

# Impact on an integrated psychiatric pharmacy service in a primary care clinic

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## Abstract

**Introduction:** Traditionally, clinical pharmacists have been employed in the primary care setting to help manage chronic disease states, such as diabetes and hypertension. Although the benefits of pharmacists managing chronic conditions have been extensively published, published data for clinical pharmacist mental health services in primary care is limited to Veterans Affairs populations. This article describes a practice model in which pharmacists are providing psychiatric medication management and consultation in a federally qualified health center.

**Methods:** A period of 1 year from the psychiatric pharmacy service was analyzed from April 1, 2017, to March 31, 2018. Reports were generated that included information about psychiatric pharmacy consults, 1-on-1 psychiatric pharmacy visits, and psychotropic medication prescribing/dispensing trends. Each consult was further reviewed for additional details, including patient characteristics, medications prescribed, psychiatric diagnoses involved, and actions taken.

**Results:** A review of this pharmacy service showed significant pharmacist involvement in psychiatric medication consults and 1-on-1 visits. Common disease states consulted on were depressive disorders, anxiety disorders, and neurologic disorders, which reflects psychiatric disease states commonly seen in primary care practice. Provider satisfaction survey results showed that the service was valued and that providers felt their comfort in prescribing psychotropic medications improved due to the service.

**Discussion:** The service described here exemplifies the potential for pharmacists in the ambulatory care setting to expand beyond the traditional chronic disease state management. It also speaks to a potential role for psychiatric pharmacists in the primary care setting.

**Keywords:** psychiatric pharmacy, clinical pharmacy, primary care

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## Introduction

Mental health concerns, particularly anxiety and depression, affect millions of Americans every year. In 2016, more than 16 million American adults experienced at least 1 major depressive episode, and 19.1% experienced an anxiety disorder.<sup>1,2</sup> Federally qualified health centers (FQHCs) are safety-net services and clinics associated with the Health Resources and Services Administration, that were created to provide primary care services to medically underserved urban and rural communities. Federally qualified health centers care for more than 28

million Americans each year.<sup>3</sup> In 2017, Health Resources and Services Administration reported that 26.5 million visits to community health centers included a mental health diagnosis, such as anxiety, depression, or substance use-related disorder.<sup>4</sup>

Despite the growing burden of mental health, psychiatric care, particularly medication management, in primary care clinics, such as FQHCs, can be limited. Nearly two thirds of primary care providers reported that they could not get outpatient mental health care for patients.<sup>5</sup> According to the National Institute of Mental Health,<sup>1</sup> in 2016 only 50% of adults and 21% of adolescents with a diagnosis of depression received medication. Decreased access to care can occur for several reasons, including lack of access to psychiatrists.<sup>5</sup> Even if the patient can be referred to a psychiatrist, it can often take months for a patient to see this clinician. Clinical pharmacists are recognized as medication-use experts and are well positioned to improve patient access to mental health medications through collaborative practice agreements (CPAs) and consult-based services and through increasing education to primary care providers (PCPs).

Traditionally, clinical pharmacists have been employed in the primary care setting to help manage chronic disease states, such as diabetes and hypertension. The benefit of pharmacists managing chronic conditions have been extensively published.<sup>6-10</sup> However, published data<sup>11-13</sup> for clinical pharmacist mental health services in primary care is limited to Veterans Affairs populations. At Salud Family Health Centers (Salud), clinical pharmacists have been managing hypertension, anticoagulation, and diabetes since 2013. In 2015 a dual-board certified pharmacist in both psychiatric and ambulatory care pharmacy joined the clinical pharmacy team as part of an effort to expand Salud's integrated care teams and increase access to mental health care alongside PCPs and behavioral health providers (BHPs). Behavioral health providers include psychologists (PhDs and PsyDs), licensed clinical social workers, and their trainees. As nearly 1 in 11 Americans receive their primary care from FQHCs,<sup>3</sup> increasing access to mental health care is imperative in this setting.

## Methods

Salud Family Health Centers are recognized as patient-centered medical homes and annually serve more than 77 000 patients from 14 primary care clinics and a mobile unit. In 2017, 91% of Salud patients were at or below 200% of the federal poverty level, 62% of patients identified as Hispanic, and 35% of patients preferred to receive care in a language other than English, predominantly Spanish.<sup>14</sup> Each site represented in this study has an in-house 340B pharmacy at which patients are able to

receive medications at a reduced cost. In order to meet the need of this patient population, CPAs were developed allowing pharmacists to initiate, change, and/or discontinue medications for depression, anxiety, and bipolar disorder. Pharmacists were also available for psychiatric medication consults for PCPs and BHPs. This service was run by 2 bilingual clinical pharmacists (both board certified in ambulatory care, 1 board-certified in psychiatric pharmacy), postgraduate year 2 ambulatory care pharmacy residents, and pharmacy students.

