

# Evaluation of provider response to positive depression screenings and physician attitudes on integrating psychiatric pharmacist services in primary care settings

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## Abstract

**Introduction:** The aim of this study was to identify potential gaps in the management of depression and assess the perceptions of primary care providers (PCPs) toward integrating psychiatric pharmacists into primary care settings.

**Method:** This was a retrospective chart review of patients  $\geq 18$  years of age seen in primary care clinics in Los Angeles County with a documented annual health screening (AHS) between January 1, 2015, through December 31, 2015. Primary outcomes were number and percentage of patients screened for depression with patient health questionnaire (PHQ) assessments, positive depression screenings, and interventions made for positive depression screenings. Secondary outcomes were PCPs' perceptions on management of depression, use of AHS, and roles for psychiatric pharmacists through evaluation of provider survey.

**Results:** Of the patients who received an AHS ( $n = 6797$ ), 63% received PHQ assessments. Of 145 individuals with a positive PHQ-2, 69% had a positive PHQ-9. Greater than 50% of individuals with a positive PHQ-9 had no preexisting depression diagnosis. Seventy-six percent of individuals with a positive PHQ-9 and 78% with reported suicide ideation had no documented intervention. The majority of providers reported there is a role for psychiatric pharmacists in primary care.

**Discussion:** Gaps in the management of depression were identified. Although depression screenings were performed for the majority of individuals receiving an AHS, no documented interventions were made for most of those individuals who screened positive for depression. Primary care clinics could benefit from psychiatric pharmacist involvement in depression screening and follow-up processes.

**Keywords:** depression, patient health questionnaire (PHQ), psychiatry, psychiatric pharmacist, primary care, ambulatory care, annual health screening

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## Introduction

Major depressive disorder (MDD) is a common illness, affecting 35 million people worldwide.<sup>1</sup> Because primary care providers (PCPs) are among the most accessible health care professionals, they are often considered gatekeepers for depression care. Major depressive disorder is the second-most common chronic disorder in primary care settings, with an estimated 25% of patients

presenting with MDD and 60% to 80% of antidepressants being prescribed by a PCP.<sup>1,2</sup>

Screening tools, such as the Patient Health Questionnaire (PHQ; ie, PHQ-2, PHQ-9), have been shown to be effective in assisting in the early detection of depression. A study<sup>3</sup> assessing the accuracy of general practitioners' unassisted detection of patients' depression found that general practitioners lacked sensitivity and specificity compared with the PHQ-9 screening tool. Despite PHQ assessments leading to increased awareness of depression, providers may still lack the knowledge or resources to appropriately treat and refer patients who screen positively.<sup>3</sup>

Pharmacists have specialized in psychiatry for nearly 50 years and have proven valuable when involved in mental health treatment. They may provide direct patient care through scheduled caseloads and/or consultations. Studies<sup>4,5</sup> have shown psychiatric pharmacist services are 40% less costly than psychiatrist services and can lead to better medication adherence, fewer PCP visits, and higher patient satisfaction levels.

The institution involved in this study is an academic medical center in Los Angeles County that functions as a tertiary-care center with affiliated primary care and specialty care clinics. Annual health screenings (AHS), which include a PHQ assessment, are performed by nursing staff for patients seen at this institution but are only required of continuity clinics (ie, rheumatology, transplant, oncology, internal medicine, and family medicine).

The PHQ-2 serves as a tool to determine if a patient needs further screening for depression. At this institution, a score of  $\geq 3$  on the PHQ-2 prompts a PHQ-9 to be administered. A score of  $\geq 10$  on the PHQ-9 is considered a positive depression screening and warrants an intervention (eg, diagnosis, referral, pharmacotherapy management). Primary care providers render mental health services, and referrals are made to psychologists and/or psychiatrists within and outside the institution as necessary.

The aim of this retrospective chart review was to identify potential gaps in care following positive annual depression screenings. Additionally, this study also evaluated PCPs' perceptions toward management of depression, use of AHS for depression, and psychiatric pharmacists' scope of practice. It was our intention that these data taken together would help to determine potential opportunities for improvement in the care of patients with depression seen in this setting.

## Methods

This was a retrospective electronic chart review of adults seen in primary care clinics within an academic medical

center in Los Angeles County. Eligible subjects were individuals  $\geq 18$  years of age, who had a documented AHS between January 1, 2015, and December 31, 2015. Patients seen in the family and internal medicine clinics were included in this review. This study received institutional review board approval.

Individuals were considered screened with a PHQ assessment if there was documentation within the electronic health record (EHR) of a PHQ-2 or PHQ-9 assessment having been administered. Individuals who received screening with a PHQ assessment were then categorized by whether they had a positive depression screening. Positive depression screenings were defined as a score of  $\geq 3$  on the PHQ-2 or a score of  $\geq 10$  on the PHQ-9. Interventions made in response to positive depression screenings documented in the EHR were recorded.

