University of San Diego

Digital USD

Doctor of Nursing Practice Final Manuscripts

Theses and Dissertations

Spring 5-26-2018

A Common Goal: Primary Care and Psychiatry Improve Depression Detection and Outcomes

Katherine Kilkenney

University of San Diego, kkilkenney@sandiego.edu

Follow this and additional works at: <https://digital.sandiego.edu/dnp>

Part of the [Psychiatric and Mental Health Nursing Commons](#)

Digital USD Citation

Kilkenney, Katherine, "A Common Goal: Primary Care and Psychiatry Improve Depression Detection and Outcomes" (2018). *Doctor of Nursing Practice Final Manuscripts*. 62.

<https://digital.sandiego.edu/dnp/62>

This Doctor of Nursing Practice Final Manuscript is brought to you for free and open access by the Theses and Dissertations at Digital USD. It has been accepted for inclusion in Doctor of Nursing Practice Final Manuscripts by an authorized administrator of Digital USD. For more information, please contact digital@sandiego.edu.

UNIVERSITY OF SAN DIEGO
Hahn School of Nursing and Health Science:
Beyster Institute for Nursing Research

DOCTOR OF NURSING PRACTICE PORTFOLIO

by

Katherine M. Kilkenny

A portfolio presented to the

FACULTY OF THE HAHN SCHOOL OF NURSING AND HEALTH SCIENCE:
BEYSTER INSTITUTE FOR NURSING RESEARCH
UNIVERSITY OF SAN DIEGO

In partial fulfillment of the
requirements for the degree

DOCTOR OF NURSING PRACTICE
May 2018

TABLE OF CONTENTS

Acknowledgements.....	3
Documentation of Mastery of DNP Program Outcomes.....	4
Appendix	
A. Letter of support from clinical site.....	28
B. Poster Abstract.....	29
C. GNSA Letter of acceptance.....	30
D. DNP Project Poster.....	32
E. Stakeholder Presentation.....	33
F. Final Clinical Exemplars.....	41
G. Official Protocol.....	57

ACKNOWLEDGEMENTS

I owe a great many thanks to a great many people who supported and helped me throughout the duration of this program.

My deepest thanks to Dr. Michal Terry and Dr. Dee Cannon for their constant support, invaluable guidance, and contributions throughout this program. You both helped me to focus on what ultimately has been a hugely rewarding and enriching process.

I would also like to express a huge amount of gratitude to my astoundingly supportive friends. Without your life-long encouragement I would not have been able to achieve any of this.

Most importantly I want to thank my family. Mom, Dad, Marc, Rory, Sara, Conor, Gabi, Mac, and Hampton nobody has been more important to me in the pursuit of this doctorate degree than all of you. Your love and support provided unending inspiration to make it where I am today.

DOCUMENTATION OF MASTERY OF DNP PROGRAM OUTCOMES

A Common Goal: Primary Care and Psychiatry

Improve Depression Detection and Outcomes

Author: Katherine M. Kilkenny RN, BSN

Author affiliations: University of San Diego, Hahn School of Nursing and Health

Science: Beyster Institute for Nursing Research

ABSTRACT

Background: Major Depressive Disorder (MDD) affects over 15 million (6.7%) adult Americans. While one in four primary care patients suffer from depressive symptoms, MDD is accurately diagnosed as little as 25% of the time.

Purpose: Implementation of an evidence-based protocol outlining the process for screening, behavioral health referral, and the role of a collaborative care team would improve detection and treatment of adult MDD patients in the ambulatory setting.

Process: A systematic Patient Health Questionnaire (PHQ-9) based screening protocol was implemented. Every new and existing patient completed the PHQ-9 during scheduled primary care appointments. If a patient scored 15 or higher, indicating moderate to severe risk, they were referred to behavioral health. The behavioral health case manager then triaged the patient for their specific needs and scheduled appointments to psychiatry and psychology as appropriate. If a patient was not progressing during treatment the case was discussed during bi-weekly collaborative care team meetings and the plan was adjusted.

Outcomes: The baseline PHQ-9 screening rate for all patients was 40% for Quarter 2 of 2017. After implementation of the protocol screening rates of new and existing patients increased to 49% in one month's time. After two months screening and referral rates reached 100%. This rate was maintained for the five-month project duration.

Conclusion: Depression must be addressed in the primary care setting. Depression screening is a safe and efficacious intervention to improve detection and guide treatment. Addressing MDD in a collaborative care model is also a cost-effective and successful approach to address one of the most detrimental diseases worldwide.

INTRODUCTION

Lack of access to mental health services is a worldwide health disparity. In 2010, Major Depressive Disorder was the second largest contributor to global disease burden. (Ferrari et al., 2013) In the United States mental health disorders are the leading cause of disability and premature death. (Zaat, 2004) Americans with severe mental illness are dying on average 25 years earlier. (Zaat, 2004)

In regard to depression, 16.1 million (6.7%) American adults had a minimum of one major depressive episode (MDE) in 2015. Over 10 million (4.3%) adults had severe impairment because of it. (Ali, Dean, & Hedden, 2016) Major Depressive Disorder (MDD) rates and impact increase in the low socioeconomic and minority populations. (Jackson-Triche et al., 2000; Lee et al., 2016)

Many patients are trying to seek help. Psychological problems drive up to 70% of primary care appointments and depression is the third most common reason for consultation. (Hunter, 2009; Gilbody, 2006) Despite the frequency in presentation depression management is below evidence-based standards. A 20-year study revealed that primary care providers detected and diagnosed depression correctly in as low as 25% of patients, only half of which received minimally adequate pharmacologic care. (Simon, 2002) Some providers referred patients but due to the lack of in-house psychiatric providers many are referred to a distance location. Research has shown that only 10% of patients will follow up with psychiatric services that are not co-located. (Hunter, 2009)

Despite the high rate of patients suffering from depression a gap exists between need and services provided. Both patients and providers are contributing to the issue. Primary care providers have identified multiple contributing factors to the subpar

diagnosis and treatment of depression at their ambulatory settings. Lack of funds, incentives, training, and treatment resources were top of the list. (Unützer, Schoenbaum, Druss, & Katon, 2006) Low levels of cultural competence, language barriers, and qualities of care recipients are also listed amongst the reasons for the gap in care. (Martinez, Galván, Saavedra, & Berenzon, 2016; Sanchez & Watt, 2012) Patients have reported a lack of access, fear of stigma, fear of burden, provider compassion fatigue, guilt, shame, denial, and social withdrawal amongst the reasons they do not seek care when first experiencing psychological distress. (Dawson et al., 2017; Gronholm, Thornicroft, Laurens, & Evans-Lacko, 2017)

The clinic of concern was located in San Diego County. The community clinic is a Federally Qualified Health Center that provides women's, behavioral, pediatric, and adult health services to low-income, uninsured and families experiencing homelessness. San Diego County has high rates of psychological stress when compared to the state of California. Approximately 9% of Californians report experiencing severe psychological distress, compared to 10.2% in San Diego County and 13.3% of Central San Diego County. Twenty percent of Central San Diego County residents reported "Needing help for emotional/mental health problems" while 17.6% of all Californians reported this. (UCLA Center for Health Policy Research, 2016)

The behavioral health and physical health services offered at this clinic were siloed. The behavioral health department had medical assistants, case managers, psychiatrists, psychologists, and licensed social workers. The primary services offered were standard ambulatory care. There was no formalized procedure or process in place to structure collaborative care between these services. There was also no standard

process to identify and engage primary care patients who were suffering from depressive symptoms. Implementing a standard screening with immediate referral to a collaborative care service between primary care and behavioral health has been shown to greatly improve identification, treatment, and overall health outcomes of patients with depression within the primary care setting.

