Evaluation of Depression Screening by Providers for Adult Patients with Type 2 Diabetes in Primary Care

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The document mentioned above has been reviewed and accepted by the student’s advisor, on behalf of the advisory committee, and by the Assistant Dean for MSN and DNP Studies, on behalf of the program; we verify that this is the final, approved version of the student's DNP Project including all changes required by the advisory committee. The undersigned agree to abide by the statements above.

Kristy M. Bryant, Student

Dr. Elizabeth Tovar, Advisor
Evaluation of Depression Screening by Providers for Adult Patients with Type 2 Diabetes in Primary Care

Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Nursing Practice at the University of Kentucky

By

Kristy M. Bryant

Louisville, KY

2019
Abstract

BACKGROUND: Depression in adults with type 2 diabetes can lead to non-adherence to self-management behaviors and treatment recommendations, and ultimately worse health outcomes. Currently, only 50% of adult patients with type 2 diabetes treated in the primary care setting are screened for depression. Without screening for depression, a diagnosis of depression and subsequent treatment is likely to be missed and the patient is more likely to experience worse health outcomes and worse quality of life.

PURPOSE: The purpose of this study was to evaluate impact of provider education on improving screening rates for depression in adult patients with type 2 diabetes within the primary care setting. The objectives of this study were to: 1. Evaluate baseline assessment of screening rates using the PHQ 2/9 by providers, and provider knowledge, facilitators, and barriers regarding screening for depression in adult patients with type 2 diabetes in primary care;

2. Deliver an education intervention to providers on the importance of screening adult patients with type 2 diabetes in the primary care setting.; and 3. Evaluate changes in depression screening rates using the PHQ 2/9 post educational intervention.

METHODS: This study used a quasi- experimental design. Phase 1 consisted of an online provider survey to assess knowledge, facilitators, and barriers in screening adult patients with type 2 diabetes for depression. Phase 2 included a provider educational intervention with pre and post chart reviews to assess depression screening rates.
RESULTS: There was a significant increase in screening from 1.9% to 6.3% (p = .024) after the educational intervention. Barriers to screening identified included time to screen, and knowledge of documentation in the EHR.

CONCLUSION: Providers agree that screening for depression in adult patients with diabetes is important and they feel comfortable with screening. Further work is needed to identify measures that will continue to increase and sustain depression screening for adult patients with type 2 diabetes in the primary care setting.
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Lastly, I would like to thank my amazing group of friends Julia Riley, Sarah Hardwick, Holly Duvall, Karla Russell, and April Hill for being such an amazing support system. Even though we are more like family, I could never thank each one of you enough for pushing and encouraging me every step of the way.
To my colleagues in cohort four I feel very blessed by this opportunity from Norton Healthcare, and the University of Kentucky to learn and grow on this DNP journey with each of you and feel very excited for what the future holds for all of us.
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Introduction

Adult patients with type 2 diabetes are at an increased risk for depression related to the cost of the disease, rapidly declining health, and non-adherence to treatment regimens (Badescu et al., 2016). Only 50% of adult patients with type 2 diabetes seen in the primary care setting are properly screened and identified for depression (Egede, Walker, Bishu, & Disbuke, 2016). Moreover, studies have shown that adult patients with type 2 diabetes and unrecognized depression have increased insulin resistance and have poorer adherence to treatment recommendations (Ciechanowski, Katon, & Russo, 2000). The United States spends over $21.3 billion dollars annually in medical expenditures due to the impact of unrecognized comorbid depression on adult patients with type 2 diabetes. This cost is associated with higher complication rates, increased use of healthcare costs, and non-adherence to treatment plans, which may have contributed to poor glycemic control (Egede et al., 2016). Adult patients with type 2 diabetes are also predisposed to other comorbidities, such as stroke, kidney disease, and death (Egede et al., 2016). Without properly screening adult patients with type 2 diabetes for depression, there is likely to be an increase in non-adherence with diabetic treatment, which may lead to further comorbidities and possible mortality (Badescu et al., 2016). Annual and periodic screening with the patient health questionnaire 2–item (PHQ-2) or 9-item (PHQ-9) version (PHQ-2/9) is an evidence-based strategy for addressing the problem of undiagnosed depression in adult patients with type 2 diabetes in the primary care setting (Kroenke & Spitzer, 2001). This brief screening tool is quick to implement (5 minutes or less), can be self-administered, has been well received by primary care providers, and has been shown to increase identification for depression, which can lead to better patient outcomes (Bajracharya, Summers, Amatya, & Deblieck, 2016).
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Background

Depression is defined as a loss of pleasure in daily activities which can lead to fatigue, weight loss, insomnia, psychomotor agitation, feelings of worthlessness, diminished ability to concentrate, and possible suicide (American Psychiatric Association, 2013). Researchers have found having depression can shorten one’s lifespan by 25-30 years compared to individuals who do not suffer from depression (Voinov, Richie, & Bailey, 2013). Type 2 diabetes is defined as a disease that occurs when an individual’s blood sugar is too high, and the body does not produce enough insulin to counteract the process (National Institute of Diabetes and Digestive and Kidney Disease, 2016). Globally, over 387 million people are affected by type 2 diabetes (Bajracharya et al., 2016). More than 30 million Americans suffer from type 2 diabetes. In Kentucky, it is estimated that over 14.5% of the adult population has been diagnosed with type 2 diabetes, and the treatment for these patients costs over $4.8 billion dollars annually (Bilous, 2013). According to the National Institute of Mental Health, it is estimated that 17.3 million adults (7.1%) have been diagnosed with at least one major depressive episode (NIMH, 2017). Studies have shown that when a patient has a chronic illness, they are 3 times more likely to have co-morbid depression than the general population (Salinero-Fort et al., 2018).