Patients with a positive PHQ-2 screening were categorized based on whether they had a positive PHQ-9, a negative PHQ-9, or did not receive a PHQ-9. Individuals with a positive PHQ-9 were classified based on whether they did or did not have a preexisting MDD diagnosis, as well as by the severity of the PHQ-9 score. Severity was defined as mild by a score of 5 to 9, moderate by a score of 10 to 14, moderately severe by a score of 15 to 19, and severe by a score of  $\geq 20$ . Suicide ideation (SI) was identified based on PHQ-9 item No. 9 with a response of  $\geq 1$  ("thoughts that you would be better off dead"). Interventions were documented for patients with a positive PHQ-2 and/or a positive PHQ-9.

The primary endpoints were the number and percentage of patients screened for depression with PHQ assessments, the number and percentage of patients who had positive depression screenings, and the interventions made for patients screening positive for depression. The secondary endpoints were the PCPs' perceptions on the management of depression, the use of AHS for depression, and the psychiatric pharmacists' scope of practice. A 21-item electronic survey created by the study authors was distributed via e-mail from a family medicine provider, serving in an administrative role, to all physicians within internal medicine or family medicine primary care clinics to assess their perceptions on the management of depression, the use of AHS for depression screening, and the psychiatric pharmacists' scope of practice. No incentives were offered for survey participation (see Supplementary Material, available at <http://dx.doi.org/10.9740/mhc.2018.01.028.S1>).

## Results

A total of 10 636 patients were seen by internal and family medicine clinics between January 2015 and December

**TABLE:** Baseline characteristics of patients with a positive depression screening<sup>a</sup>

	N = 155
Mean age (SD)	55 (15)
18-24	4 (3%)
25-44	39 (25%)
45-64	67 (43%)
>64	45 (29%)
Female sex	107 (69%)
Ethnicity	
Hispanic/Latino	48 (31%)
Non-Hispanic/Latino	100 (65%)
Other <sup>b</sup>	7 (4%)
Race	
White	82 (53%)
African American	12 (8%)
Asian	9 (6%)
American Indian/Alaska Native	2 (1%)
Other <sup>c</sup>	50 (32%)
Psychiatric history <sup>d</sup>	
Past psychiatric history	65 (42%)
Past psychotropics	75 (48%)
Past MDD diagnosis	48 (31%)
Current MDD diagnosis	65 (42%)
PHQ scoring	
Average PHQ-2 (SD)	4.3 (0.4)
Average PHQ-9 (SD)	14.4 (5.1)
Positive PHQ-9, past MDD diagnosis	36 (33%)
Positive PHQ-9, no past MDD diagnosis	61 (56%)
PHQ-9 suicide ideation	40 (30%)

MDD = major depressive disorder; PHQ = patient health questionnaire.

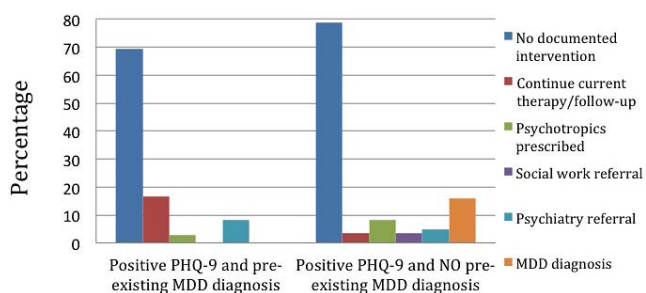
<sup>a</sup>All data are representative of individuals with a positive PHQ-2 and/or PHQ-9 and are presented as number (percentage) unless otherwise indicated.

<sup>b</sup>Other category includes 4 individuals who refused to answer and 3 individuals marked as unknown.

<sup>c</sup>Other category includes 1 individual who refused to answer or marked as unknown.

<sup>d</sup>Psychiatric history is based on any previous documentation in electronic health record.

2015. Annual health screenings were completed for 6796 patients (64%) with 6551 (63%) of those individuals also receiving screening for depression with a PHQ assessment. There were 245 individuals who did not receive a PHQ assessment despite having an AHS completed. Of the 6551 individuals who received PHQ-2 assessments, 145 (2%) had a positive screening. Of the individuals with a positive PHQ-2, subsequently 100 (69%) had a positive PHQ-9, 26 (18%) had a negative PHQ-9, and 19 (13%) had no PHQ-9 documented. There were 10 individuals who received and screened positive on the PHQ-9 despite having a negative PHQ-2.



**FIGURE:** Interventions based on positive patient health care questionnaire (PHQ-9) and preexisting major depressive disorder (MDD) diagnosis

There were 155 individuals with a positive PHQ-2 and/or a positive PHQ-9 (Table). The population with a positive PHQ screening were predominantly female and white with an average age of 55 years old. The majority of patients (n = 90, 58%) had no past psychiatric history documented within the EHR. The average score on the PHQ-9 was 14, classified as moderate-depression. Most patients were classified as moderate-depression regardless of whether they also had a preexisting MDD diagnosis. Thirty percent of individuals screened positive for SI on the PHQ-9.

