

Impact of a clinical pharmacist–managed clinic in primary care mental health integration at a Veterans Affairs health system

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Abstract

Introduction: The demand for mental health (MH) services has increased as more veterans seek MH care. At the South Texas Veterans Health Care System, Primary Care Mental Health Integration (PCMHI) was developed to manage patients with uncomplicated MH conditions, including depression, anxiety, or posttraumatic stress disorder (PTSD), within an interdisciplinary primary care (PC) team that includes clinical pharmacy specialists (CPSs). Pharmacists have improved outcomes and access to care for many chronic medical conditions, but limited data demonstrate the impact of MH pharmacists within PC.

Methods: This project evaluated the impact of a PCMHI CPS clinic on managing patients with recent antidepressant initiation and CPS clinic intake from September 2015 through December 2016, including follow-up through January 2017. Markers used to evaluate effectiveness of the service included the Patient Health Questionnaire-9 scores, antidepressant medication possession ratio, number of emergency department visits for MH-related concerns, patient engagement in concurrent psychotherapy, and referrals to specialty MH providers.

Results: A total of 196 unique patients had intake with the PCMHI CPS in the time specified; 172 of these patients were included in analyses. There were 155 patients maintained in PC. Average Patient Health Questionnaire-9 scores decreased from 14.5 to 8.5, with 63 patients (46%) achieving response and 42 patients (31%) achieving remission. The average antidepressant medication possession ratio was 0.93 for all included patients.

Discussion: A PCMHI CPS successfully manages and maintains patients with uncomplicated MH conditions in PC through evidence-based pharmacotherapy, as evidenced by symptom improvement, medication adherence, and low rate of specialty MH referrals.

Keywords: mental health, behavioral health, primary care, primary care mental health integration, pharmacist, pharmacy, clinical pharmacist, clinical pharmacy specialist, depression, anxiety, posttraumatic stress disorder

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Introduction

Depression was the leading cause of disability in the world in 2016.^{1,2} Nearly 44 million adults in the United States have a mental health (MH)–related episode in a given



year, not including substance use disorders.³ Similarly, nearly 2 million Operation Enduring Freedom (OEF)/Operation Iraqi Freedom (OIF)/Operation New Dawn (OND) veterans have become eligible for Veterans Affairs (VA) health care since fiscal year 2002, 58% of whom had received an MH diagnosis, the second most common diagnosis after musculoskeletal ailments.⁴ More than half of these veterans have obtained VA health care which, coupled with the large number of elder veterans experiencing MH conditions, challenges the resources currently available to provide appropriate, timely care for these patients.⁴ Of those with at least 1 MH diagnosis, common MH diagnoses in the OEF/OIF/OND cohort include posttraumatic stress disorder (PTSD; 55.5%), depressive disorders (45.4%), and anxiety disorders (43.7%).⁴ Although specialty MH services are warranted for some, many patients can be effectively managed within primary care (PC).

Interdisciplinary care between physicians and other health care professionals continues to expand, with the goal of optimizing care and improving outcomes. Clinical pharmacy specialists (CPSs) in the VA have scopes of practice with prescribing privileges, acting within interdisciplinary care teams.

The Primary Care Mental Health Integration (PCMHI) service was established VA system-wide in 2007 to facilitate a stepwise approach for managing patients with MH conditions and to meet the needs of patients with uncomplicated MH conditions within PC. Most PC clinics at the South Texas Veterans Health Care System (STVHCS) have at least 1 PCMHI provider, such as a psychologist, social worker, or licensed professional counselor, colocated within the PC teams; some clinics also have an MH-trained CPS working with these therapy providers within the PCMHI construct. The service agreement between PC and MH facilitates treatment planning and helps determine the appropriate location for veterans' MH treatment. Service agreement criteria for specialty MH referral include failure of at least 2 adequate antidepressant medication trials for conditions such as depression, anxiety, or PTSD, if appropriate, prior to referral. Patients with schizophrenia, bipolar spectrum disorders, complicated depression or anxiety (eg, with suicidal ideation or psychosis), or treatment-resistant depression should be referred directly to specialty MH. Patients are typically referred to PCMHI providers at the discretion of the PC provider (PCP) or other PC team members.