Self-management is key in creating positive health outcomes for patients with type 2 diabetes. This often includes exercise, healthy diet, at home glucose monitoring, diabetes management follow ups, and emotional wellbeing. However, self-management is often minimal in adult patients with type 2 diabetes who suffer from comorbid depression, and this leads to poor health outcomes and higher medical expenditures (Mut-Vitcu et al., 2016). Also, depression rates in patients with type 2 diabetes are significantly higher in uncontrolled diabetes...
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(30%), which can lead to poor self-care management (Mut-Vitcu et al., 2016). Studies have also shown that the moment a type 2 diabetes diagnosis is made, many patients felt stressors related to lifestyle changes that come with the disease, specifically diet changes and exercise (Kaltman et al., 2015). The emotional demands that are attached to a type 2 diabetes diagnosis can worsen depression, which in turn often contributes to difficulties with disease self-management (Kaltman et al., 2015).

The U.S. Preventative Services Task Force recommends screening patients for depression (B recommendation), especially in patients with chronic diseases such as type 2 diabetes (USPSTF, 2009). In addition, the American Diabetes Association recommends screening adult patients with type 2 diabetes during initial diagnosis of the disease, annual diabetic visits, when complications arise, and during hospitalizations to assess psychosocial status (AACE, 2011). However, despite these recommendations, depression screening in the primary care setting occurs for less than 5% of adult patients with type 2 diabetes (Cantor, 2018).

A leading depression screening measure in primary care is the Patient Health Questionnaire (PHQ; Kroenke & Spitzer, 2001). This screening tool is composed of the PHQ 2-item and the PHQ 9-item. The PHQ-2, which is the initial screening, contains 2 questions to help providers assess a patient’s mood over the last two weeks. If the PHQ-2 is found to be positive, then the PHQ-9 is administered to further explore the severity of symptoms experienced over the preceding two-week period (Arroll et al., 2010). The PHQ 2/9 is a brief self-administered questionnaire that has been validated as a strong indicator for identifying depression among adults in the primary care setting (Willborn et al., 2016). Administering the PHQ-2/9 to adult patients with type 2 diabetes has been shown to improve physiological
outcomes such as HBA1c levels, cholesterol levels, kidney function, and hypertension by helping providers identify depression earlier and treat it concurrently. In addition, Willborn and colleagues (2016) reported that the PHQ-2/9 showed an 88% sensitivity rate in identifying and managing depression in adult patients with type 2 diabetes in the primary care setting. Given that the PHQ 2/9 is a fast, reliable, inexpensive, easily adaptable evidenced-based screening tool, all adult patients with type 2 diabetes should be screened in the primary care setting (Owens et al., 2019). By utilizing the PHQ 2/9 for adult patients in primary care, type 2 diabetes and depression can be treated concurrently, and this may prevent further comorbidities and mortality.

The PHQ 2/9 screening tool is located on the organization’s electronic health record (EHR) where this study was performed as an accessible flow sheet, which can be easily added to the patient encounter by a smart phrase. Unfortunately, there is no current protocol in place at this primary care location to make sure screening with the PHQ 2/9 occurs in adult patients with type 2 diabetes, despite recommendations. If screenings occurred in the office prior to this study, they were conducted in the following manner: 1. The provider would administer the PHQ 2/9 to the patient through the (EHR during the patient visit, or ;2. The medical assistant (MA) would give a paper copy to the patient to complete during rooming and the provider would discuss the results during the visit and document the score in the EHR.

**Purpose**

The main purpose of this study was to evaluate the relationship between provider education about the PHQ 2/9 and screening rates for depression in adults with type 2 diabetes in
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a primary care setting. An additional purpose was to gain an understanding of why depression screenings were not being completed on adult patients with type 2 diabetes in this setting and implement and evaluate an intervention to improve it.

The specific aims of the project were:

1. Describe a baseline assessment of depression screening rates using the PHQ 2/9 by providers, and assess provider knowledge, facilitators, and barriers to screening for depression in adult patients with type 2 diabetes in primary care.

2. Evaluate the impact of an educational intervention for providers on the importance of screening adult patients with type 2 diabetes for depression, by comparing PHQ 2/9 screening rates both pre- and post-intervention.

Methods

This project used a quasi-experimental study design to describe provider knowledge, perceptions, and barriers related to depression screening and to evaluate depression screening rates before and after an educational intervention for providers. This study consisted of three phases.

Phase 1: Retrospective Chart review/Provider Survey

This phase included a retrospective chart review to assess baseline screening rates to assess whether adult patients with type 2 diabetes were screened for depression using only the PHQ 2/9. In addition, an anonymous electronic survey was sent to assess providers’ knowledge
of the PHQ 2/9 questionnaire along with facilitators and barriers in screening adult patients with type 2 diabetes for depression.

Phase 2: Provider Educational Intervention

This phase included an educational intervention for providers, delivered during a lunch and learn session which also included sharing of phase 1 baseline screening rates and provider survey results. Providers were also invited to share their on knowledge and perceived barriers regarding screening.

Phase 3: Retrospective Chart Review

This phase included a post educational intervention retrospective chart review to determine if screening rates increased using the PHQ 2/9 questionnaire for adult patients with type 2 diabetes.

Theoretical Framework

The theoretical framework that informed the design of this study was Dorothea Orem’s self-care nursing theory. The goal of Orem’s theory is to help create a strong patient provider relationship, and for the patient to control or minimize the effects of poor chronic health by understanding health deviation self-care requisites that can result from chronic illnesses such as type 2 diabetes (Gonzalo, 2019). Since adult patients with type 2 diabetes are at an increased risk for developing depression, providers need to be able to identify and treat depression for the patient to achieve and/or maintain good mental and physical health. This will help the patient adapt to pathologic changes that often occur with chronic illnesses such as type 2 diabetes.
Setting

The setting for all phases of this study was an outpatient primary care office that is part of a large healthcare organization in the Midwest. Annually, the office is responsible for the management and treatment of approximately 4800 adult patients with type 2 diabetes in Louisville, Kentucky and the surrounding area. At the time of this project, there were seven providers in the office, which included two nurse practitioners and five physicians.

