Determining the prevalence of patients with a positive depression screen, in a family medicine residency clinic and how effective is follow-up.

A Retrospective Study

Aditya Birbal-Jain, MD; Taariq Khan, MD

Background: Depression is one of the most common mood disorders, affecting approximately 17% of the general United States population, about 53million people [1,9]. The Primary Care Physician (PCP) diagnoses and manages the majority of people with depressive disorders approximately 5 to 13%. In 2009, the USPSTF updated its recommendations for screening adults for depression when staff-assisted depression care supports are in place to assure accurate diagnosis, effective treatment, and follow-up. (Grade B recommendation)

Purpose: To determine the prevalence of adult patients with a positive depression screen, after a PHQ-2 questionnaire was initiated in the ambulatory electronic medical record of a family medicine residency clinic, and how effectively follow-up was made.

Design: A retrospective chart review study.

Setting: The University of Illinois College of Medicine at Peoria; Family Medicine Residency Program, a community-based program.

Participants: 1118 Adults (18 years old and above) who visited the family medical center in January of 2013.

Methods: A retrospective chart review was performed. No patient or provider identifying information was used. Electronic medical records of patient visits from January 2013 were reviewed for responses to the PHQ-2 questionnaire. Charts of only those who were given the PHQ-2 were used. Data was then extrapolated regarding positive responses by the hospital Information Technology department. Positively screened charts were individually reviewed by 2 investigators of the study, to assess for any type of provider acknowledgement or follow-up.

Results: For January 2013 there were 1118 total adult, patient visits to the FMC. Of the 1118 patients, 974, (87%) were administered the PHQ-2. A total of 252 patients screened positive, giving us a prevalence of 25.87% for depression. 54 of these patients had office visits for mental illness, and were removed from our data collection, as this was an exclusion criterion. Of the remaining 198 patients visits, follow up was made for only 68 patients, 34.34%.

Limitations: Only one individual clinic was reviewed. Only data from January 2013 was used. Pediatric population was not included in the study. Patients who visit the FMC are primarily on Medicare and Medicaid. Overall effect on healthcare outcomes such as mortality was not reviewed here.

Conclusion: Based on our review, the prevalence of those who screened positive for depression in our family medical center is ~26% which is higher than the national average of other primary care settings,~ 5-13%. Depression screening in the family medicine residency clinic was a quality improvement metric initiated in late 2012. The results show that only 34% of those who screened positive for depression had some type of follow-up. This shines light on our role as primary care physicians to improve our follow-up of depression screened positive patients. As accountable care organizations become the standard of healthcare today, more effort needs to be done in order for us to better serve our patients.

Potential Conflicts of Interest: None disclosed

Introduction

Major depressive disorder is one of the most common mood disorders that affects approximately 17% of the general United States population, around 53 million Americans[1]. Primary care physicians are responsible for diagnosing and managing the majority of people with depressive disorders, approximately 5 to 13%. In 2009, the USPSTF updated its recommendations for screening adults for depression when staff-assisted depression care supports are in place to assure accurate diagnosis, effective treatment, and follow-up. (Grade B recommendation)

The economic burden of Depression in the United States in the year 2000 was 83 billion dollars. It not only affects quality of life, but also leads to higher healthcare utilization and spending, most of which is not the cost of depression treatment itself. It is also a leading cause of absenteeism and reduced productivity at work. Depression is associated with poor psychosocial and physical functioning and poor self-rated health. [2]

Depression is associated with increased all-cause mortality and completed suicide. [3] Effective treatment of depression not only improves quality of life, but also reduces the economic burden. [4] It is well known that the prevalence of Depression is higher in patients with chronic diseases such as; heart disease, cancer, diabetes, hypertension and stroke. [5,6]

A majority of the population with depression is either untreated or undiagnosed. Many people diagnosed with depression are seen by their Primary Care Physician (PCP) and not a mental health specialist. So effective screening and treatment for depression is crucial.

The Patient Health Questionnaire -2, (PHQ-2) is a well validated first step screening tool for depression[7,8,9,10,11,12,13]. It inquires about the frequency of depressed mood and anhedonia over the past two weeks. In late 2012, The Methodist Family Medical Center in Peoria, IL (FMC), instituted a policy that required nursing staff to administer the PHQ-2 questionnaire to all adult patients.

In our study, we performed a retrospective chart review; to 1) determine the point prevalence of patients in the FMC that had a positive depression screen and 2) how effectively follow up was made for those who screened positive.