Evidence Addressing the Problem

A literature review was performed to collate evidence for best practice regarding collaborative care and depression screening within the ambulatory setting. Databases accessed included CINAHL, Cochrane Library of Systematic Reviews, PsycINFO, and PubMed. Search terms used included "collaborative care," "depression," "behavioral health," "case managers," "screening," "follow ups," "electronic health record referral" and "trans-disciplinary meetings." A total of 314 articles were identified. The author reviewed abstracts to identify 47 relevant articles. The final literature review included 27 studies. Studies were ranked according to Melnyk and Fineout-Overholt's hierarchy of evidence. These studies comprised of 9 systematic reviews and/or meta-analyses, 5 randomized control trials, 7 case-control studies, and 6 qualitative studies.

Collaborative care was designed to improve detection and diagnosis of depression, increase the amount of providers following evidence-based care guidelines, and increase clinical and community knowledge and support of depression. (Community Preventive Services Task Force, 2012) There is robust research to support collaborative care in a multitude of settings and patient populations. A Cochrane review that included 79 randomized controlled trials and nearly 25,000 participants concluded that patients with depression under a collaborative model had significant improvements in the short,

medium, and long-term outcomes. The review contributed the success to increased adherence to care plans, guidance and support throughout treatment, and higher rates of patient satisfaction. (Archer et al., 2012)

The key foundation of care collaboration is that it involves a multi-disciplinary team to create and deliver a patient centered care plan. This team includes the patient, a case manager, behavioral health specialist (therapist or psychologist), the primary care provider, and a psychiatric provider. Unützer and Park (2012) stated that patients receiving care within a collaborative clinic have a 50% or greater improvement in depressive symptoms at 12 months when compared to separate services. Collaborative care will also increase psychotropic medication adherence, patient satisfaction, remission of symptoms, and quality of life. These patients also have lower rates of cardiovascular events, chronic pain, and medical costs. (Goodrich et al., 2013) Collaborative care models are also translatable to both private practice and community clinics. (Coventry et al., 2014) A diverse patient population has been shown to benefit from care collaboration. Spanish speaking Hispanic patients had a 77% recovery rate and 51% of English speaking Hispanics reported significant improvement. (Sanchez & Watt, 2012)

Research has shown that family practice providers don't identify up to 50% of MDD patients when not using standardized screening. (Arroll et al., 2010) The Patient Health Questionnaire (PHQ-9) has been validated for depression screening within ambulatory care settings. (Arroll et al., 2010) The PHQ-9 utilizes a "categorical algorithm" to detect the presence of DSM-V depression diagnosis criteria and a "continuous score" that relates to depression severity. (Löwe, Schenkel, Carney-Doebbeling, & Göbel, 2006) Scores are equated with the risk a patient is suffering from

MDD. A score of 0-4 indicates no risk, 5-9 mild, 10-14 moderate, 15-19 moderately severe, and 20-27 indicate severe risk for MDD. A PHQ-9 score of 10 or above has an 88% sensitivity and 88% specificity for MDD. (Muñoz-Navarro et al., 2017) Use of the PHQ-9 to aid diagnosing and tracking depression is recommended by the World Health Organization, American Psychiatric Association Practice Guidelines for the treatment of Patients with MDD, and the Cochrane Review for Collaborative Care of Depression. (American Psychiatric Association, 2010; Archer et al., 2012; World Health Organization, 2001)

METHODS

Framework

Implementation of this evidence-based practice (EBP) project required a clear and well defined model. The Stetler Model is a proven and reliable model. Phase I entails the preparation phase. Phase II requires that the Advanced Practice Registered Nurse (APRN) must critique the gathered evidence to ensure its adequacy. Phase III requires that the APRN consider the feasibility, sustainability, risks, resources, and readiness for the EBP change before progressing to the implementation phase. Phase IV is the actual evidence implementation stage. Phase V calls for evaluation. (Rycroft-Malone & Bucknall, 2010)

The Stetler Model worked well with this practice change as it allowed for both qualitative and quantitative research, was simple to follow, and was highly recommended by the University of San Diego.

Project Approval

The University of San Diego's Institution Review Board granted this project exemption as it did not qualify as a research or clinical investigation as defined by the federal government. New verbal or written consent outside the clinic's consent to receive services was not obtained as no new additional services were offered.

Description of Project

The purpose of this EBP project was the implementation of an evidence-based protocol outlining the process for primary care patient depression screening, referral to in-house behavioral health (BH), and the role of the collaborative care team. This protocol's goals were to improve detection, treatment, and outcomes for adult MDD patients. A major strength of this protocol was the utilization of trans-professional staff engaged in care collaboration. Another strength was the use of evidence-based screening tools to guide practice. The evidence-based tool was the PHQ-9. Lastly, a major strength was the ease of provider notification regarding PHQ-9 scores and the need for referral. Provider notification and referral order ensured patients were offered collaborative care services. These services include meeting with the BH case manager, psychiatry appointments for medications, and psychologist appointments for therapy. The Doctor of Nursing Practicing (DNP) student wrote, implemented, and monitored the evidence-based protocol "Clinical Depression Screening and Follow Up Using the Patient Health Questionnaire" (Appendix H). The DNP student also obtained baseline screening rates to evaluate project success. The EBP project was evaluated over a five-month period.

Intervention Implementation

For this EBP project all further described interventions were formally detailed in the implemented practice protocol. All patients presenting to the clinic were to be administered the PHQ-9 by the medical assistants. All new patients were to be screened at their physical exam and intake appointment. For existing patients, the medical assistant performed a chart review and administered the tool if they had not completed one within the last calendar year. The medical assistant then documented each score in the electronic medical record during the appointment. The Information Technology (IT) department built an automatic “trigger” into the electronic medical record to alert all providers to order a “Behavioral Health referral” for patients with documented score 15 or above. The primary care provider underwent training to assess for depression, understand the PHQ-9 scores, and how to place the BH referral.