Sample

The medical record numbers for phases 1 and 3 of this study were obtained from the healthcare organization’s data analytics team. A request was made to include eligible medical records with the following inclusion/exclusion criteria. Inclusion criteria encompassed: 1.) Male and female patients over the age of 18 presenting for annual wellness visits or diabetes management visits; 2.) male and female patients with ICD-10 diagnosis of Type 2 Diabetes Mellitus (E11.9) at the study site. Exclusion criteria included: 1.) All patients under the age of 18 years of age; 2.) patients with Type 1 or Gestational Diabetes; 3.) patients with single ICD-10 diagnosis of depression (F41.8); 4.) patients with the ICD-10 code of type II diabetes (E11.9) along with other comorbidities (ex: hypertension, and hyperlipidemia); and 5.) patients not seen at the chosen study site. Eligible medical records were then selected by the statistician by simple random sampling and returned to the principal investigator (PI) for phases 1 and 3 of the study.

For the survey, the PI collected study site provider names from the organization’s HR department. The survey (see Appendix B) included four yes or no, one Likert-style, and three multiple choice questions that assessed providers’ perceptions of their knowledge of, and barriers
to using the PHQ 2/9 in the clinical setting. The survey took approximately 5-10 minutes to complete. The reliability and validity of the survey has not been determined, as it was generated by the PI and not trialed prior to this study.

Procedures

This study occurred in three phases at one primary care office setting. Data were collected to assess current screening rates and knowledge of providers who use the PHQ 2/9 in adult patients with type 2 diabetes.

Phase 1: Retrospective chart review

For the retrospective chart review, 215 charts that met eligibility requirements were audited from the study site, in order to determine baseline provider documentation of depression screening using the PHQ 2/9 between July 1, 2018 and July 1, 2019. The results of the chart review were provided in phase 2 during the educational intervention.

Regarding the provider survey, an email was sent to all seven providers at the study site with a cover letter (see Appendix A) and link that would take them directly to a survey (see Appendix B). The survey was given through an online service, REDCAP (Harris et al., 2019). Participants were given a two-week window to complete the survey. The results of the survey were anonymous and exported via Microsoft Excel through REDCAP; then they were analyzed by a statistician.

The University of Kentucky Institutional Review Board granted approval (#46927) prior to the start of the project. Permission was granted to obtain work email addresses for the specific providers at the chosen site of study to send the cover letter (see Appendix A) and survey (see
Appendix B). The cover letter explained the PI’s goals for the study and benefits to screening patients with type 2 diabetes for depression. Responses to the survey were anonymous and data collection was performed via REDCAP. The results from the survey were provided in phase 2 during the provider education intervention.

Phase 2: Education Intervention and Focus Group

The educational intervention was conducted two weeks after completion of the baseline provider survey, on August 21, 2019. Topics included baseline screening rates and an aggregate summary of survey responses. The intervention also focused on re-educating providers on how to use the PHQ 2/9 questionnaire, why it is important to screen adult patients with type 2 diabetes for depression, accessibility of the PHQ 2/9 in the EHR, and how to document the scores in the EHR during the patient visit. The educational session lasted ten minutes. Education was given to providers who were present that day using a PowerPoint presentation during a scheduled lunch break where food was provided (see Appendix C). Permission was obtained prior to the intervention for the primary investigator to attend a regularly scheduled provider meeting following IRB approval. Providers who were unable to attend received a copy of the information that was discussed during the presentation and were given the PI’s phone number in case questions arose.

Providers who attended the educational session were asked to begin or continue utilizing the PHQ 2/9 questionnaire for eligible patient visits. During the focus group meeting with providers, a review of how to use the PHQ 2/9 questionnaire and where to document results in the EHR was discussed. The importance of identifying depression earlier in adult patients with type 2 diabetes by using the PHQ 2/9 was also discussed. Results from the Phase 1 chart review
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and survey were reviewed with providers. Providers were given the opportunity to discuss barriers to screening eligible adult patients with type 2 diabetes using the PHQ 2/9 questionnaire. The PI took notes during the conversation.

Phase 3: Retrospective Chart Review

Phase three consisted of a retrospective chart review that occurred four weeks post educational intervention (08/21/2019-09/21/2019) to determine if depression screening rates increased in adult patients with type 2 diabetes. The data analytics team from the healthcare organization helped to compile a list of eligible charts that met the inclusion and exclusion criteria and 215 charts were reviewed. All seven providers were included in the post education audit chart review since four of the providers were present for the educational intervention, and the other three received a copy of the PowerPoint slides (see Appendix C) for review. Audit tools were used in both chart reviews to ensure consistency, then destroyed per guidelines.

Data Analysis

Descriptive statistics were used to summarize the variables such as age, gender, ethnicity, insurance use, PHQ 2/9 results, and the provider survey responses using Microsoft Excel to create tables with percentages. Screening rates for using the PHQ 2/9 questionnaire were also examined pre and post educational intervention using the chi-square test of association using SPSS, version 25, with an alpha of <.05. Focus group responses were written down by the PI and categorized into themes.
Results

PHASE 1: BASELINE CHART REVIEW

Patients on average were Caucasian (94%, n=202) females (53%, n=114) over the age of 65 (47%, n=101) and had Medicare insurance (46%, n=100; see Table 2). The data research query returned over 26,317 eligible medical records and 215 charts were randomly selected by choosing every fifth one until a sufficient sample size was obtained. The charts were reviewed to determine if providers were screening adult patients with type 2 diabetes for depression using the PHQ 2/9 questionnaire. For the score to be counted in the audit, the PHQ 2/9 questionnaire score needed to be visible in the patient’s visit encounter summary. Of the 215 randomly selected charts, only four (1.9% see table 1) were found to have been screened with the PHQ 2. Patients who were identified as being positive for screening were on average Caucasian (100%, n=4) males (50%, n=2) and females (50%, n=2) over the age of 65 (75%, n=3) with Medicare insurance (75%, n=3; see table 3). Of the four patients that were screened, three were found to be negative for depressive symptoms and one was found to be positive.