METHODS

Setting

The study was conducted at the UnityPoint Clinic, Family Medical Center, in Peoria, Illinois. This establishment is affiliated with The University of Illinois College of Medicine at Peoria; Family Medicine Residency Program, a community-based program. There were 32 family medicine residents training at this program during the study. 12 faculty-attending physicians and 2 behavioral medicine faculty, support the residency program. This clinic has approximately 25,000 patient visits per year.

Data

Data was collected over a three-month period, November 2012, December 2012, and January 2013. Only data from January 2013 was used due the large number of patient visits from each month. This was believed to be a sufficient sample number of patients to reflect the clinic. Assistance from the Unity Point Health Methodist information technology department was used to pull data from the EMR.

Participants

A retrospective chart review was performed. A total of 1118 Adults visited the FMC in January of 2013. Inclusion criteria included; Adult patients (18 years old and above) who visited the FMC for any reason, and patients who were given the PHQ-2 questionnaire. Exclusion criteria included; pediatric patients under 18 years of age, patients visiting the clinic specifically for follow-up of psychiatric complaints such as major depressive disorder, bipolar disorder, and other mood disorders, and patients who were coming in for a counseling visit.

Outcomes and Measurements

The PHQ-2 questionnaire has been added to the EMR of all adult patient clinic templates since late 2012. The nursing staff member who roomed the patient for their office visit administered it. Any (YES) response was automatically highlighted in red on the EMR to call the attention of the resident physician for further review. Nursing staff at this point was not instructed to verbally inform the physician of a positive screen. The PHQ-2 has been found to be up to 97 percent sensitive and 67 percent specific in adults, with a 38 percent positive predictive value and 93 percent negative predictive value.(aafp) There is little evidence to recommend one screening method over another (USPSTF article)

We collected non-identifying patient or provider information from the EMR. Only data from patients who were seen by a resident physician was included. This information included; the date of visit, if the chief complaint was related to behavioral health or counseling, if the PHQ-2 was administered to the patient and its result, age and sex of the patient, and if the patient received follow-up regarding a positive screen. A positive screen was considered to be answering (YES) to at least one of the PHQ-2 questions; (In past 2 weeks, have you been bothered by: 1. Little interest or pleasure in doing things? 2. Feeling down, depressed or hopeless?). Follow-up of a positive screen was considered adequate if the patient's physician acknowledged and documented the positive screen by; further questioning the patient about the responses, making a new behavioral health diagnosis, starting a new psych medication, referral to behavioral health, handing out a list of community behavioral health resources, setting up counseling services or a follow-up appointment for the patient.

RESULTS

We collected data for the month of January 2013. There were 1118 adult patients who visited the FMC whose charts were evaluated for eligibility. Of the 1118 patient visits, 144 patients were not given the PHQ-2 questionnaire for unknown reasons.

Primary Outcome

Subtracting this from the total left us with 974 who were screened and met our primary outcome inclusion criteria. Of these patients, 252 were screened positively using the PHQ-2 questionnaire. This gave us a depression screening point prevalence of 25.87% in the FMC. National reported prevalence is ~5-13%.

Secondary Outcome

Of the 252 patients that screened positive, 54 patients met the exclusion criteria for our secondary outcome, patients visiting the clinic specifically for follow-up of psychiatric complaints such as major depressive disorder, bipolar disorder, or other mood disorders, and patients who were coming in for a counseling visit. Subtracting this from the total number of patients who screened positive left us with a total of 198 patients meeting our criteria. Of the 198 patients who screened positive, 68 patients or 34% had appropriate follow-up as described earlier, giving us our secondary outcome.

Discussion

In light of the 2009 USPSTF depression-screening recommendation the FMC has been using the PHQ-2 questionnaire for screening adult patients. Key highlights from our research results demonstrate that approximately 26% of our patient population screened positive for depression, and approximately 34% of those who screened positive had any type of follow-up done. Comparing this to national data that approx. 5-13% prevalence in primary care, our clinic has a significantly higher number of those screening positive.

Limitations

In this study only, one clinic setting was used; a multi-centered study might have been better to compare more recent depression prevalence data. We gathered data from the month of January 2013 only; this was just a few months after starting the PHQ-2 questionnaire at our office. Although we had data from November and December 2012, it was not use as the number of patients screened in those months were very few and would not have been accurate. Due to the large number of office visits that we have, it was felt that data from January 2013 would be a good sample size. Some problems with this may be that specifically more people experience depressive symptoms during the winter as well as around the holidays. Pediatric population was not included in the study even though the USPSTF also makes recommendation for screening 12-18 year old adolescents. This may be used as part of a follow-up study to compare the prevalence of adults to adolescents. Patients who visit the FMC are primarily on Medicare and Medicaid, it is also know that patients in theses groups tend to have more chronic illnesses, which may be a result in the higher number of positive screens. Overall effect on healthcare outcomes such as mortality was not reviewed here.