Patient screening rates, scores, follow-up appointments and clinical outcomes needed to be monitored to gauge the success of the protocol. Monitoring adherence to the protocol ensured patients suffering from depressive symptoms were identified, contacted, monitored, and following a care plan. The DNP student was responsible for this. The IT department provided the student each week with a list of every patient who presented to the clinic and their corresponding scores. This list was reviewed by the DNP student performed a corresponding chart audit. The purpose of the audit was to ensure each patient who required a PHQ-9 screening as outlined above completed one, and those who were appropriate received a BH referral. For patients that scored equal to or above a 15 and did not get the BH referral, the DNP student placed the referral and contacted the patient to offer the BH services. The audit also indicated which patients were not progressing per their PHQ-9 scores. These patients were discussed during the bi-weekly

collaborative care meetings. After the DNP student completed the project, the case manager absorbed the chart auditing process.

Care collaboration was vital to this process as it empowered the team and the patient to be involved with creating a care plan and goal setting. Specific roles of each team member were outlined in the depression screening protocol. These roles and coinciding responsibilities in relation to the protocol were disseminated to providers by the DNP student. A key role to highlight was that of the BH case manager. Case managers were individuals with a minimum education of a bachelor's degree in social work or nursing. They were also specially trained in the standards of care for patients suffering from MDD in order to accurately address patients' mental health needs and offer appropriate services. This knowledge and training was vital as the case managers were directly responding to the BH referrals placed by the primary care providers. When a referral was placed, a warm hand off between these two providers occurred directly after completion of the primary care appointment. At this time the BH case manager further screened the patient and educated them on BH collaborative care. If appropriate and the patient was agreeable, the BH case manager then scheduled desired psychiatric services. If a patient was not able to meet in the case manager during their primary care appointment they received a follow-up phone call from the case manager. While warm handoffs were preferred, phone calls have also been proven as effective. Follow up calls have shown that up to 20% of patients who receive a call have significant improvements when compared to those who don't have contact at with a case manager at all. (Bao, Druss, Jung, Chan, & Unutzer, 2016). This phone call reinforced the clinical alliance between the patient and the care team by discussing symptom status, medication

compliance, and barriers to care. The BH case manager charted an encounter note in the EMR once the call or warm handoff were complete. The DNP student monitored the occurrence of these interactions on a weekly basis during chart audits to ensure no patients were missed. All case manager duties were outlined in the EBP protocol.

A requirement of successful care collaboration is also patient focused case discussions during collaborative care meetings. These team meetings are associated with symptom improvement and medication adherence (Conventry et al., 2014). This protocol required bi-weekly meetings between the entire team. The DNP student also participated in these meetings when possible to ensure a tailored plan was formulated in a timely manner for the presented patient.

Stakeholder Identification

Process stakeholders were vital to the successful implementation of this EBP. Outcome stakeholders are vital to the EBP change's sustainability. Regarding this project the patient and faculty advisor were solely process stakeholders. The psychiatrist (clinical mentor), primary care provider, psychologist, IT department, and case managers were both process and outcome stakeholders. The strict outcome stakeholders were identified.

Process Stakeholders

The faculty advisor collaborated with the DNP student on implementation and sustainability strategies. This was done through monthly emails and monthly informal meetings. Discussion topics included patient data, implementation barriers, and project gaps.

The patient's role was informal but important. The patient informally reported on the effectiveness of the care plan and provide process feedback during follow up behavioral health meetings. This occurred during scheduled clinic appointments and BH case manager phone calls.

Process and Outcome Stakeholders

The clinical mentor required similar updates as the faculty chair and also received monthly emails. The clinical mentor also required formal meetings to consult on project process.

To assist the DNP student with success and sustainability of the project a close working relationship with the case manager was required. The case manager provided feedback regarding the student's strengths and weaknesses, areas for improvement, and brainstorm strategies to streamline and improve collaborative care. The case manager and DNP student also collaborated on strategies to engage the patient during warm handoffs and telephone calls. Weekly emails or phone calls and bi-weekly informal meetings were held.

The IT department was vital as they provided weekly emails obtaining PHQ-9 data. This informed the DNP student of the project's progression. These emails will also need to be continued for the BH case managers post DNP student project completion for project sustainability. Weekly emails occurred between the IT department, the case managers, and the DNP student.

The primary care provider needed to be informed and provided feedback regarding plan of care changes recommended by the collaborative team. Weekly emails,

documentation in the medical record, and bi-weekly 15-minute caseload discussion took place at the clinical site.

Desired Project Outcomes

Desired outcomes included 100% of new patients completed a PHQ-9 during their physical exam and intake appointment. All existing patients completed a PHQ-9 assessment annually. All patients who scored 15 or higher were to be referred to collaborative care immediately by the primary care provider placing an order for “Behavioral Health Referral”. A behavioral health case manager was meet with every referred patient same day or call them via telephone unless the patient refused. This was to ensure that the clinic referred 100% of patients with a PHQ-9 score of 15 or above to receive appropriate psychiatric services.

Outcome Indicators

The project was evaluated using two key components. Patient screening rates and patient referral rates. Short-term goals included include writing the protocol, establishing the collaborative care team and completing training within the first month of implementation. Collaborative meetings were to occur bi-weekly after the first month of the project start date. Ninety-eight percent of all patients seen were to be screened or have a PHQ-9 on file in the same calendar year starting at the end of the second month. Long term goals included 100% completion rate of PHQ-9 scales on all patients seen between the second and fifth month. Lastly, 100% of patients who scored at least a 15 were referred to behavioral health.

Sustainability

For sustainability the DNP student trained the BH case managers to absorb the DNP student's responsibility. Another option was training the medical assistant (MA) the DNP student role. Additional chart training for the MA would be simple as the PHQ-9 has already been built into the EMR and the IT department is now regularly sending weekly updates. The Psychiatric MD supported both options. The psychiatric MD's support was key to sustainability as she was the project champion and committed to the success of integrated collaborative care.

Dissemination

Dissemination of this EBP project's success took place in a variety of settings. These settings included a formal stakeholder presentation, a national conference poster presentation, and an abstract planned to be submitted for a target journal.

Stakeholder dissemination included a 20-minute PowerPoint presentation during the collaborative care meeting. The 20-minute time frame was a recommendation from the DNP Student Handbook. A digital copy of the poster presentation was also emailed to the appropriate stakeholders.

This project was accepted as a poster presentation at the Graduate Nursing Student Academy national convention in Atlanta, Georgia in February of 2018. This conference was appropriate because the conference objective is to highlight evidence-based nursing practices that are being implemented by graduate students.