PHASE 1: PROVIDER SURVEY

The provider survey (see Appendix B) assessing knowledge, facilitators and barriers to using the PHQ 2/9 was sent to seven providers at one primary care office. Out of the seven providers, four returned their responses anonymously through REDCAP (see Table 4). Providers stated they were familiar with the PHQ, mostly familiar with wear to access and document in the EHR, they sometimes screen patients, agree that it is important to screen, they feel confident in
screening with a comfort level mean of 8.3, but time was their biggest barrier in screening patients.

<table>
<thead>
<tr>
<th>Baseline Survey Results (N=4)</th>
<th>Answer/Percent or Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question</td>
<td></td>
</tr>
<tr>
<td>1. Are you familiar with the PHQ 2/9 screening tool for Depression?</td>
<td>Yes 100%, No 0%</td>
</tr>
<tr>
<td>2. Do you know where to access the PHQ 2/9 screening tool to administer to your patients</td>
<td>Yes 75%, No 25%</td>
</tr>
<tr>
<td>3. Do you know where to document the PHQ 2/9 screening tool in EPIC?</td>
<td>Yes 75%, No 25%</td>
</tr>
<tr>
<td>4. How often do you use the PHQ 2/9 screening tool on your adult patients with type 2 Diabetes</td>
<td>Always 0%, Sometimes 25%, Never 75%</td>
</tr>
<tr>
<td>5. Do you feel that it is important to screen adult patients with type 2 diabetes for depression</td>
<td>Agree 75%, Disagree 0%, Neither Agree/Disagree 25%</td>
</tr>
<tr>
<td>6. Do you feel confident in scoring patients using the PHQ 2/9 screening tool?</td>
<td>Yes 75%, No 25%</td>
</tr>
<tr>
<td>7. On a scale of 1-10 (with 1 being not comfortable at all and 10 being completely comfortable, how do you rate your comfort level in using the PHQ 2/9 in screening patients?</td>
<td>Scale of 1-10 8.3 mean score(2.0 SD)</td>
</tr>
<tr>
<td>8. What barriers do you feel prevent you from performing the PHQ on your adult patients with type 2 diabetes?</td>
<td>Time 75%, Importance 0%, Knowledge 25%, Other 0%</td>
</tr>
</tbody>
</table>

PHASE 2: FOCUS GROUP RESULTS

After the education was presented, providers were afforded the opportunity to share their feedback regarding the PHQ 2/9 questionnaire. Four providers were present and identified time as the biggest barrier in performing the PHQ 2/9 for adult patients with type 2 diabetes. The providers stated they were knowledgeable and confident in screening but were overwhelmed with high patient loads, which they felt contributed to missed screenings. Since responses to the provider survey were anonymous for phase 1, there was no way to identify whether the providers...
who attended the focus group were the same ones that filled out the provider survey. There was no mention of lack of knowledge as a barrier during the focus group.

**PHASE 3: RETROSPECTIVE CHART REVIEW**

Patients included in the post-intervention chart audit were most likely to be Caucasian (85%, n=149) males (50.3%, n=88) between the ages of 55-65 (36%, n=63) with private insurance (61%, n=107; see table 5). The second data research query returned over 2,154 eligible medical records that met criteria for the retrospective chart review post education intervention for phase 3 (see Appendix C). There were 175 medical records chosen randomly by picking every 5th one until a sufficient sample size was obtained. The charts were reviewed to determine if providers were screening adult patients with type 2 diabetes for depression using the PHQ 2/9 questionnaire. For the score to be counted in the audit, the PHQ 2/9 questionnaire score needed to be visible in the patient’s visit encounter summary. Patients who were identified as being positive for screening on average were Caucasian (73%, n=8) females (82%, n=9) ages 55-65 (46%, n=5), and had private insurance (73%, n=8; see table 6). Of the 175 charts reviewed, 11 patients (6.3%; see Table 1) were screened using the PHQ. Of the 11 patients that were screened, six patients were found to be negative for depression using the PHQ 2, and five were positive and then followed up with the PHQ 9 to determine the severity of depressive symptoms.

After the educational intervention, providers were more likely to agree that screening is important and to feel comfortable screening with the PHQ 2/9 questionnaire (mean score 8.3; see Table 4). There was a significant increase in screening from 1.9% to 6.3% (p = .024; see Table 1) after the educational intervention. Barriers to screening included time, which was consistent with the main barrier identified in phase 1.
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Discussion

The purpose of this study was to describe a baseline assessment of depression screening rates using the PHQ 2/9, and assess provider knowledge, facilitators, and barriers to screening for depression in adult patients with type 2 diabetes in a specific primary care clinic. Second, to evaluate the impact of an education intervention for providers on the importance of screening adult patients with type 2 diabetes for depression in the primary care setting. Depression screening rates increased from 1.9% to 6.3% (see Table 1), and time was identified as the most significant barrier to screening both pre and post intervention. The finding of low screening rates is consistent with the national average of 5% (Cantor, 2018), but it is encouraging that this clinic increased screening rates from 1.9% to 6.3% (see Table 1), which now exceeds the national average. However, 6.3% is still very low and additional strategies to improve depression screening rates are still very much needed, both in this setting and nationally.

The provider participants in this study all had good baseline knowledge scores and positive perceptions about the importance of screening for depression in adults with type 2 diabetes, which suggests that they are willing and able to complete the depression screening. However, time to screen appears to be a significant barrier that needs to be addressed for the providers in this setting. This is also a national problem, as evidenced by the fact that other researchers have also found time to be the biggest barrier to screening (Colligan et al, 2018; Sanchez, Eghaneyan, & Trivedi, 2016). Thus, an important finding from this study is the recognition of time as a major barrier that needs to be addressed in this setting.

