Project Title:	Collaborative Care for Depression in Primary Care
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Abstract:	**Purpose:** The quality improvement practice was the exploration of collaborative care between primary care providers and behavioral health advanced practice nurse (APN). The objectives were increasing the accuracy of depressive symptoms and increasing the level of screening of depression for patients with any additional high-risk conditions, improving patients' depressive outcomes with treatment, and expanding communication between primary care providers and behavioral health provider. The primary care clinic did not have a routine screening for depression. Patients were waiting as long as five months to obtain services from behavioral health. The quality improvement practice was to develop the coordination and collaboration of care, access to services, and referral to behavioral health providers. **Materials & Methods:** The primary point of contact for behavioral health care delivery for most patients is the primary care clinic. The 51 patients with depression were seen in a rural primary care clinic for three months. The increase of screening for depression in the participants was an aggregate percentage of the International Classification of Diseases-9 (ICD-9) codes for depression 30 days prior to implementation of the intervention and post 30 day review of the providers in the clinic. The Patient Health Questionnaire-9 (PHQ-9) was administered at first visit and with each follow up appointments. A reduction in the PHQ-9 score of 10 or less at follow up or a reduction in the score of 5 were considered to have improved depressive symptoms. The high risk conditions, diabetes, cardiovascular disease, cancer, chronic pain, and substance misuse were gathered from the patients' chart review. The improvement in communication between primary care provider and behavioral health APN was the measurement of percentage of patients with depression documentation demonstrated in the electronic medical record. The documentation data included the referral to behavioral health or consultation with the behavioral health APN. The Patient Health Questionnaire-9 (PHQ-9), and record review for data collection using descriptive statistics. The study was approved by the University's Institutional Review Board for the quality improvement project. **Results:** The increase of the accuracy of depressive symptoms were 37 females and 14 males age 19 and older were screened for depression. Patients age 19-44; 50% males and 26.3% had PHQ-9 score less than 10, age 45-64; 25% males and 44% females had PHQ-9 score less than 10; age 65 and older: two

males and nine females had PHQ-9 score of less than 10. The aggregate percentage of patients with ICD-9 code of depression 30 days prior to the quality improvement practice was 2.6% and the 30 day post aggregate percentage was 4%. The increase of screening for depression for participants with any additional high-risk conditions were identified in nine males and 27 females. One male and seven females had more than on high-risk conditions. The depression screening increased by 64.3% on male participants and 72.9% on female participants. The improvement in depressive outcomes from treatment were age 19-44, 1/8 males and 3/19 females: three had PHQ-9 score below 10 and two had 5 point difference in score; age 45-64; one male had one point increase in PHQ-9 score and one female had score of 7 and one female had a reduction of 11 points in PHQ-9 score, and participants age 65 and older did not require follow up as PHQ-9 scores were below 10. The improvement in communication between primary care provider and behavioral health provider were two consults and total of 9 referrals were made. The coordination and collaboration of care improved with access of behavioral health services offered within 2-8 weeks.

Conclusion: The quality improvement practice has effectively improved collaborative care with increase in depressive screening and improvement the accuracy in depressive symptoms. The results highlighted the need for collaborative care in the primary care clinic for patients with depression. The use of the electronic medical records (EMR) ensured documentation of the diagnosis and collaboration of care. The EMR had a trigger depression tab to help facilitate depression screening and comparing PHQ-9 scores in each visit. The collaborative practice team promptly learns from the experience to provide depressive screening to patients with comorbid conditions improved quality care, patient-centered care, and efficient, and effective treatment.

Clinical Relevance: Depression significantly affects the patients' health and outcomes. Screening for depression in primary care is the first step in treating depression. The adoption of collaborative care with a multidisciplinary team of primary care providers and behavioral health providers focused on decreasing depressive symptoms and improvement in health outcomes. The behavioral health advanced practice nurse established leadership in the collaboration of care with patient improvement of depressive symptoms, coordinated services, and quality improvement practice. The screening for depression will be used for accuracy of depressive symptoms, education opportunity for patients in follow up appointments, and treatment options.

Keywords | depression, primary care, behavioral health, collaborative care, PHQ-9