The target journal identified for abstract submission is the journal *Nursing Outlook*. This journal focuses on current nurse student issues and trends throughout education. The role of a mental health DNP student within a small organization primarily offering primary care services operating without funds has generated little published

discussion. As funding and quality initiatives continue to target collaborative services and mental health needs in the primary care setting it is possible more students will have an interesting in learning from the DNP student's experiences.

DATA ANALYSIS AND RESULTS

The Quality Initiative (QI) Department requested that the DNP student evaluate outcomes combining both existing and new patients into one group for both screening and referral rates. All analysis done was with the aid of Dr. Dee Cannon.

To evaluate the PHQ-9 screening and referral rates a pre, mid, and post evaluation approach was used. The QI department provided the baseline data regarding screening rates. This was used as the prescreening rate data point. Subsequent screening and referral rates were obtained bi-weekly for every scheduled appointment until project conclusion. The post evaluation data point was obtained one month after the EBP project concluded.

The baseline PHQ-9 screening rate for all patients was 40% for Quarter 2 of 2017. Per QI department request the implementation of the DNP Depression Protocol occurred August 1, 2017. At the end of this month screening rates increased from 40% to 49% for both new and existing patients combined. Screening rates increased from 49% to 100% by the end of September. From October to January the 100% screening rates were maintained. January was the month the post evaluation data point was obtained.

The baseline referral rates were not able to be determined as there was no formal behavioral health referral order in place. Providers would refer patients by in-person introductions to behavioral health employees or by placing a variety of orders including "refer to psychology," "refer to case management," "refer to psychiatry," "refer to mental

health.” Once the protocol was implemented a single order was established as the “Behavioral Health referral.” Following referral rates were observed. August through January had a 100% referral rate for patients who scored equal to or above a 15 on the PHQ-9 tool. This success can be contributed to educating the providers, having a standardized protocol, and the EMR automatic referral reminder for providers.

Further analysis could include investigating PHQ-9 score progressions to assess if patients are improving. Analysis could also include medication adherence or follow up adherence. Other valuable information would be length of time to reach remission and overall score reductions for patients. Analysis could also include documenting the dates of each collaborative meeting and each care-call. The specific timelines of each intervention could be determined and compared to patient outcomes. This could identify if quicker intervention implementation translates into more effective outcomes. For example, this data could reveal if a three-week care-call window is more effective than a four-week care-call window. Data analysis and presentation of this data would be further discussed with Dr. Cannon.

Cost Benefit Analysis

This EBP did not require additional funds as all services utilized were already in place at the clinic. To demonstrate the cost-benefit, costs determined by the Grochdreis et al. (2012) systematic review will be used. The calculated intervention costs included the cost of a case manager, primary care provider, psychiatric provider, psychiatric medications, and outpatient mental health services. The average cost to provide collaborative care for 24 months was \$597 per patient.

To calculate the benefit, Depression Free Days (DFD) will be used. One DFD for a MDD patient prevents a loss of \$56.59 per day. (Grochtdreis et al., 2015) This is due to the prevented direct and indirect medical costs as well as prevention of work-related lost productivity. Patients with MDD who received collaborative care had an average of 115 more DFDs in 24 months than MDD patients who didn't. (Grochtdreis et al., 2015) This would be an average prevention of a loss of \$6,507.85 per patient over 24 months.

The theoretical DNP student caseload would consist of 12 patients. Over 24 months this caseload would require a total cost of \$7,164 (12 patients x \$597 in costs). The intervention would potentially result in 1,380 additional DFDs (12 patients x 115 DFDs). This would amount to \$78,094.2 prevented losses over 24 months (1,380 DFDs x \$56.59). The net gain from investment would be \$70,930.20 (\$78,094.2 – \$7,164). The return on investment would be 990% ($[\$70,930.20 / \$7,164] \times 100$).

IMPLICATIONS FOR RESEARCH AND PRACTICE

Project Impact

Implementing this protocol to improve early identification, quality of treatment, and patient outcomes for medically underserved patients at moderate-high risk of depression in the community health setting has the potential for great outcomes. Full integration of the PHQ-9 to screen all adult patients presenting to a clinic can increase identification and treatment of depressed patients. This project can also potentially increase access to integrated behavioral health services for San Diego County residents by increasing the level of behavior health integration at the clinic of concern. Mental health outcomes of the vulnerable or underserved primary care patient can improve while

operating under a cost-effective care model. Barriers to accessing behavioral health services and implementing collaborative care will be identified for this clinic setting.

Barriers and Lessons Learned

Lessons learned included the strengths and weaknesses working in a small community clinic. Strengths included the ease of EBP project implementation. Having to work with only a small staff size made education and evaluation processes simpler then when compared to larger organizations. Small staff size was also a weakness and barrier for this project. Further data analysis including specific patient numbers was unable to be obtained from the IT department. The IT department was only one individual who ultimately and reluctantly stated clinic priorities did not allot much time to mine data for the DNP student. Under these conditions the project outcomes would have been better analyzed if there were two DNP students working on this project. One student to write and implement the protocol and one student to evaluate outcomes and produce clinic suggestions.

Conclusion

Depression is a prevalent and debilitating illness affecting individuals worldwide. The psychological effects can exacerbate physical ailments, personal relationships, and ability to contribute within society. It is the utmost importance that the healthcare system addresses this public health threat.

Collaborative care is an evidenced based approach to identifying and treating depression. It improved provider adherence to recommended treatment guidelines and patient adherence to treatment plans. It also addresses the stigmatization and lack of care of this population. Care collaboration has been shown to be effective in a vast number of

patient populations, clinical environments, and countries. This model empowers patients and providers to face depression by actively engaging in treatment. Depression can no longer be ignored by the public or medical sectors and care collaboration is the strongest evidenced based intervention to address it.

REFERENCES

- Ali, M. M., Dean, D., Jr., & Hedden, S. L. (2016). Key Substance Use and Mental Health Indicators in the United States: Results from the 2015 National Survey on Drug Use and Health. *Addictive Behaviors*, 59, 35–41.
<http://doi.org/10.1016/j.addbeh.2016.03.019>
- American Psychiatric Association. (2010). American Psychiatric Association Practice Guidelines for the Treatment of Patients With Major Depressive Disorder (3rd ed.). Arlington, VA: American Psychiatric Publishing, Inc.
<http://doi.org/10.1176/appi.books.9780890423387.654001>
- Archer J, Bower P, Gilbody S, Lovell K, Richards D, Gask L, Dickens C, Coventry P. (2012) *Collaborative care for depression and anxiety problems*. Cochrane Database of Systematic Reviews DOI: 10.1002/14651858.CD006525.pub2.
- Arroll, B., Goodyear-Smith, F., Crengle, S., Gunn, J., Kerse, N., Fishman, T., ... Hatcher, S. (2010, July 19). Validation of PHQ-2 and PHQ-9 to Screen for Major Depression in the Primary Care Population. *The Annals of Family Medicine*, 8(4), 348-353. <http://dx.doi.org/10.1370/afm.1139>
- Bao, Y., Druss, B. G., Jung, H., Chan, Y., & Unutzer, J. (2016,). Unpacking Collaborative Care for Depression: Examining Two Essential Tasks for Implementation. *Psychiatric Services* , 67(4), 418-424.
<http://dx.doi.org/10.1176/appi.ps.201400577>
- Community Preventive Services Task Force. (2012). Recommendation from the Community Preventive Services Task Force for Use of Collaborative Care for the Management of Depressive Disorders. *American Journal of Preventive Medicine*,