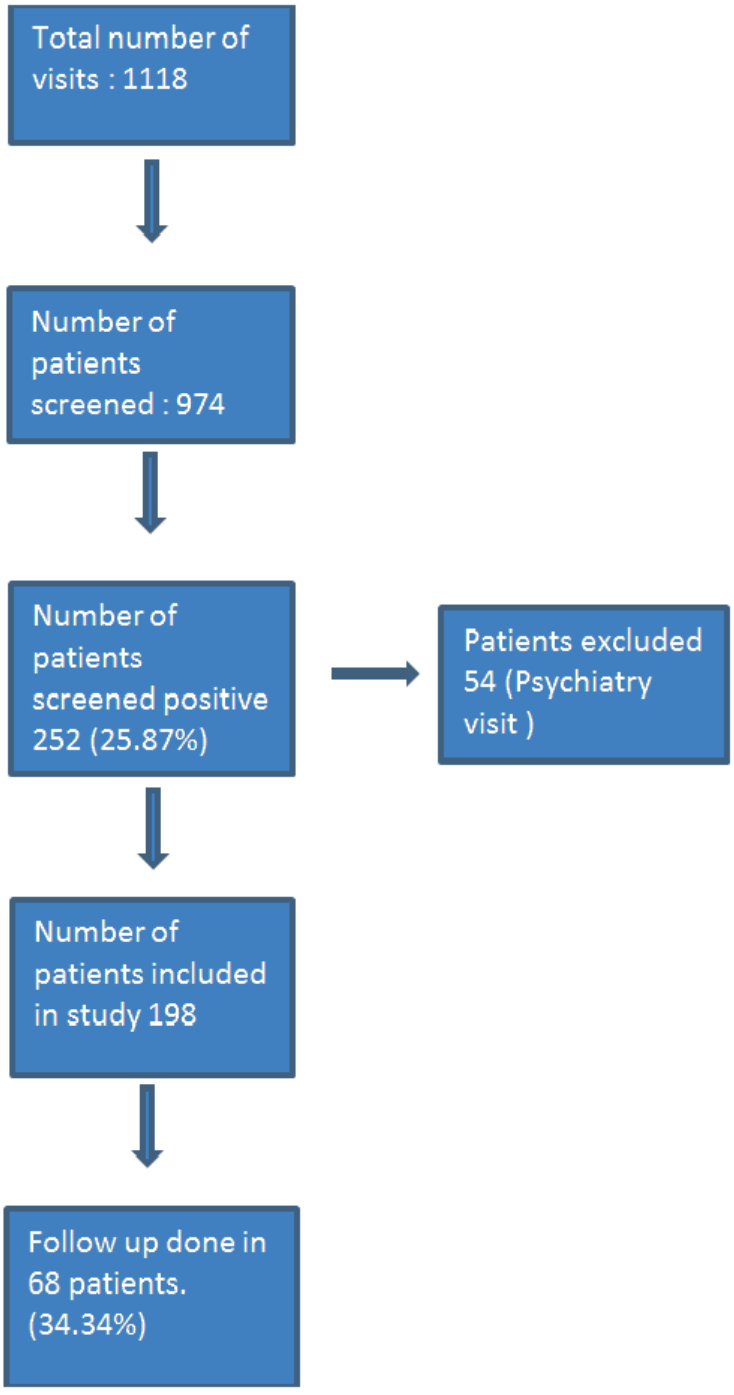
Conclusion

Depression screening in the family medicine residency clinic was a quality improvement measure, initiated in the EMR since late 2012. This shines some light on our role as primary care physicians to improve our follow-up of depression screened positive patients. As accountable care organizations become the standard of healthcare today, more effort needs to be done in order for us to better serve our patients.

Potential Harms of Screening and Treatment

The potential harms of screening include false positive screening results, the inconvenience of further diagnostic work-up, the adverse effects and costs of treatment for patients who are incorrectly identified as being depressed, and potential adverse effects of labeling. None of the research reviewed provided useful empirical data regarding these potential adverse effects.

Figure 1. Flow Chart of Data



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