 Patients Included in the Study[a]

Demographics	
Age, mean ± SD	51 ± 8
Gender	
Men	21 (47.7)
Women	23 (52.3)
Race	
Black	24 (54.5)
Hispanic	12 (27.3)
White	6 (13.6)
Asian	2 (4.6)
≥ 2 Psychiatric diagnoses	13 (30.0)
History of substance abuse	28 (63.6)
Most prevalent types of comorbid medical conditions[b]	
Pain	34 (77.3)
Hypertension	27 (61.4)
Obesity	25 (56.8)
Dyslipidemia	21 (47.7)
Gastroesophageal reflux disease	17 (38.6)
Diabetes	16 (36.4)
Asthma/chronic obstructive pulmonary disease	14 (31.8)
Allergies	11 (25.0)
Overweight	9 (20.5)
Anemia	8 (18.2)
Total comorbid conditions, mean ± SD	5 ± 2

[a]Data are presented as n (%) unless otherwise specified.
[b]Less common medical conditions included hypothyroidism (n = 5); hepatitis C, benign prostatic hyperplasia, gout (each with n = 4); epilepsy, congestive heart failure, coronary artery disease (each with n = 2); and atrial fibrillation, hiccups, and glaucoma (each with n = 1).

questionnaire was distributed to all primary care providers (4 physicians and 2 physician assistants) and was collected by the same individual to ensure confidentiality and to avoid influencing providers' responses. The survey contained Likert scale questions, in which choices included strongly agree, agree, neutral, disagree, and strongly disagree.

Ethics Review

Institutional review board approval was obtained for this investigation.

Statistics

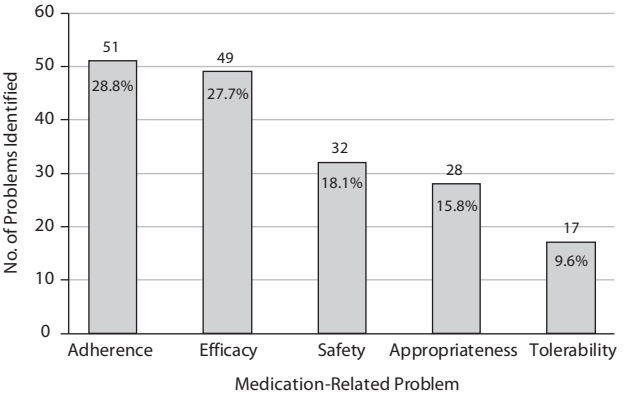
Descriptive statistics were utilized to determine incidence rates of comorbid medical conditions, medical interventions, PCP acceptance status of interventions, and survey results. Wilcoxon test (nonparametric *t* test) was used to determine differences in interventions in groups divided by presence of substance abuse and number of psychiatric diagnoses. Two-sample *t* test was used to assess the difference in total nonpsychiatric medication interventions. The χ^2 or Fisher exact test was used to determine the association of comorbid condition and nonpsychiatric medication interventions. Statistical significance was determined at the .05 level.

RESULTS

Primary Objective

Demographic results are presented in Table 1. The study included 44 patients, and 177 nonpsychiatric medication interventions were documented. The number of each type of intervention is depicted in Figure 1. Fifty interventions required PCP approval, and 45% of these interventions were

Figure 1. Nonpsychiatric Medication–Related Problems (no. = 177) Identified by the Psychiatric Pharmacist



either accepted as written (25%) or partially accepted (20%). Fifty-five percent of interventions were not accepted. Having a diagnosis of diabetes ($P < .0001$), hypertension ($P < .0001$), gastroesophageal reflux disease ($P < .0001$), ≥ 9 medications ($P < .0001$), or ≥ 5 medical diagnoses ($P < .0001$) were all associated with increased mean number of interventions (Table 2). Patients with an asthma/chronic obstructive pulmonary disease diagnosis were more likely to have interventions associated with appropriateness ($P = .0036$), but no statistical difference was seen for total interventions ($P = .3879$). Patients with a dyslipidemia diagnosis were more likely to have interventions associated with efficacy ($P = .0042$), but also had no statistical difference for total interventions ($P = .4678$). Pain disorders ($P = .2729$) and obesity ($P = .1486$) were not associated with any statistical difference in total interventions compared to those without these disorders. No correlation was observed between number of interventions and presence of substance abuse ($P = .7221$) or number of psychiatric diagnoses ($P = .3609$).