42(5), 521–524. <http://doi.org/10.1016/j.amepre.2012.01.010>

Conventry, P. A., Hudson, J. L., Kontopantelis, E., Archer, J., Richards, D., Gilbody, S.,

... Bower, P. (2014,). Characteristics of Effective Collaborative Care for

Treatment of Depression: A Systematic Review and Meta-Regression of 74

Randomised Controlled Trials. *PLoS ONE*, 9(9).

<http://dx.doi.org/10.1371/journal.pone.0108114>

Dawson, S., Gerace, A., Muir-Cochrane, E., O'Kane, D., Henderson, J., Lawn, S., &

Fuller, J. (2017). Carers' experiences of accessing and navigating mental health care

for older people in a rural area in Australia. *Aging & Mental Health*, 21(2), 216–223.

<http://doi.org/10.1080/13607863.2015.1078283>

Ferrari, A. J., Charlson, F. J., Norman, R. E., Patten, S. B., Freedman, G., Murray, C. J.

L., et al. (2013). Burden of Depressive Disorders by Country, Sex, Age, and Year:

Findings from the Global Burden of Disease Study 2010. *PLoS Medicine*, 10(11),

e1001547. <http://doi.org/10.1371/journal.pmed.1001547>

Gilbody, S. (2006). Collaborative Care for Depression. *Archives of Internal Medicine*,

166(21), 2314. <http://doi.org/10.1001/archinte.166.21.2314>

Grochtdreis, T., Brettschneider, C., Wegener, A., Watzke, B., Riedel-Heller, S., Harter,

M., & König, H. (2015,). Cost-Effectiveness of Collaborative Care for the

Treatment of Depressive Disorders in Primary Care: A Systematic Review. *PLoS*

ONE, 10(5). <http://dx.doi.org/10.1371/journal.pone.0123078>

Gronholm, P. C., Thornicroft, G., Laurens, K. R., & Evans-Lacko, S. (2017). Mental

health-related stigma and pathways to care for people at risk of psychotic disorders or

experiencing first-episode psychosis: a systematic review. *Psychological Medicine*,

1–13. <http://doi.org/10.1017/S0033291717000344>

Goodrich, D. E., Kilbourne, A. M., Nord, K. M., & Bauer, M. S. (2013). Mental Health

Collaborative Care and Its Role in Primary Care Settings. *Current Psychiatry*

Reports, 15(8), 383. <http://doi.org/10.1007/s11920-013-0383-2>

Hunter, C. L. (2009). *Integrated behavioral health in primary care: Step-by-step*

guidance for assessment and intervention. (9781433804281). American

Psychological.

Jackson-Triche, M. E., Greer Sullivan, J., Wells, K. B., Rogers, W., Camp, P., & Mazel,

R. (2000). Depression and health-related quality of life in ethnic minorities seeking care in general medical settings. *Journal of Affective Disorders*, 58(2), 89–97.

Lee, C.-T., Chiang, Y.-C., Huang, J.-Y., Tantoh, D. M., Nfor, O. N., Lee, J.-F., et al.

(2016). Incidence of Major Depressive Disorder: Variation by Age and Sex in Low-Income Individuals: A Population-Based 10-Year Follow-Up Study. *Medicine*,

95(15), e3110. <http://doi.org/10.1097/MD.00000000000003110>

Löwe, B., Schenkel, I., Carney-Doebbeling, C., & Göbel, C. (2006). Responsiveness of

the PHQ-9 to Psychopharmacological Depression Treatment. *Psychosomatics*, 47(1),

62–67. <http://doi.org/10.1176/appi.psy.47.1.62>

Martinez, W., Galván, J., Saavedra, N., & Berenzon, S. (2016). Barriers to Integrating

Mental Health Services in Community-Based Primary Care Settings in Mexico City:

A Qualitative Analysis. *Psychiatric Services (Washington, D.C.)*, appips201600141.

<http://doi.org/10.1176/appi.ps.201600141>

Muñoz-Navarro, R., Cano-Vindel, A., Medrano, L. A., Schmitz, F., Ruiz-Rodríguez, P.,

Abellán- Maeso, C., ... Hermosilla-Pasamar, A. M. (2017). Utility of the PHQ-9 to

identify major depressive disorder in adult patients in Spanish primary care

centers. *BMC Psychiatry*, 17, 291. <http://doi.org/10.1186/s12888-017-1450-8>

Rycroft-Malone, J., & Bucknall, T. (Eds.). (2010). *Models and frameworks for*

implementing evidence-based practice: linking evidence to action (1st ed).

Chichester, West Sussex: Wiley-Blackwell.

Sanchez, K., & Watt, T. T. (2012). Collaborative care for the treatment of depression in

primary care with a low-income, spanish-speaking population: outcomes from a

community-based program evaluation. *The Primary Care Companion for CNS*

Disorders, 14(6). <http://doi.org/10.4088/PCC.12m01385>

Simon, G. E. (2002). Evidence review: efficacy and effectiveness of antidepressant

treatment in primary care. *General Hospital Psychiatry*, 24(4), 213–224.

UCLA Center for Health Policy Research. (2016). 2015 California Health Interview

Survey. Los Angeles. Retrieved from

http://ask.chis.ucla.edu/AskCHIS/tools/_layouts/AskChisTool/home.aspx#/results

Unützer, J., & Park, M. (2012). Strategies to Improve the Management of Depression in

Primary Care. *Primary Care*, 39(2), 415–431

<http://doi.org/10.1016/j.pop.2012.03.010>

Unützer, J., Schoenbaum, M., Druss, B. G., & Katon, W. J. (2006). Transforming Mental

Health Care at the Interface With General Medicine: Report for the Presidents

Commission. *Psychiatric Services*, 57(1), 37–47.

<http://doi.org/10.1176/appi.ps.57.1.37>

World Health Organization. (2001). The World Health Report 2001. World Health

Organization.

Zaat, J. (2004). World Health Report. *Huisarts en Wetenschap*, 47(11), 239–239.