A period of 1 year from the psychiatric pharmacy service was analyzed from April 1, 2017, to March 31, 2018. Reports included information about psychiatric pharmacy consults, 1-on-1 psychiatric pharmacy visits, and psychotropic medication prescribing/dispensing trends. Each consult was manually reviewed for patient characteristics, medications prescribed, psychiatric diagnoses involved, and actions taken. If patients had multiple consults, only their most recent consult were included. A comparator year of April 1, 2015, to March 31, 2016, was used to represent data from a time period before psychiatric pharmacy services were initiated at Salud. This comparator year was used to compare prescribing and dispensing trends. For dispensing trends, medications were grouped into 3 categories: benzodiazepines (alprazolam, clonazepam, lorazepam), selective-serotonin reuptake inhibitors (SSRIs; fluoxetine, sertraline, citalopram, escitalopram), and mood stabilizers (aripiprazole, quetiapine, lamotrigine).

Two main pharmacy interventions were analyzed: psychiatric pharmacy consults and 1-on-1 psychiatric pharmacy visits. For the purpose of this study, psychiatric pharmacy consults are defined as queries initiated by PCPs either in the electronic health record via a "telephone encounter" function or in-person during clinic hours. The in-person consults occurred during a patient's visit with the PCP. Consults that included a psychiatric diagnosis either as a primary or secondary diagnosis were the focus of this analysis. One-on-one psychiatric pharmacy visits are defined as in-person, face-to-face, visits scheduled solely with the pharmacist. These visits were either 30 or 60 minutes in length, depending on whether it was a follow-up or initial visit.

Additionally, the clinical pharmacy administered a 12-question, anonymous provider satisfaction survey via an online survey program, Qualtrics (Provo, UT). Four of the 12 questions pertained to the usage and perceived benefit of psychiatric pharmacy services. Two questions asked how often providers used the psychiatric pharmacy referral or consult service. The other 2 questions asked if clinical pharmacists had helped providers to be more comfortable prescribing psychiatric conditions and if clinical pharmacists had helped to increase their psychi-

atric medication knowledge. The rating scale for these 2 questions was a 5-point scale from *strongly agree* to *strongly disagree*.

This study was reviewed and approved by the Colorado Multiple Institutional Review Board.

## Results

A total of 294 psychiatric pharmacy consults were identified in the 12-month study period. Thirty-two consults were excluded to include only the most recent consult for each patient. A further 14 consults were excluded due to inadequate documentation. A total of 248 consults were analyzed for further details. Psychiatric pharmacy consults accounted for 20% (248/1242) of all consults done by pharmacists at these clinics, including consults for other disease states. Table 1 describes the characteristics of the patients serviced, including their psychiatric diagnoses.

Consults that were done while the patient was physically in-clinic for a PCP visit accounted for 78.6% (195/248) of the total consults. During these consults, the pharmacists may have met with the patient, their provider, or both. The remainder of the consults (53/248) were documented in the electronic record via the “telephone encounter” function after the patient had already been seen in clinic. Table 2 describes actions taken and psychotropic classes involved during consults. A total of 37% of patients (91/248) were receiving care by a clinical psychologist or social worker. This was defined as having met with the clinician within 3 months before or after the date the psychiatric pharmacy consult was completed.

Regarding 1-on-1 psychiatric pharmacy visits with clinical pharmacists, 47 patients had 102 visits during the time period analyzed. These 47 patients and 102 visits accounted for 11% and 5%, respectively, of the pharmacists’ overall 1-on-1 visits during the year. These 47 patients all had a diagnosis of depressive disorder, anxiety disorder, or bipolar depression and were treated based on the existing CPAs. Pharmacists at these clinics also see patients under CPAs for chronic disease state management of diabetes, hypertension, and hyperlipidemia. Of note, if a pharmacist is seeing a patient for diabetes and finds their depression to be untreated, it is possible for them to treat the untreated condition.