There are a variety of evidence-based strategies that have helped improve depression screening rates in primary care settings and the use of information technology (IT) is a leading
approach. Use of IT to facilitate depression screening in the primary care setting where this study took place would be particularly helpful, as it addresses the barrier of time, provides a standardized place to document, and initiates provider alerts (Savoy & O’Gurek, 2016; Triveti et al., 2019). Other evidence-based strategies include empowerment of staff, which includes having the medical assistant (MA) provide a paper copy of the PHQ for the patient to complete while waiting to see the provider. Patients with access to their patient portal could be asked to complete the questionnaire electronically prior to their visit (Savoy & O’Gurek, 2016; Triveti et al., 2019).

These are strategies to consider implementing in this setting as a next step. The increase in screening rates after the provider education suggests that this session may have led to the increase in depression screening. Although this study was not designed to test for causation, it is encouraging that there was a significant improvement in screening after a brief and simple session with the providers. Because baseline knowledge scores were already high and perceptions started out positive, it does not seem likely that the providers learned new information; however, it is possible that simply discussing depression screening brought it to the forefront of their attention and thus made them more likely to screen. In addition, providers were very engaged during the focus group when reminded of how to document via smart text phrase in the EHR. Further investigation is needed to determine what specific element of the educational intervention led to this improvement. Brief education to providers may have played a major role with the increased screening rates. Studies have shown that efforts such as education to providers, consistent depression management and follow up, and a collaborative care approach...
can increase depression screening rates in the primary care setting (Maimone & Marhatta, 2015; Unützer & Park, 2012). Further research to assess depression screening for all adults in the same age group would lend attention to the need for screening.

The increase in depression screening rates is a positive and encouraging finding from this study; however, the screening rates are still very low and evidence-based strategies to sustain this improvement and improve screening even more are needed. Effective sustainment strategies that have worked well in other settings and would be appropriate in this study’s setting include the use of performance metrics and reporting mechanisms (Schaeffer & Jolles, 2019; Kroenke & Unutzer, 2017). This can often include strategies such as the use of scorecards or monthly provider audits by an appointed team leader in the clinic.

**Implications for Practice**

Time was identified by the providers as the biggest barrier to screening, so implementing strategies to reduce the time burden is an important next step for this clinic as well as other clinics. An evidence-based strategy that should be considered for practice is training and empowerment of staff to help streamline the process (Savoy & O’Gurek, 2016). Since one provider in the baseline chart audit screened a patient positive using the PHQ 2 but did not follow up with the PHQ 9 per recommendations, further training needs to occur with providers. Future practice should include continued education for providers on the importance of screening adult patients with type 2 diabetes for depression using the PHQ 2/9 (Maimone & Marhatta, 2015; Unützer & Park, 2012). One way to remind providers how the screening process with the PHQ2/9 works is to place posters and prompts in the office rooms (Schaeffer, & Jolles, 2019). Another beneficial method would be for the MA to give the patient a paper copy of the PHQ 2/9.
screening tool to complete while rooming, then place scores in the EHR for the provider to discuss with the patient. This is an efficient use of time and a collaborative approach that does not overburden the patient, provider or staff (Savoy & O’Gurek, 2016).

If the EHR has the capability, it would be ideal to initiate a best practice advisory alert for all adult patients with type 2 diabetes to ensure they are screened during annual visits and follow ups (Savoy & O’Gurek, 2016; Kroenke, 2017). Additionally, for patients with access to the patient portal, another implication for future practice would be the use of Mychart, which provides access to their medical records and already in use within the organization. This could serve as a means for the patient to fill out the PHQ 2/9 questionnaire prior to the scheduled visit. This allows the provider to already have the scores in the EHR to discuss during the patient encounter. The responses would be available on the vital sign screen and the provider can carry over the results into the patient encounter summary (Savoy & O’Gurek, 2016; Triveti et al., 2019).

It would also be worthwhile to implement a tracking measure to monitor screening adherence (Kroenke & Unutzer, 2017). According to a prediction made by the World Health Organization, by the year 2030 depression rates will double and be the leading cause of life lost due to disability (El-Hechmi et al., 2013). It is imperative for primary care offices to ensure that they screen all adult patients with type 2 diabetes for depression along with proper follow up and management, to help ensure the patient is being treated both mentally and physically.
Limitations

Limitations of this study included a small sample size of providers who responded to the survey (N=4) out of a total of seven possible. In addition, only four out of a total of seven providers attended the focus group. Since the surveys were anonymous, there was no way to determine if the providers that attended the focus group (N=4) were the same providers that responded to the survey (N=4). In addition, this study took place at only one clinic over a period of a few months. Increasing the study reach to include multiple locations could increase the number of providers who participate in the survey. The post chart review audit may have been higher if multiple sites were included.

Conclusion

Patients with diabetes are 30% more likely to be depressed than the general population (Mut-Vitcu et al., 2016), and depression leads to worse self-management and health outcomes. However, depression screening rates among adults with diabetes are very low, at only 5%. Because of the impact on health outcomes and quality of life, providers must do a better job of screening in order to identify and treat depression appropriately. The PHQ 2/9 is a brief, self-administered questionnaire that has been validated for identifying depression among adults in the primary care setting (Kroenke & Spritzer, 2001). Patients may only see their primary care provider every 3-6 months, so screening at these visits is important so depression can be identified and addressed if indicated; otherwise, the negative effects are likely to continue as the patient goes untreated. Earlier identification of depression can lead to better diabetes management, improve morbidity and mortality and help lower medical expenditures when patients are treated for type 2 diabetes and depression concurrently. In this study, after a brief
education session for providers that focused on why and how to screen and where to document the screening, there was an increase in depression screening rates for adult patients with type 2 diabetes. However, screening rates were still low and there remains much need for improvement. Future work should seek to identify which specific elements of this intervention contributed to the success and strategies to ensure sustainability of these improvements should be explored.
Table 1. Screening rates for Depression