<http://doi.org/10.1007/BF03083736>

APPENDIX A
LETTER OF SUPPORT FROM CLINICAL SITE

To: Institutional Review Board, University of San Diego

From: Kelley De Leeuw, MD, MPH

Behavioral Health Director, Imperial Beach Community Clinic

I am serving as a mentor for the DNP Project being conducted by Katherine Kilkenny in the Hahn School of Nursing and Health Science. I approve of this timely and important project and will be advising this student throughout this process.

If you have any questions, please do not hesitate to contact me at (619) 429-3733 or kdeleeuw@ibclinic.org

Sincerely,

Kelley De Leeuw, MD Behavioral Health Director Imperial Beach Community Clinic

APPENDIX B
POSTER ABSTRACT

**POSTER ABSTRACT SUBMITTED TO
GRADUATE NURSING STUDENT ACADEMY NATIONAL CONFERENCE**

Title: A Common Goal: Primary Care and Psychiatry Improve Depression
Detection and Outcomes

Background: Major Depressive Disorder (MDD) affects over 15 million (6.7%) adult Americans. While one in four primary care patients suffer from depressive symptoms, MDD is accurately diagnosed accurately 25% of the time.

Intervention: Implementation of an evidence-based protocol outlining the process for depression screening, r behavioral health referral, and the role of the collaborative care team will improve detection, treatment, and outcomes for adult MDD patients.

Outcomes: The mission is to achieve a 100% screening rate using the patient health questionnaire (PHQ-9) of all adult patients and a 100% behavioral health referral rate for patients with a PHQ-9 score of 15 or above.

Word count: 100

APPENDIX C

GRADUATE NURSING STUDENT ACADEMY CONFERENCE LETTER OF ACCEPTANCE

Congratulations!

I am pleased to inform you that your abstract# 0973-000772, titled "A Common Goal: Primary Care and Psychiatry Improve Depression Detection and Outcomes" has been selected for a Poster Presentation at the 2018 Graduate Nursing Student Academy (GNSA) Conference at the Marriott Marquis in Atlanta, GA.

Please be sure see the following details regarding your presentation.

General Information:

- The poster presentations will occur on Thursday, February 22, 2018 from 5:00 to 7:00 p.m. during the Networking Reception.
- We ask that posters remain displayed on Friday, February 23, 2018 so that participants can view them during breaks. Presenters are only required to be by their poster during the Networking Reception.
- Please visit the following link for instructions on effective poster presentations: <http://www.aacnnursing.org/Portals/42/Professional-Development/Conferences/Poster-Recommendations.pdf>
- ***Please note that you are required to register for the conference in order to present.***

Acceptance Confirmation Instructions:

In order to present, you must confirm your acceptance via the abstract management website by January 22, 2018. If we do not receive your confirmation by this date, you will no longer be eligible to present.

- On or before January 22, please log in to the abstract management website with your original email username and password created during the submission process, via the link below.
<https://precis2.preciscentral.com/Link.aspx?ID=58BE2DD4C8D34683BA220FoFCD84EAB7>
- Once logged in, under *My Submissions*, proceed to the Graduate Nursing Student Academy Conference Page. From here, select the abstract that has been accepted and click the edit icon.
- Click the blue *Edit Submission* button at the top of the page, and then select the *Confirmation* tab.
- From here, please indicate if you *Accept* or *Decline* the invitation to present.
- After you have indicated Accept or Decline, simply click *Save* and then be sure to click on "Submit & Review Changes" and then "Finalize" to complete your submission. If you do not click "Submit & Review Changes" and then "Finalize",

your submission will be marked as incomplete. After you have clicked “Finalize” to mark your submission complete, you can simply log out or close out of the site.

Poster Presentations:

The following are specifications that should assist you in the preparation of your poster presentation.

- AACN will provide double-sided bulletin board that will hold two (2) posters per side. **Poster presentations will need to be 48” H x 36” W; formatted as a portrait layout.** Please adhere to these dimensions to ensure that your poster can be displayed properly.
- Historically successful posters presentations have included graphics, pictures and text clearly describing the methods, programs or practices pertaining to the theme of the event.

Shipping:

If you plan to ship your materials to the hotel, please address the package(s) to your attention at the following address. Please do not ship materials to the hotel any earlier than Monday, February 19, 2018.

Attn: YOUR NAME
 Atlanta Marriott Marquis Hotel
[265 Peachtree Center Avenue](#)
[Atlanta, GA 30303](#)
 Hold for: AACN GNSA Conference

Co-Presenters:

PLEASE NOTIFY YOUR CO-PRESENTERS OF ALL INFORMATION AND DETAILS

AACN Website:

A week prior to the conference, an email will be sent to all registered attendees including a web link to select online materials. These materials will include the abstract that you originally submitted to the abstract website. You will **NOT** be able to make changes to the posted abstract as the original version was the version approved by AACN.

Best Regards,

Marta Okoniewski, MPA
Director of Student Engagement
American Association of Colleges of Nursing
[655 K Street, NW, Suite 750](#)
[Washington, DC 20001](#)
 202-463-6930 ext. 220
 Website: www.aacnnursing.org
 Email: mokoniewski@aacnnursing.org

APPENDIX D

DNP PROJECT POSTER

A Common Goal: Primary Care and Psychiatry Improve Depression Detection and Outcomes

Katherine Kilkenny BSN, RN
Psychiatric Nurse Practitioner / Doctor of Nursing Practice Student

Faculty Mentor Michael Terry DNP, FNP, PMHNP

Background

16.1 million (6.7%) American adults had a minimum of one major depressive episode (MDE) in 2015

In 2010, Major Depressive Disorder was the second largest contributor to global disease burden

Americans with severe mental illness are dying on average 25 years earlier

Evidence for Problem

20% of Central San Diego County residents reported "Needing help for emotional/mental health problems"

Psychological issues contribute to 70% of primary care appointments

Depression is accurately diagnosed in as low as 25% of primary care patients

Purpose

Identify patients at high risk for Major Depressive Disorder in the ambulatory setting

Increase referrals to Behavioral Health Services
Increase follow up to psychiatry and psychotherapy

Demonstrate efficacy of a standardized depression screening, referral, and treatment protocol

Evidence-Based Interventions

An evidence-based protocol was designed to identify and direct care for patients suffering from depression. The protocol was implemented in two San Diego Community Health clinics that offered separate primary care and psychiatric services.