Secondary Objective

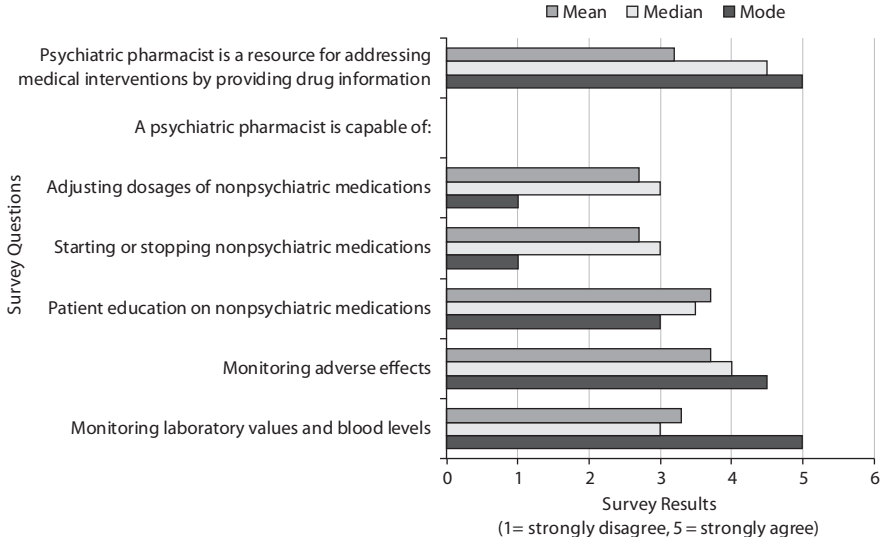
All PCPs (100%, n = 6) in the clinic completed the anonymous survey. Of the PCPs, 66% (strongly agree 50%, agree 16%) viewed the psychiatric pharmacist as a resource for addressing nonpsychiatric medication interventions by providing drug information. Figure 2 contains survey responses from PCPs. Pertaining to activities toward nonpsychiatric medications, PCPs were approximately neutral. Where 1 = strongly disagree and 5 = strongly agree, PCPs averaged 3.67 for patient education and monitoring of adverse events, 3.33 for monitoring of laboratory values, and 2.67 for adjusting doses or starting/stopping medications. Figure 3 depicts the conditions in which PCPs were most comfortable allowing psychiatric pharmacists to comanage chronic conditions. Of the PCPs, 50% (strongly agree 33%, agree 17%) felt as if the psychiatric pharmacist's progress notes in the medical record were useful and informative in formulating treatment decisions. One-third of PCPs (33%) did not read the notes, and 17% felt neutral toward using the notes.

Table 2. Patient Characteristics Associated With Increased Medical Interventions

	Characteristic	Comparator	*P* Value
	≥ 5 Medical diagnoses (n = 75)	< 5 Medical diagnoses (n = 59)	
Total medical interventions, sum (mean ± SD)	212 (3 ± 1.6)	99 (2 ± 0.8)	< .0001*
	≥ 9 Medications (n = 80)	< 9 Medications (n = 54)	
Total medical interventions, sum (mean ± SD)	221 (3 ± 1.5)	90 (2 ± 0.8)	< .0001*
	Hypertension (n = 85)	No hypertension (n = 49)	
Total medical interventions, sum (mean ± SD)	241 (3 ± 1.5)	70 (1 ± 0.6)	< .0001*
	Gastroesophageal reflux disease (n = 54)	No gastroesophageal reflux disease (n = 80)	
Total medical interventions, sum (mean ± SD)	160 (3 ± 1.6)	151 (2 ± 1.0)	< .0001*
	Diabetes mellitus (n = 38)	No diabetes mellitus (n = 96)	
Total medical interventions, sum (mean ± SD)	125 (3 ± 1.8)	186 (2 ± 1.0)	< .0001*

*Indicates statistical significance.