Greater than 50% (n = 61) of individuals with a positive PHQ-9 screening had no preexisting MDD diagnosis documented within the EHR. As few as 16% of these individuals received a MDD diagnosis (n = 10), and less than 10% were instructed to continue current therapy (n = 9), given a prescription for a psychotropic medication (n = 9), or given referrals to mental health services (n = 10; Figure). Among antidepressants prescribed, the majority were selective serotonin reuptake inhibitors (n = 6) followed by bupropion (n = 2) and trazodone (n = 1). Five of the 9 individuals prescribed a psychotropic medication had no documented preexisting MDD diagnosis. Of those individuals referred to mental health services, the majority received psychiatry referrals (n = 7) followed by social work referrals (n = 3). There was no documented intervention for 76% (n = 84) of individuals with a positive screening or for 78% (n = 31) of individuals with SI.

Twenty-three PCPs were sent the survey, and 74% (n = 17) of those providers completed the survey. Survey results revealed that the majority of providers find the AHS to be a good opportunity to use the PHQ screening tool for depression (strongly agree, n = 1; agree, n = 8); however, the majority also reported not being aware of when nursing staff had performed the screening for their patients (n = 9). Greater than 50% of providers reported feeling comfortable (n = 6) or very comfortable (n = 5) managing depression and making referrals to outside mental health services more than once per month but not weekly (n = 8). With respect to the types of mental health services providers refer to, most responses were to psychiatrists (n = 16) followed by

psychologists (n = 13), social workers (n = 10), and occupational therapists (n = 8). Although most providers reported never having worked with psychiatric pharmacists (n = 15), they reported believing psychiatric pharmacists can administer rating scales to assess for depression (strongly agree, n = 4; agree, n = 8), can assist with individual/group counseling (strongly agree, n = 3; agree, n = 9), and can assist in initiating or adjusting psychiatric medications (strongly agree, n = 3; agree, n = 8). Most providers reported that there is a role for psychiatric pharmacists in the primary care setting (strongly agree, n = 8; agree, n = 8).

## Discussion

In the present study, it was revealed that despite an AHS with PHQ assessments being performed for the majority of individuals seen in primary care clinics, no documented interventions were being made for those individuals who screened positive for depression, including those with SI.

The provider survey helped to identify contributing factors to these gaps in the management of depression. Most providers feel as though the AHS is a good opportunity to use the PHQ screening tool for depression. However, these providers are not aware when a PHQ assessment has been performed for their patients, suggesting a clear need for an alert within the computer software system to notify providers when a depression screening is performed. There was no clear protocol in place for providers to consistently document interventions made for patients with positive screenings. It appears this institution lacks adequate resources for patients with mental health needs, as evidenced by providers referring more mental health services outside the institution as compared to within. Referrals outside the institution served as a limitation because of the authors' inability to follow up on treatment or services delivered. Despite providers reporting that they feel comfortable managing depression and adjusting psychotropic medications, they make referrals more than once per month to mental health services. These referrals encompassed areas of practice beyond psychiatry, such as social work and occupational therapy, which may or may not have been utilized within the institution.

Considering the limited mental health resources currently available at the institution, there may be opportunities to incorporate other disciplines to meet the needs of this patient population. Despite the majority of providers surveyed having never worked with a psychiatric pharmacist, they are familiar with their roles as is evidenced by most reporting that they believe psychiatric pharmacists can administer rating scales to assess for depression, assist with individual/group counseling, and assist in initiating or adjusting psychiatric medications. This finding, along with all providers reporting that there is a

role for psychiatric pharmacists in primary care settings, suggests another health care professional who can serve as a resource to help manage patients with depression.

There were several limitations to the current study. Only those individuals seen by internal medicine or family medicine were included, so individuals receiving primary care through specialists were not screened. Only continuity clinics were required to perform AHS, and a function within the computer software system allowed the AHS to be bypassed if a patient was seen by a noncontinuity clinic at the time an AHS was due, which created missed opportunities for patients to receive screening for depression. Because of a computer software system malfunction that did not include PHQ assessments as part of the AHS, it is estimated that 97 additional individuals with positive depression screenings could have been captured if screened properly, based on extrapolation of results. The finding of patients who screened negative on the PHQ-2 but then screened positive on the PHQ-9 suggests possible false negatives or PHQ administration issues. Arguably, the most noteworthy limitation and difference from other studies<sup>3</sup> is the lack of provider notification for positive depression screenings. The inconsistent and potential lack of documentation by providers also cannot be ignored. The data in the study are only representative of the information documented within the EHR. It is possible that more patients within this population had a preexisting MDD diagnosis or even received intervention(s) after screening positive for depression, but that these were never documented.

These data have been shared with medical leadership at the institution, and collaboration to implement a referral and follow-up process for positive depression screenings has already begun. Future research should evaluate outcomes associated with expanding the process for depression screening, referrals, and follow-up from primary care clinics to other clinical services at this institution such as specialty clinics in which depression may be prevalent.

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