- PHQ administered annually for every patient ≥ 18 years old
- The Patient Health Questionnaire (PHQ) aids screening, diagnoses, monitoring, and measuring severity of depression
- PHQ score ≥ 15 required immediate referral to Behavioral Health (BH), complete with warm-handoff between provider and BH case manager
- BH case manager triaged patient and scheduled appointments for therapy and/or psychiatry
- Mental Health providers administer PHQ at all follow up visits
- Weekly report generated for all patients seen in both clinics. Surveyed by case manager for missed screenings, referrals, follow-ups, or worsening scores. Patients contacted appropriately

Identify and Engage

Establish and Diagnose

Initiate Treatment

Follow-up Care & Treat to Target

Complete Treatment & Relapse Prevention

Evaluation Results

Percentage of Referrals to Behavioral Health for Patients Who Met Criteria for Moderately Severe Depression

Conclusion and Implications for Clinical Practice

The mental health crisis in America necessitates health care to be delivered in an integrated, collaborative, evidenced based model

Standardized screening in the ambulatory setting greatly improves identification and treatment of patients suffering from depressive disorders

Patients with depression who received behavioral health services within their primary care clinic have much greater chances of reaching remission than when managed by primary care alone

Transdisciplinary clinics show superior mental and physical health outcomes when compared to clinics offering single services

One depressive free day for a patient suffering from Major Depressive Disorder prevents a loss of \$56.59

APPENDIX E
STAKEHOLDER PRESENTATION

**A Common Goal: Primary Care and
Psychiatry Improve Depression
Detection and Outcomes**

Katherine Kilkenney RN, BSN
Faculty Mentor Michael Terry DNP, FNP, PMHNP
Clinical Mentor Kelley DeLeeuw MD, MPH

Background and Significance

- In the United States mental health disorders are the leading cause of disability and premature death
- 16.1 million (6.7%) American adults had a minimum of one major depressive episode (MDE) in 2015
- In 2010, Major Depressive Disorder was the second largest contributor to global disease burden
- Americans with severe mental illness are dying average 25 years earlier

Needs Assessment

- Depression is accurately diagnosed in as low as 25% of primary care patients
- 20% of Central San Diego County residents reported "Needing help for emotional/mental health problems"
- Psychological issues contribute to 70% of primary care appointments
- Without systematic screening family practice providers can miss at least 50% of pts with MDD

Purpose/Aims

- Identify patients at high risk for Major Depressive Disorder in the ambulatory setting
- Increase referrals to Behavioral Health Services
- Increase follow up to psychiatry and psychotherapy
- Demonstrate efficacy of a standardized depression screening, referral, and treatment protocol

Framework/EBP Model

- The Stetler Model is a proven and reliable model.
- It allows for both qualitative and quantitative research.
- Highly recommended by University of San Diego

Synopsis of the Evidence

- Collaborative care models have shown 60% improvement on MDD patient's PHQ-9 scores, 25% achieved remission compared to 40% of patients improving and 10% achieved remission
- Screen and assess depression using PHQ-9 scale. Sensitivity 74%, Specificity 91% with score >10.
- 10-20% of patients with follow-up phone calls within 4 weeks have significant improvement of symptoms when compared to those without.
- Participate in regularly schedule collaborative care meetings which include psychiatric consultation.

Project Plan Process

- To identify depressed patients each new intake will be administered the PHQ-9.
- To improve patient outcomes and medication compliance all patients will receive a follow-up phone call.
- The DNP student will present on all caseload patients within one week of their intake date at these meetings.

Timeline

-July 31st, 2017

Introduce Collaborative Care Model and Depression Screening Protocol

-August 31st, 2017

Evaluate implementation progress and assess for barriers.
Begin weekly surveillance for missed patients

-November 30th, 2017

Reach 100% referral rates for pts with PHQ score >14

Depression Screening Protocol

CLINICAL DEPRESSION SCREENING AND FOLLOW UP USING THE PATIENT HEALTH QUESTIONNAIRE

I. PURPOSE

To outline the procedure for screening patients for clinical depression and choosing the appropriate follow-up plan.

II. DEFINITIONS:

- A. PHQ-2: Patient Health Questionnaire 2 is a brief tool to screen for depression.
- B. PHQ-9: Patient Health Questionnaire 9 is a tool used to screen for depression, measure symptom severity, and measure a patient's response to treatment.
- C. BH: Behavioral Health.
- D. EHR: Electronic health record.
- E. PCP: Primary care provider/community clinic provider. Includes medical doctors, doctors of osteopathy, and nurse practitioners.
- F. Behavioral Health Provider: Community clinic behavioral services staff. Includes psychiatrists, psychologists, and LCRNs.

III. TEXT

- A. The PHQ-2 tool will be administered to screen for clinical depression. Annual screening is required for every patient ≥ 12 years old. Additional screening criteria for primary care and behavioral health listed in procedure section A.
- B. The primary care provider will be notified of patients who score ≥ 15 on the PHQ-9 or if answer to item "I" is "yes" "not at all" (either I thought that you would be better off dead or of hurting yourself in some way).
- C. The primary care provider will use the PHQ-2 and 9 scores along with clinical judgment to determine if referral to behavioral health is appropriate. Note: Behavioral health referral is required for all patients who score ≥ 15 on the PHQ-9 or give any answer other than "not at all" for item "I" on PHQ-9.
- D. All screening and follow up procedures will be documented in the electronic medical record.

IV. PROCEDURE

PROCEDURE	RESPONSIBILITY
-----------	----------------

<p>A. Patients to be screened for clinical depression using the PHQ-2 electronic tool.</p> <p>Primary Care patients required to screen:</p> <ol style="list-style-type: none"> 1. Patient is ≥ 12 years old and has not completed a PHQ in the last calendar year 2. New to clinic 3. Re-evaluating case 4. CDSST program eligible <p>Additional screening is suggested for:</p> <ol style="list-style-type: none"> 5. High risk populations. Includes existing or new diagnosis of cancer, diabetes, myocardial infarction, stroke, HIV, chronic pain, substance abuse, childhood trauma. <p>Behavioral Health patients required to screen:</p> <ol style="list-style-type: none"> 1. Initial BH appointment 2. Each follow up appointment 	Administrative Staff
<p>B. Patients screened by administration of electronic PHQ-2. If indicated by PHQ-2 scores, patients are prompted to complete the electronic PHQ-9. Results will automatically be documented in the patient's EHR.</p> <ol style="list-style-type: none"> 1. Educate patient to complete the PHQ tool based on the last two weeks. 	Administrative Staff
<p>C. If screening indicated "Depression Screening Protocol" will be ordered under "assessment and plan".</p>	Medical Assistant
<p>D. Documentation of PHQ scores in EHR verified. Primary care provider notified if necessary.</p> <p>Provider to be notified if:</p> <ol style="list-style-type: none"> 1. Patient scores ≥ 15 on the PHQ-9 2. Patient answer to section "I" of PHQ-9 with any answer excluding "not at all." 3. Patient refused to complete PHQ 	Medical Assistant