Figure 2. Primary Care Provider Survey Results (n = 6) Regarding Psychiatric Pharmacist Management of Nonpsychiatric Medical Conditions

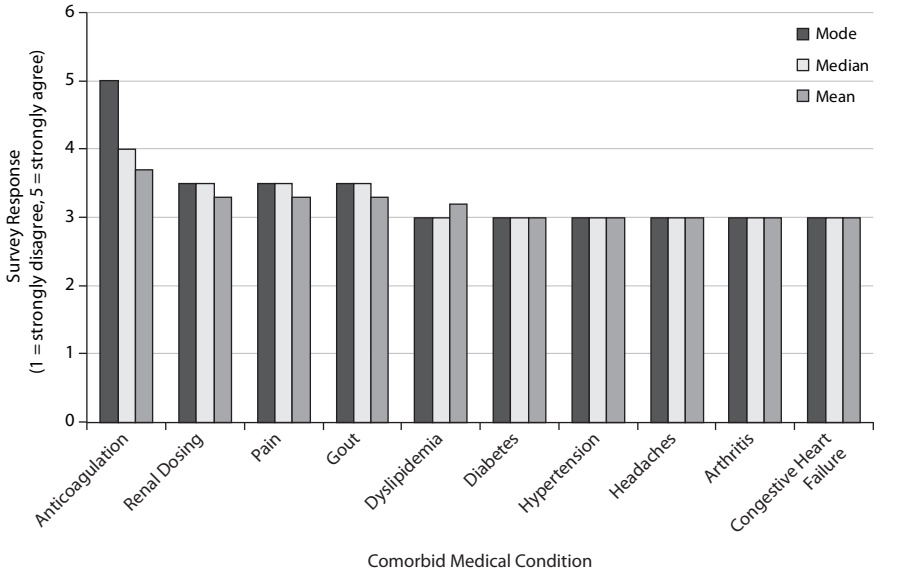


DISCUSSION

A postgraduate year 2 psychiatric pharmacy resident practicing comprehensive medication management in a once-weekly clinic was able to identify over 170 drug-related problems within a cohort of 44 patients. This finding translates to approximately 1.3 nonpsychiatric medication interventions per encounter. In 1 case example, a 55-year-old man was referred for management of depression. After reviewing laboratory results and finding an international normalized ratio of 8.1, the psychiatric pharmacist noted that sertraline (recently initiated by the PCP) was most likely causing the higher ratio due to a drug interaction with warfarin. The drug interaction was discussed with the patient's PCP, and the warfarin regimen was changed per the psychiatric pharmacist's recommendation. A second example is of a 50-year-old woman with depression and hypertension, who presented for her follow-up visit at the USC Psychiatric Pharmacy Clinic. After review of her vital signs, the psychiatric pharmacist discovered that the patient was experiencing hypertensive urgency. The patient's PCP was notified, and a 1-time dose of antihypertensives was administered during her visit with the psychiatric pharmacist. The patient was found to be nonadherent to her antihypertensives, and a thorough counseling session stressing the importance of medication adherence was conducted.

The observation that patients with multiple medical and psychiatric diagnoses, taking higher numbers of medications, received more interventions adds support to the existing literature showing that this group can benefit most from a pharmacist's comprehensive medication management services. It has been established in previous studies that depression has a negative impact

Figure 3. Primary Care Provider (n = 6) Attitudes Toward Psychiatric Pharmacist Management of Comorbid Medical Conditions



on adherence to antidiabetic medications, lipid-lowering agents, antihypertensives, and inhalers.[27–31] Our study is consistent with these findings in that patients enrolled in the psychiatric pharmacy clinic were more likely to receive interventions addressing nonadherence or misadherence and interventions pertaining to suboptimal efficacy of multiple classes of medications.