The provider satisfaction survey was completed by 13 out of 18 primary care providers (6 physicians, 7 family nurse practitioners or physician assistants). Eight out of 13 indicated that they refer patients to clinical pharmacy for psychiatric medication management. All 13 respondents indicated that they use clinical pharmacy for psychiatric

**TABLE 1:** Characteristics of patients involved in psychiatric pharmacy consults (N = 248)<sup>a</sup>

Characteristic	No.
Female, %	70
Average age, y (range)	44.01 (9-96)
Language preference	
English	82
Spanish	17
Ethnicity	
Non-Hispanic	61
Hispanic	39
Insurance type	
Medicaid	63
Medicare	16.5
Commercial	10.5
Uninsured	10
Primary psychiatric diagnosis	
Depressive disorder	29.8
Anxiety disorder	20.2
Neurological disorder	14.1
Bipolar	10.5
PTSD	5.6
Schizophrenia	5.2
Insomnia	5.2
ADHD	3.6
Substance use disorders	3.2
Dementia	2
Autism	0.4
Secondary psychiatric diagnosis	
Anxiety disorders	39.9
Depressive disorder	31.9
Neurological disorders	7.2
Insomnia	7.2
PTSD	3.6
Bipolar	3.6
Schizophrenia	2.9
ADHD	2.2
Dementia	0.7
Substance use disorders	0.7

ADHD = attention-deficit/hyperactivity disorder; PTSD = posttraumatic stress disorder.

<sup>a</sup>All values are percentages with the exception of the average age range.

consults with 4 of them stating they use the service 1 to 3 times per week, and the rest used them 1 to 3 times per month. Eleven of the primary care physicians strongly agreed that clinical pharmacists had made them more comfortable in their psychiatric medication knowledge, and 9 respondents strongly agreed that clinical pharmacists had helped them feel more comfortable prescribing

**TABLE 2: Actions taken and psychotropics involved in psychiatric pharmacy consults (N = 248)**

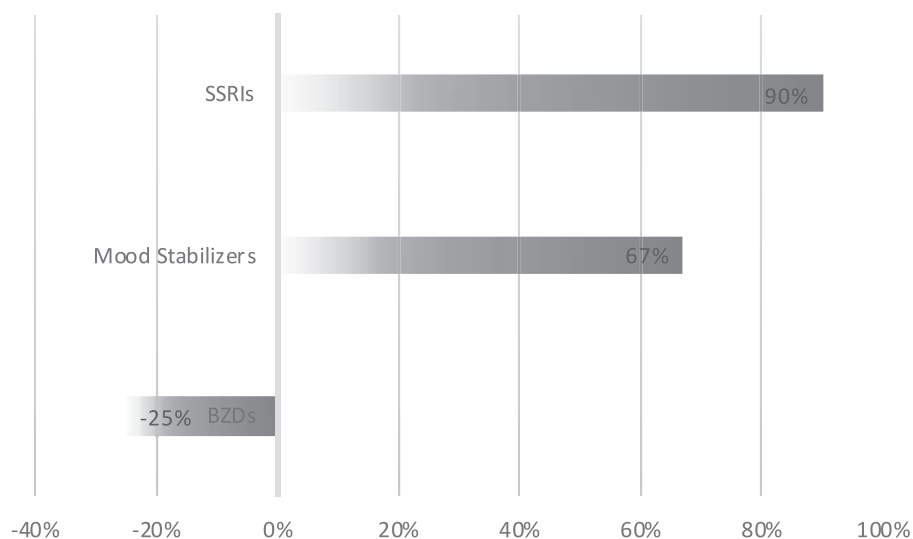
Characteristic	No.
Medication started	147
Provider education	122
Medication stopped	50
Change due to adverse drug reaction	43
Dose increase	33
Laboratory test ordered	29
Patient education	27
Dose decrease	19
Change due to drug-drug interaction	5
Psychotropic involved	
Antidepressant	178
Antipsychotic	39
Antiepileptic/mood stabilizer	32
Non-benzodiazepines anxiolytics	23
Benzodiazepines	22
Pain medications	11
Stimulants	10
Substance use disorders	9
Hypnotics	6
Miscellaneous	8

psychotropics. All 13 respondents strongly agreed that clinical pharmacists made the clinic a better place to work. Additionally, 4 behavioral health providers at the clinics were given the same survey to which all responded using clinical pharmacy for consults and having positive results on their medication treatment knowledge.

A comparison of psychotropic dispensing trends from the pharmacies at these clinics was analyzed. The time frame of our primary psychiatric analyses (April 1, 2017, to March 31, 2018) was compared to a year in which no psychiatric services existed (April 1, 2015, to March 31, 2016). This analysis showed a decrease in benzodiazepine dispensing and an increase in SSRIs, and mood stabilizers. Chi-square tests showed a difference in dispensing trends ( $P < .05$ ), and the standardized residuals showed that the statistical difference appears to be the result of decreased prescriptions in benzodiazepines and an increase in SSRI prescriptions. Further details can be seen in the Figure. Additionally, prescribing trends during the study period showed that a higher percentage of patients with a diagnosis of a depressive disorder received medication treatment with an increase from 49% to 58% ( $P < .0001$ ). Statistical analyses in prescribing trends were done using a 2-tailed Fisher exact test.