<table>
<thead>
<tr>
<th></th>
<th>Pre-education n (%)</th>
<th>Post-education n (%)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screened</td>
<td>4 (1.9%)</td>
<td>11 (6.3%)</td>
<td>.024</td>
</tr>
<tr>
<td>Not Screened</td>
<td>211 (98.1%)</td>
<td>164 (93.7%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>215</td>
<td>175</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Pre education chart review Demographics (N=215)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Pre-education</th>
<th>Post-education</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>101</td>
<td>96</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>114</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>25-34</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>35-44</td>
<td>14</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>45-54</td>
<td>35</td>
<td>35</td>
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<tr>
<td>55-65</td>
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<tr>
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<td></td>
<td></td>
</tr>
<tr>
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<td>202</td>
<td>202</td>
<td></td>
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<tr>
<td>African American</td>
<td>11</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Insurance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>96</td>
<td>96</td>
<td></td>
</tr>
<tr>
<td>Medicare</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Medicaid</td>
<td>19</td>
<td>19</td>
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Table 3. Phase 1 chart review results demographics (N=4)

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</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>2</td>
<td>2</td>
<td>50%</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td>50%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>18-24</th>
<th>25-34</th>
<th>35-44</th>
<th>45-54</th>
<th>55-65</th>
<th>&gt;65</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>25-34</td>
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<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>35-44</td>
<td>0</td>
<td></td>
<td>0</td>
<td>0</td>
<td></td>
<td></td>
</tr>
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<td>45-54</td>
<td>0</td>
<td></td>
<td>0</td>
<td></td>
<td>0</td>
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</tr>
<tr>
<td>55-65</td>
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<td></td>
<td>0</td>
<td></td>
<td>0</td>
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</tr>
<tr>
<td>&gt;65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Race</th>
<th>Caucasian</th>
<th>African American</th>
<th>Hispanic</th>
<th>Asian</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100%</td>
</tr>
<tr>
<td>African American</td>
<td>0</td>
<td></td>
<td>0</td>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Asian</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insurance</th>
<th>Private</th>
<th>Medicare</th>
<th>Medicaid</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>25%</td>
</tr>
<tr>
<td>Medicare</td>
<td></td>
<td></td>
<td></td>
<td>75%</td>
</tr>
<tr>
<td>Medicaid</td>
<td></td>
<td></td>
<td></td>
<td>0%</td>
</tr>
</tbody>
</table>

Table 4.

<table>
<thead>
<tr>
<th>Baseline Survey Results (N=4)</th>
<th>Answer/Percent or Mean (SD)</th>
</tr>
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<tbody>
<tr>
<td>Question</td>
<td></td>
</tr>
<tr>
<td>1. Are you familiar with the PHQ 2/9 screening tool for Depression?</td>
<td>Yes 100%, No 0%</td>
</tr>
<tr>
<td>2. Do you know where to access the PHQ 2/9 screening tool to administer to your patients</td>
<td>Yes 75%, No 25%</td>
</tr>
<tr>
<td>3. Do you know where to document the PHQ 2/9 screening tool in EPIC?</td>
<td>Yes 75%, No 25%</td>
</tr>
<tr>
<td>4. How often do you use the PHQ 2/9 screening tool on your adult patients with type 2 Diabetes</td>
<td>Always 0%, Sometimes 75%, Never 25%</td>
</tr>
<tr>
<td>5. Do you feel that it is important to screen adult patients with type 2 diabetes for depression</td>
<td>Agree 75%, Disagree 0%, Neither Agree/Disagree 25%</td>
</tr>
<tr>
<td>6. Do you feel confident in scoring patients using the PHQ 2/9 screening tool?</td>
<td>Yes 75%, No 25%</td>
</tr>
<tr>
<td>7. On a scale of 1-10 (with 1 being not comfortable at all and 10 being completely comfortable, how do you rate your comfort level in using the PHQ 2/9 in screening patients?</td>
<td>Scale of 1-10 8.3 mean score(2.05 SD)</td>
</tr>
<tr>
<td>8. What barriers do you feel prevent you from performing the PHQ on your adult patients with type 2 diabetes?</td>
<td>Time 75%, Importance 0%, Knowledge 25%, Other 0%</td>
</tr>
</tbody>
</table>
Table 5. Post education chart review Demographics (N=175)

<table>
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<tr>
<th>Gender</th>
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</thead>
<tbody>
<tr>
<td>Male</td>
<td>88</td>
<td></td>
<td>50.3%</td>
</tr>
<tr>
<td>Female</td>
<td>87</td>
<td></td>
<td>49.7%</td>
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<table>
<thead>
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<th>Age</th>
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<th></th>
</tr>
</thead>
<tbody>
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<td>0%</td>
</tr>
<tr>
<td>25-34</td>
<td>4</td>
<td></td>
<td>2%</td>
</tr>
<tr>
<td>35-44</td>
<td>10</td>
<td></td>
<td>6%</td>
</tr>
<tr>
<td>45-54</td>
<td>42</td>
<td></td>
<td>24%</td>
</tr>
<tr>
<td>55-65</td>
<td>63</td>
<td></td>
<td>36%</td>
</tr>
<tr>
<td>&gt;65</td>
<td>56</td>
<td></td>
<td>32%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race</th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
<td>149</td>
<td></td>
<td>85%</td>
</tr>
<tr>
<td>African American</td>
<td>21</td>
<td></td>
<td>12%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0</td>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>Asian</td>
<td>5</td>
<td></td>
<td>3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insurance</th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>107</td>
<td></td>
<td>61%</td>
</tr>
<tr>
<td>Medicare</td>
<td>56</td>
<td></td>
<td>32%</td>
</tr>
<tr>
<td>Medicaid</td>
<td>12</td>
<td></td>
<td>7%</td>
</tr>
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</table>

Table 6. Post education chart review results demographics (N=11)