The landmark Sequenced Treatment Alternatives to Relieve Depression (STAR*D) study demonstrated the value of adequate medication trials, at least 8 weeks at a maximally tolerated dose, prior to deciding an intervention has failed.⁵ Symptom remission, or complete relief

from a depressive episode, is the goal of treatment because it is associated with a better prognosis. STAR*D demonstrated that after 2 adequate medication trials, the likelihood of remission declines; the greatest chance of remission is roughly 33% with the first adequate medication trial.⁵

A primary objective of a PCMHI CPS within each PC clinic is to manage, and maintain, patients with uncomplicated MH conditions within PC, thereby improving access to specialty MH for patients who meet referral criteria while providing a more general arena in which to obtain MH-related care for patients hindered by barriers, such as social stigma. In clinics with a PCMHI CPS, patients may be referred for medication management. The PCP typically initiates the psychotropic medication, and the CPS then adjusts doses and/or changes medications as indicated within the scope of practice. The CPS manages antidepressants, prazosin for nightmares, noncontrolled antianxiety medications, and sleep aids, as appropriate, based on patients' MH rating scales and verbal report. Scales used during PCMHI visits include the Patient Health Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder-7 scale, and PTSD Checklist. The goal for PCMHI CPS clinics is to transfer care back to the PCP once the patient meets the following criteria: the patient's symptoms are improved and stable based on rating scale scores and/or self-report, the patient is on a stable medication regimen, and finally, based on the CPS's clinical judgment that the patient is appropriate to be transferred back to the PCP for MH care. Alternatively, the patient may be referred for specialty care if indicated. As stated previously, symptom remission (PHQ-9 score <5) is the goal of treatment, although remission is not required for transfer of care back to the PCP, because some patients may verbalize improvement despite a score of 5 or higher.

Primary Care Mental Health Integration teams have been gradually implemented across outpatient clinics at the STVHCS, but no PCMHI CPS clinic has been evaluated to date. This quality improvement project was developed to evaluate one such clinic by reviewing the impact on patients' MH-related symptoms and medication adherence, as well as prevention of emergency department visits and specialty MH referrals. The apparent efficacy may be used later to guide improvements among any of the 5 existing STVHCS PCMHI CPS clinics or to establish PCMHI CPS clinics within other PC clinics in this and other health care systems.

Methods

This project was approved by the local institutional review board and VA research and development offices, and a retrospective chart review of the STVHCS veterans

was performed. The initial study population included patients with antidepressant initiation within the prior 84 days through the time of intake with a PCMHI CPS dated September 1, 2015, through December 31, 2016, as well as all subsequent PCMHI visits through January 31, 2017.

Patients who could not be reached for scheduling or who no-showed to the intake visit were excluded from analyses. Patients were also excluded if they declined psychotropic medication, if already established with specialty MH—that is, psychiatry—at a prior VA location or outside of the VA, or if seen by the PCMHI CPS solely for interim care while awaiting specialty care.

Patients' MH diagnoses and psychotropic medication history were recorded along with the intake date. The index antidepressant prescription, including start date and days' supply plus all subsequent antidepressant prescriptions throughout the study period, were recorded. The total number of PCMHI CPS visits during the study period and transfer status at the end of the study period, any documented psychotherapy while followed by the CPS, baseline and follow-up PHQ-9 scores, MH referrals, and MH-related emergency department visits were also recorded.

The primary outcomes as markers of effectiveness of the service included changes in patient-rated symptoms per PHQ-9 scores from baseline to end point, including those achieving response (50% reduction in score from baseline) and remission; antidepressant medication possession ratio (MPR); and MH referrals. Any emergency department visits for MH-related concerns were also considered, and the correlation between MPR and change in PHQ-9 score was calculated.

Results

A total of 196 patients had an intake visit with the PCMHI CPS during the study period, and 172 of these were included in analyses. The main reason for exclusion was inability to reach the patient to schedule intake or patients not showing for the intake (Figure). The average age of the patients was 45 years, and age ranged from 22 to 82 years. Most patients were referred by a PCP ($n=131$) or psychologist ($n=37$). Common MH diagnoses documented in patients' problem lists or diagnosed by psychologists included depressive disorders, PTSD or unspecified trauma and stressor-related disorder, and anxiety disorders (Table 1). Many patients had more than one relevant diagnosis.

Patients had 1.2 antidepressant medication trials, on average, prior to intake with the CPS. Including the intake

visit, patients averaged 3.7 PCMHI CPS visits. The average PHQ-9 scores for the total population decreased from 14.5, suggestive of moderate depressive symptoms, to 8.5, suggesting mild depressive symptoms. Initial PHQ-9 scores ranged from 1 to 26, and final scores while seeing the CPS ranged from 0 to 23. Of the 136 patients who had at least 2 PHQ-9 scores recorded during CPS follow-up, 63 patients (46%) achieved response and 42 patients (31%) achieved remission.