Patients enrolled in the Psychiatric Pharmacy Clinic had more frequent access to the psychiatric pharmacist than to their PCP. Often, a patient would see the psychiatric pharmacist multiple times prior to seeing his or her PCP for the follow-up visit. Multiple factors impact access to care for patients with mental illness, including shortage of providers,[4] lack of available appointment, or an impaired patient-provider relationship.[32,33] Patients within this urban safety net clinic were no exception.

The Center for Community Health is an urban safety net clinic designated as a level 2 patient-centered medical home with a large proportion of patients with a history of substance abuse. Nearly 64% of patients enrolled in the USC Psychiatric Pharmacy Clinic have a history of substance abuse. Surprisingly, a history of substance abuse was not associated with an increased number of drug therapy problems. These results seem counter-intuitive given that literature demonstrates an increase in health care utilization often without an increase in quality of care.[34] Individuals with co-occurring mental illness and substance abuse are more likely to have poorly controlled chronic disease states, including diabetes, respiratory illness, cardiovascular disease, and infectious disease.[35–37] A possible explanation as to why Center for Community Health patients with substance abuse lacked a statistical difference in number of interventions may be due to the large number of patients actively involved in substance abuse recovery, such as substance abuse counseling and sober living residential center treatment.

Slightly greater than half of the interventions requiring PCP approval according to the collaborative practice agreement were not accepted, most likely due to decreased number of patient encounters with the PCP compared to the psychiatric pharmacist and one-third of PCPs not reading the psychiatric pharmacist's progress notes. Of note, only 50 of 170 interventions required physician approval. Approximately 120 interventions were able to be addressed directly by the psychiatric pharmacist. These interventions included actions such as clarifying proper instructions, side effect troubleshooting, and addressing polypharmacy (ie, continued use of discontinued medications, therapeutic duplication, or multiple over-the-counter medications). The full value of a psychiatric pharmacist implementing comprehensive medication management practice is yet to be recognized by a majority of staff, evidenced by opinion survey averages being centered around "neutral." Possible explanations for these neutral opinions include difficulty establishing rapport with PCPs when only being present onsite once a week or barriers in effectively communicating the intervention in the progress note alone.

The PCPs did recognize that the psychiatric pharmacist may be helpful in co-managing pain conditions. Depression may exacerbate pain, and pain may exacerbate depression. There appears to be a well-established reciprocal relationship between the 2 disorders.[38–40] This reciprocity may provide further opportunities for health care teams to utilize psychiatric pharmacists. Interestingly, despite pain being the most common comorbid condition, there was not an increased rate of nonpsychiatric medication interventions aimed at managing pain.

Initiation of psychiatric pharmacy services into a patient-centered medical home continues to be an evolving process at the Center for Community Health. Several lessons have emerged from this research: (1) the electronic health

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record is not the best way to communicate interventions, as providers may not read each other's notes, and it does not allow for establishing professional rapport; (2) problems with medication adherence, efficacy, and safety were the most significant nonpsychiatric drug therapy problems identified in patients with psychiatric and medical conditions; and (3) patients with diabetes, hypertension, and gastroesophageal reflux disease and those taking ≥ 9 medications and with ≥ 5 medical diagnoses are more likely in need of drug therapy optimization.

CONCLUSIONS

A psychiatric pharmacist implementing comprehensive medication management services can identify significant nonpsychiatric medication interventions, while optimizing pharmacotherapy for psychiatric conditions and coordinating care with clinic providers. The PCP perceptions of a psychiatric pharmacist providing nonpsychiatric medication interventions remain mixed and could be related to suboptimal communication between PCPs and the psychiatric pharmacist. There was a consensus among providers that the psychiatric pharmacist was helpful in enhancing patient education, ensuring appropriate monitoring and serving as a resource for drug information for clinic staff and patients. More active participation of the psychiatric pharmacist at clinic meetings is planned in an effort to improve communication.

Drug names: sertraline (Zoloft and others), warfarin (Coumadin, Jantoven, and others).

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