<table>
<thead>
<tr>
<th>Gender</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>2</td>
<td></td>
<td>18%</td>
</tr>
<tr>
<td>Female</td>
<td>9</td>
<td></td>
<td>82%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>18-24</td>
<td>0</td>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>25-34</td>
<td>1</td>
<td></td>
<td>9%</td>
</tr>
<tr>
<td>35-44</td>
<td>1</td>
<td></td>
<td>9%</td>
</tr>
<tr>
<td>45-54</td>
<td>4</td>
<td></td>
<td>36%</td>
</tr>
<tr>
<td>55-65</td>
<td>5</td>
<td></td>
<td>46%</td>
</tr>
<tr>
<td>&gt;65</td>
<td>0</td>
<td></td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
<td>8</td>
<td></td>
<td>73%</td>
</tr>
<tr>
<td>African American</td>
<td>3</td>
<td></td>
<td>27%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0</td>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>Asian</td>
<td>0</td>
<td></td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Insurance</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>8</td>
<td></td>
<td>73%</td>
</tr>
<tr>
<td>Medicare</td>
<td>0</td>
<td></td>
<td>0%</td>
</tr>
<tr>
<td>Medicaid</td>
<td>3</td>
<td></td>
<td>27%</td>
</tr>
</tbody>
</table>
Appendix A

Dear Providers at chosen site of study,

You are being invited to participate in a research study, “Evaluation of Depression Screening by Primary care providers who provide care for Adult Patients with Type II Diabetes Mellitus”. The purpose of this study will be to assess baseline screening rates in providers who screen for depression in the adult type II diabetic population. Furthermore, the purpose will be to educate providers about the benefits of identifying depression using the PHQ 2/9 screening tool and treating it concurrently with type II diabetes. The focus group for this study will be providers and those who treat adult patients with type II Diabetes Mellitus in the primary care setting.

The Principal Investigator is Kristy Bryant who is a student in the Doctor of Nursing Practice Program at the University of Kentucky College of Nursing and current employee at the chosen site of study.

Your participation in this study is entirely voluntary. If you agree to participate in the study, you will be asked to complete an online survey on REDCAP that asks you to provide answers to 8 questions, in the form of YES or NO, Likert Scale, and multiple choice. The survey should only take 5-10 minutes to complete.

An educational session will follow 1-2 weeks after completion of the survey in phase 2 of this study. Education will be provided on the importance of utilizing the PHQ 2/9 screening tool, where to find and document the tool in EPIC, and why we need to screen Type II Diabetics for depression. The educational session will also include survey results to discuss knowledge, facilitators and barriers to using the PHQ 2/9 screening tool in the primary care setting. The study will take place from May 1, 2019 to October 1, 2019. There is no risk to participate in the study.

The benefits that may be derived from this research include; that with future improvement of depression screening in adults with type II diabetes mellitus, individuals who have not been previously recognized or screened for depression will be identified as screening process improvement takes place. Earlier identification of depression in chronic diseases such as type II Diabetes Mellitus is associated with decreased comorbidities and mortality associated with the disease, decreased health care expenditures, and improved quality of life.

We make every effort to safeguard your data once received on our servers via REDCAP. Given the nature of online surveys, as with anything involving the internet, we can never guarantee the confidentiality of data still en route to us. REDCAP is a secure, web-based application designed exclusively to support data capture for research studies. Your responses will be anonymous. Records of your participation in this study will be kept confidential to the extent permitted by law. Results of this research will be reported as summarized data and will not contain any identifiable individual data.

Should you have any questions you may contact Kristy Bryant, the Principal Investigator, at kmbu253@uky.edu. If you have complaints, suggestions, or questions about your rights as a research volunteer, contact the staff in the University of Kentucky Office of Research Integrity at 859-257-9428 or toll-free at 1-866-400-9428. Your completion of the survey will be considered
your consent to participate in the study and as your agreement that you have been sufficiently informed of the purpose of the study and any risks and benefits. If you agree to participate in the study, please click on the below link to access the survey.

https://redcap.uky.edu/redcap/surveys/?s=E3TPEDHTJJ

Thank you in advance for your assistance with this important project.

Sincerely,

Kristy Bryant College of Nursing, University of Kentucky
DNP Student
E-MAIL: kmbu253@uky.edu
## Evaluation of Depression Screening by Providers for Adult Patients with type II diabetes mellitus

1) Are you familiar with the PHQ 2/9 screening tool for Depression?
   - [ ] Yes
   - [ ] No

2) Do you know where to access the PHQ 2/9 screening tool to administer to your patients?
   - [ ] Yes
   - [ ] No

3) Do you know where to document the PHQ 2/9 screening scores in EPIC?
   - [ ] Yes
   - [ ] No

4) How often do you use the PHQ 2/9 screening tool on your Type II Diabetic patients
   - [ ] Daily
   - [ ] Weekly
   - [ ] Monthly
   - [ ] Less than monthly
   - [ ] Never

5) Do you feel that it is important to screen adults with Type II Diabetes for Depression?
   - [ ] Strongly Agree
   - [ ] Agree
   - [ ] Neutral
   - [ ] Disagree
   - [ ] Strongly Disagree

6) Do you feel confident in scoring patients using the PHQ 2/9 screening tool?
   - [ ] Yes
   - [ ] No

7) On a scale of 1-10 (with 1 being not comfortable at all and 10 being completely comfortable), how do you rate your comfort level in using the PHQ 2/9 in screening patients for depression?
   - [ ] 1
   - [ ] 2
   - [ ] 3
   - [ ] 4
   - [ ] 5
   - [ ] 6
   - [ ] 7
   - [ ] 8
   - [ ] 9
   - [ ] 10

8) What barriers do you feel prevent you from performing the PHQ 2/9 screening for depression on your adult patients with type II diabetes? Fill in the blank:
   - [ ] Time
   - [ ] Importance
   - [ ] Knowledge of PHQ
   - [ ] Other
Utilizing the PHQ 2/9 Screening Tool for Adult Patients with Type 2 Diabetes in Primary Care (Education for Providers)

KRISTY BRYANT RN, BSN
DNP STUDENT
UNIVERSITY OF KENTUCKY

Why do we need to screen adults with type 2 diabetes for depression?