Per prescription fill dates, quantity, and days' supply, the average MPR for all included patients while followed by the CPS was 0.93 based on prescription fills, more than two thirds of whom had an MPR of 1.00. More than half the patients ($n=110$; 64.0%) were seen for concurrent psychotherapy at some point while seeing the CPS. There was a correlation of 0.23 between MPR and percent change in PHQ-9 score. The vast number of patients were maintained within PC, with few ($n=17$; 9.9%) referred to specialty MH. Of those maintained in PC, however, nearly a third were lost to follow-up with the CPS, a third were still followed by the CPS at the end of the study period, and a third could be transferred back to their PCP during the study period (Table 2). There were 2 emergency department visits, 1 for an antidepressant medication refill and 1 for antidepressant-related side effects.

Discussion

The PCMHI CPS clinic reviewed for this project had an inception date of September 2015, which was also the starting point for this review, and the review continued through January 2017. The other core providers within the PC clinic and the PCMHI team widely used this medication management service, because there were on average at least 12 new patients with CPS intake in each month. The predominant diagnoses of depression, anxiety, and PTSD reflect the most common MH diagnoses documented in veterans who have become eligible for VA health care since 2002.⁴ As stated previously, these are common MH conditions which may not warrant referral to specialty care and instead remain appropriate to manage in PC. This is supported by the finding that most patients seen by the CPS were indeed maintained in PC, a third of whom were stabilized on an effective medication regimen and transferred back to their PCP, the goal of the service. Patients averaged more than 1 antidepressant medication trial prior to intake, but this does not unequivocally indicate adequate trials as set forth in the PC-MH criteria of at least 2 adequate trials warranting specialty MH referral.

This chart review demonstrates the value and unique abilities that a CPS can bring to a clinic's interdisciplinary

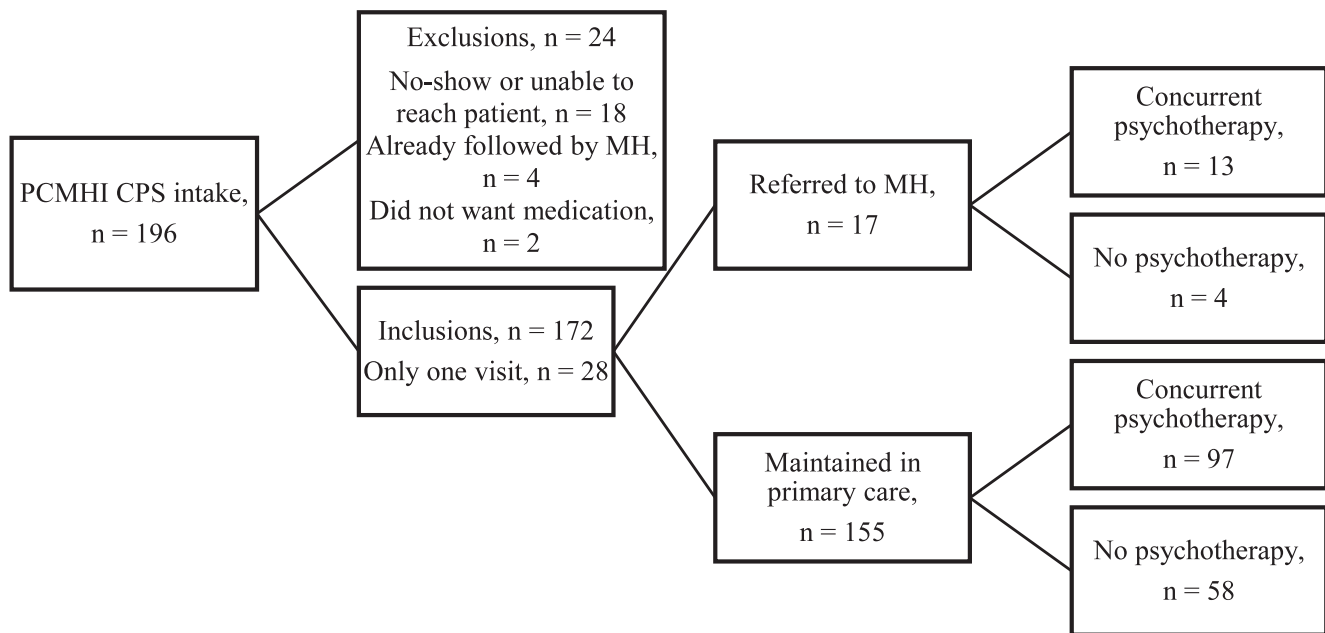


FIGURE: Patient flow diagram (CPS = Clinical Pharmacy Specialist; MH = mental health; PCMHI = Primary Care Mental Health Integration)