## Discussion

The service described here exemplifies the potential for pharmacists in the ambulatory care setting to expand beyond traditional chronic disease state management. It also speaks to a potential role for psychiatric pharmacists in the primary care setting. This service is unique because the 2 pharmacists manage both chronic disease states, such as diabetes and hypertension, along with the psychiatric conditions described. Oftentimes, both psychiatric and physical conditions affect one another; therefore, being able to treat both conditions collaboratively in 1 setting may allow for more cohesive treatment.



**FIGURE: Percentage changes in psychotropic dispensing trends (BZDs = alprazolam, clonazepam, lorazepam; mood stabilizers = aripiprazole, quetiapine, lamotrigine; SSRIs = fluoxetine, sertraline, citalopram, escitalopram)**

Although similar services have been described in the literature,<sup>11,12</sup> their main focus has been on services in the Veterans Affairs system and, therefore, may not be applicable in other settings. Federally qualified health centers and the underserved population often struggle with limited resources, including limited access to behavioral health care. A large majority of patients (63%) seen by clinical pharmacists in this service had state Medicaid insurance, and 10% had no insurance at all. This clinical pharmacy mental health service allows people to obtain care they may not have received otherwise due to limited access to psychiatrists for our Medicaid and uninsured patients and/or long wait times at community mental health centers. Of note, although the entire clinic's patient population is approximately 62% Hispanic, only 39% of this psychiatric pharmacy service's population identified as Hispanic. Efforts could be made by this service to reach out to Hispanics who may not seek out psychiatric treatment due to stigma in their communities.<sup>15,16</sup>

The psychiatric pharmacy consults and 1-on-1 visits accounted for 20% and 11%, respectively, of all patients seen by the pharmacists. Nearly 300 psychiatric medication consults were completed by pharmacists in this time period, which speaks to the volume and need for this type of service. Although the majority of consults and visits were still of a more traditional primary care nature, this demonstrates a place and need for psychiatric pharmacy knowledge in this setting.

The provider satisfaction survey results speak to the value of this clinical pharmacy service. All the respondents either strongly agreed or agreed that pharmacists helped them to improve their comfort with psychotropic medication knowledge. This study is unable to quantify how many patients received improved psychiatric care because of the presence of a pharmacist, but improving prescriber comfort with psychotropics expands access to care as they may be more likely to treat a patient presenting with a psychiatric condition due to their increased medication knowledge and comfort.

There are limitations to the psychotropic dispensing trends as there are other variables that could have affected these results. An increase in total patient volume in the clinics was not accounted for and could be responsible for some of the increase in the prescribing of certain psychotropic medications. There were no policy changes at the clinic or state level regarding prescribing of benzodiazepines during this time period. Although we cannot account for all variables that may have influenced benzodiazepine prescribing, there does appear to be a positive correlation between the time of this service and prescribing patterns at these clinics. The trend of a decrease in benzodiazepine prescribing and an increase in SSRIs points to a more appropriate treatment of psychiatric conditions. The increase in mood stabilizers (quetiapine,

aripiprazole, lamotrigine) could be related to an increase in willingness of PCPs to treat bipolar depression as well as an increase in comfort and knowledge of these medications as evidenced by the survey results discussed earlier.

The increase in percentage of patients with a depressive disorder receiving medication treatment from 49% to 58% aligns with the Healthy People 2020 objective<sup>17</sup> that sets a target improvement of 10%. Healthy People 2020 are benchmarks set by the Office of Disease Prevention and Health Promotion in order to encourage collaborations across sectors and provide measurable objectives and goals that are applicable. This service also helps to target another Healthy People 2020 objective of increasing the proportion of primary care facilities that provide mental health treatment on-site.<sup>17</sup>

An area of improvement is to increase the level of patient involvement with behavioral health providers. Currently, only 37% of patients with a clinical pharmacy psychiatric consult had seen a BHP within 3 months. Pharmacists could improve this rate by verifying the patient is interested in behavioral health counseling during the consult and recommending counseling directly to the patient or even initiating the referral themselves. At this clinic, BHPs are available for screenings and consults at the time of the visit, which makes it easy to involve them in patient care. As such, since the time of data analysis, pharmacists at Salud have begun administering the Patient Health Questionnaire-2 in hope of screening more patients for depression and increasing the number of referrals to BHPs in clinic.

## Conclusion

This collaborative integrated pharmacy service in an FQHC primary care clinic helped to increase access to psychiatric medication management. In the model described here, pharmacists in this setting were involved in psychiatric medication consults and 1-on-1 visits performing medication management under CPAs. This model could expand the role of psychiatric pharmacists into the primary care setting.

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