- Over 30 million Americans suffer from type 2 diabetes and the sequelae of the disease (Bilous, 2013).
- In Kentucky, > 14.5% of the adult population have been diagnosed with type II diabetes (Bilous, 2013).
- Increased risk for depression related to the cost of the disease, rapid decline of health, and non-compliance (Bodescu, 2016).
- Only 50% of adult patients with type 2 diabetes seen in the primary care setting are properly screened and identified for depression (Egede, & Walker, & Bishu, & Disibuke, 2016).
- The United States spends over $21.3 billion dollars annually on adult patients with type II diabetes who have not been diagnosed clinically with depression (Egede et al., 2016).
- Better laboratory outcomes in Hba1c levels, cholesterol screenings, and even kidney function when patients are treated for diabetes and depression concurrently (Willborn et al., 2016)
What is the PHQ 2/9 Screening Tool?

- The PHQ-2 inquires about the frequency of depressed mood and anhedonia over the past two weeks.
- The purpose of the PHQ-2 is to screen for depression in a “first-step” approach.
- Patients who screen positive should be further evaluated with the PHQ-9 to determine whether they meet criteria for a depressive disorder.

### PHQ-2 Questions

<table>
<thead>
<tr>
<th>Over the last 2 weeks how often have you been bothered by any of the following problems?</th>
<th>Not at all</th>
<th>Several days</th>
<th>More than half the days</th>
<th>Nearly every day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Little interest or pleasure in doing things</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Feeling down, depressed, or hopeless</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

* A cut-off score ≥ 3 is positive
DEPRESSION SCREENING FOR ADULTS WITH TYPE 2 DIABETES

Why choose the PHQ Screening tool?

- Fast
- Reliable
- Inexpensive
- Evidence based with an 88% sensitivity rate

How are we doing with screening for depression among our adult patients with type 2 diabetes?

- A recent chart review was performed at an NCMA primary care office
  - Found in patient Encounter note (PAP template) in EMR
  - Free text within patient encounter note in EMR
  - ONLY 1.86% of adult patients with type 2 diabetes were screened for depression during their initial diabetes encounter, or follow up visit.
  - 215 charts were reviewed and 4 patients were screened total
    - 3 were screened with the PHQ 2 and were NEGATIVE
    - 1 was screened with the PHQ 2 and was found to be POSITIVE but was not followed up by the PHQ 9 as recommended to determine severity.
DEPRESSION SCREENING FOR ADULTS WITH TYPE 2 DIABETES

Provider Survey Results (N=4)

(A recent survey was sent out to assess knowledge, facilitators, and barriers regarding the use of the PHQ 2/9 Screening tool in primary care by providers)

1. Are you familiar with the PHQ 2/9 screening tool for Depression?  
   Yes 100%  
   No 0%

2. Do you know where to access the PHQ 2/9 screening tool to administer to your patients?  
   Yes 75%  
   No 25%

3. Do you know where to document the PHQ 2/9 screening tool in EPIC?  
   Yes 75%  
   No 25%

4. How often do you use the PHQ 2/9 screening tool on your Type II Diabetic patients?  
   Always 0%  
   Sometimes 75%  
   Never 25%

5. Do you feel that it is important to screen adults with Type II Diabetes for Depression?  
   Agree 75%  
   Disagree 0%  
   Neither Agree nor Disagree 25%

6. Do you feel confident in using the PHQ 2/9 screening tool?  
   Yes 75%  
   No 25%

7. On a scale 1-10 (with 1 being not comfortable at all and 10 being completely comfortable), how do you rate your comfort level in using the PHQ 2/9 tool for screening patients for depression?  
   Scale of 1-10  
   8.5 mean score (0.05 SD)

8. What barriers do you find prevent you from performing the PHQ 2/9 screening for depression on your adult patients with Type II diabetes?  
   Time 75%  
   Importance of PHQ 0%  
   Knowledge of PHQ 25%  
   Other 0%

BARRIERS

According to the Survey 2 of the biggest barriers in using the PHQ 2/9 screening tool for adult patients with type 2 diabetes are:

- TIME
- KNOWLEDGE OF PHQ
- Thoughts about this?  
  - Do you agree?  
  - Other important barriers not identified?
For effective management of depression in adult patients with Type II Diabetes the first step in recognition and diagnosis.

The PHQ is quick (shortest screening tool available), cheap, and easy to administer in the Primary Care Setting (Holt, de Groot, & Golden, 2014).

To streamline the screening process could you:

- Have the MA fill out paper PHQ 2/9 while rooming in patient?
- Provider can carry over scores in EPIC.

What are your thoughts?

- Other ideas for making it easier and more likely for you or your team to complete the PHQ on every adult patient with type 2 diabetes.

Both the PHQ 2 and PHQ 9 are built into the flow sheet section of EPIC.

If the PHQ2 is positive, the PHQ 9 automatically cascades as recommended for further assessment into the severity of the Depression.

A smart link is available that pulls in the score PHQ2NPS and one that pulls in both the values and the score, PHQ9, into the patient's encounter note.
DEPRESSION SCREENING FOR ADULTS WITH TYPE 2 DIABETES

Questions or thoughts?

- We know the substantial impact of comorbid depression and diabetes on health outcomes and quality of life
- We have the resources available to screen and identify patients with depression
- Let’s work together to improve our screening rates!

- Questions or thoughts?
- Thank you for your time!

References

References


Kroenke K, Spitzer R L, Williams J B (2001). The PHQ-9: validity of a brief depression severity measure. Journal of General Internal Medicine, 16(9): 606-613