team. Not only does the PCMHI CPS help facilitate antidepressant prescribing and provide psychotropic medication management, but the CPS also employs validated assessment tools, such as the PHQ-9, offers closer follow-up than may be afforded with a PCP, and provides evidence-based pharmacotherapy for the management of MH conditions by an expert in the field. Notably, remission rates were like those seen in step one of STAR*D.⁵ More than half the patients seen by the CPS had concurrent psychotherapy. Psychotherapy remains a beneficial, strongly recommended component for the successful management of MH conditions like those included in this study.

This project has some limitations that may affect the interpretation and generalizability of the results. Some

patients had no or only 1 or 2 PHQ-9 scores recorded throughout the duration of CPS follow-up. Missing assessment data may be due to some patients declining to complete the scale(s) or some scores not being recorded in patients' charts despite completion by the patient. True end point scores are unavailable for the 54 patients still followed by the CPS at the end of the study period. The incomplete data may artificially lower the rates of response and remission and thereby impact any possible correlation between MPR and change in PHQ-9 score. Despite a somewhat high MPR average for the patients included in this trial, this does not account for individual patient compliance with treatment, which may also affect the degree of correlation between MPR and change in PHQ-9 score. Furthermore, a few patients had persistently high PHQ-9 scores, which also may have skewed the results. Upon further review, these patients often were either noncompliant with pharmacotherapy and/or psychotherapy, had multiple underlying conditions, or had side effects and/or perceived inefficacy with

TABLE 1: Most common mental health diagnoses at time of Primary Care Mental Health Integration visits

Mental Health Condition	Patients, No. (%) ^a
Depression	109 (63.4)
Posttraumatic stress disorder	64 (37.2)
Anxiety	49 (28.5)
Unspecified trauma and stressor-related disorder	13 (7.6)
Alcohol use disorder	13 (7.6)
Adjustment disorder with mixed depression and anxiety	9 (5.2)

^aNote that the total number of patients included in analyses was 172; the percentages do not add up to 100% because patients may have had more than one mental health diagnosis.

TABLE 2: Patient characteristics during and following the study period

Patient Status	Patients, No. (%)
Maintained in primary care	155 (90.1)
Lost to follow-up	45 (26.2)
Still followed by clinical pharmacy specialist	54 (31.4)
Transferred back to primary care provider	56 (32.6)
Referred to specialty mental health	17 (9.9)
Total	172 (100)

multiple antidepressant medication trials, which all limited the ability to achieve truly adequate trials of these medications. There is no control group for comparison because the PHQ-9 rating scale is not generally used by PCPs or other providers outside of the PCMHI team.

There was a high rate of patients lost to follow-up, and reasons for this may have been patients improving on their own and no longer wanting or needing more intensive medication management offered by the CPS, or patients not wanting to see an MH provider at all, possibly because of the perceived stigma associated with MH treatment.

This project reflects a typical cohort of patients that may be seen within a VA PC clinic, because the 1 CPS clinic reviewed serves patients from 6 different PCPs. Therefore, these findings may be applicable to other clinics within the STVHCS as well as other VA facilities nationwide. Standard, validated rating scales were used to assess patients' symptoms, thereby limiting interviewer bias.

The retrospective chart review and results described display only one facet—antidepressant medication management and corresponding PHQ-9 scores—of PCMHI CPS abilities. The CPS commonly manages PTSD, anxiety, and other MH conditions, but scales for these were not as widely used throughout visits, and therefore were not reported here. Continuing to administer, at a minimum, PHQ-9 scales at every visit and having more specific inclusion criteria may assist with data collection and clinic evaluation in the future.

Conclusion

This review of patients seen from the inception of a PCMHI CPS clinic shows improvements in patients' depressive symptoms, high rates of medication adherence, and low rates of specialty MH referral. A PCMHI CPS appears to have a relevant impact on successfully managing patients with uncomplicated MH conditions in PC through evidence-based pharmacotherapy and, in doing so, may also improve access to specialty MH for veterans who meet such criteria.

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