Depression Screening Protocol

<p>E. Provider reviews score. Treatment action plan determined by score and clinical judgement. Document plan in EHR. See attachments A and B for additional score based instruction.</p> <p>Primary Care: PHQ-9 Score action plan: 1. 0-14 use clinical judgement. Refer to attachment A for suggested interventions. 2. 2-15 discuss results with patient. Must place referral to Behavioral Health, complete warm handoff.</p> <p>Behavioral Health: PHQ-9 Score action plan: 1. Decrease by 2-7 points from baseline indicates adequate treatment response. 2. Drop of 4 or less points from baseline, consider adjusting treatment plan. Refer to attachment B for suggested interventions.</p> <p>F. Behavioral Health Referral. Case manager will triage patient and coordinate appropriate integrative services. Consult in person whenever possible. If unable, perform telephone consult.</p> <p>Face to Face consult: 1. Provide letter explaining Integrative Behavioral Health Services 2. Offer patient psychiatric, psychotherapy, and care coordination services. 3. Schedule intake appointments. Notify provider via patient message if appointment availability too limited. Place patient on waiting list when necessary. 4. Document interaction as mental health note.</p> <p>Telephone Consult: 1. Provide explanation of Integrative Behavioral Health services via phone. 2. Follow above steps 1 and 3.</p>	<p>Primary Care Provider / Behavioral Health Provider</p>
	<p>Behavioral Health Case Manager</p>

<p>3. If unable to reach patient after two phone calls, send Integrative Behavioral Health Services letter. No further interventions needed.</p> <p>4. Document interaction as mental health note.</p>	
<p>G. Weekly report will be generated for all patients screened using PHQ-9. Will be sent to behavioral health case management providers.</p> <p>IT report items: 1. Patient's demographics including name and birthdate. 2. Medical record number. 3. Date of screening. 4. PHQ-9 score. 5. Name of PCP</p>	Information Technology Department
<p>H. Behavioral Health case managers will review report to ensure all PHQ-9 scores were appropriately addressed. Reports documented and saved each week in clinic G file.</p> <p>BH report items: 1. Items 1-5 of section G 2. Documented intervention addressing PHQ-9 scores 2-15. Interventions include consult to psychiatric services, scheduled appointments, attempts to reach patient, or refusal of services.</p>	Behavioral Case Manager

V. ATTACHMENTS

A. Proposed Treatment Actions by PHQ-9 Score¹

PHQ-9 SCORE	DEPRESSION SEVERITY	PROPOSED TREATMENT ACTIONS
0-4	None-Mild	None
5-9	Mild	Watchful waiting, repeated PHQ-9 at follow-up
10-14	Moderate	Treatment plan, consider counseling, follow-up, and/or pharmacotherapy

Depression Screening Protocol

10-14	Moderately Severe	Behavioral Health Referral required. Consider active engagement with pharmacotherapy and/or psychotherapy.
15-21	Severe	Behavioral Health Referral required. Consider immediate initiation of pharmacotherapy and, if severe impairment or poor response to therapy, expedited referral to behavioral health services

B. Treatment Response and Plan Change in PHQ-9 Score²

PHQ-9 Score at 4-6 Weeks	Treatment Response	Treatment Plan
Drop of 2 points from baseline	Adequate	No treatment change needed. Follow up in 4 weeks.
Drop of 2-4 points from baseline	Probably Inadequate	May warrant an increase in antidepressant dose or increase therapy intensity. Follow up in 2-4 weeks.
Drop of 0-1 point from baseline	Inadequate	Increase dose, Augmentation, Informal or formal collaborative care meeting. Follow up in 1-2 weeks.

VI. REFERENCES

1. Instruction Manual: Instructions for Patient Health Questionnaire (PHQ) and GAD-7 Measures. Available at <https://www.pearsoncmg.com/data/assets/samplechapter/07/97/07970000000000000000/9780797000000.pdf>. Published December 2014.
2. The University of Washington's ADMS Center. Copyright 2018 University of Washington. <https://adms.org/adsc/>

Results

-To evaluate the PHQ-9 progression scores a pre, mid, and post evaluation approach will be used

Cost-Benefit Analysis

- One Depression Free Day for a MDD patient prevents a loss of \$56.59
- The average cost to provide collaborative care for 24 months was \$597 per patient
- The net gain from investment would be \$70,930.20. The return on investment would be 990% for a 12 patient caseload.

Implications for Clinical Practice

- Standardized screening in the ambulatory setting greatly improves identification and treatment of patients suffering from depressive disorders
- Patients with depression who received behavioral health services within their primary care clinic have much greater chances of reaching remission than when managed by primary care alone
- Transdisciplinary clinics show superior mental physical health outcomes when compared to offering single services

References

- Evidence: Arroll, B., Goodyear-Smith, F., Crengle, S., Gunn, J., Kerse, N., Fishman, T., et al. (2010). Validation of PHQ-2 and PHQ-9 to Screen for Major Depression in the Primary Care Population. *The Annals of Family Medicine*, 8(4), 348–353. <http://doi.org/10.1370/afm.1139>
- Evidence: Bao, Y., Druss, B. G., Jung, H.-Y., Chan, Y.-F., & Unützer, J. (2016). Unpacking Collaborative Care for Depression: Examining Two Essential Tasks for Implementation. *Psychiatric Services*, 67(4), 418–424. <http://doi.org/10.1176/appi.ps.201400577>
- Evidence: Coventry, P. A., Hudson, J. L., Kontopantelis, E., Archer, J., Richards, D. A., Gilbody, S., et al. (2014). Characteristics of Effective Collaborative Care for Treatment of Depression: A Systematic Review and Meta-Regression of 74 Randomised Controlled Trials. *PLoS ONE*, 9(9), e108114. <http://doi.org/10.1371/journal.pone.0108114>
- Jacob, V., Chattopadhyay, S. K., Sipe, T. A., Thota, A. B., Byard, G. J., Chapman, D. P., Community Preventive Services Task Force. (2012). Economics of collaborative care for management of depressive disorders: a community guide systematic review. *American Journal of Preventive Medicine*, 42(5), 539–549. <http://doi.org/10.1016/j.amepre.2012.01.011>
- Grochtdreis, T., Brettschneider, C., Wegener, A., Watzke, B., Riedel-Heller, S., Härter, M., & König, H.-H. (2015). Cost-Effectiveness of Collaborative Care for the Treatment of Depressive Disorders in Primary Care: A Systematic Review. *PLoS ONE*, 10(5), e0123078. <http://doi.org/10.1371/journal.pone.0123078>

APPENDIX F

FINAL CLINICAL EXEMPLARS

AACN DNP Essentials & NONPF Competencies	USD DNP Program Objectives	Exemplars Provide bulleted exemplars that demonstrates achievement of each objective
<p>DNP Essential I: Scientific Underpinnings for Practice</p> <p>NONPF: Scientific Foundation Competencies</p> <p><i>The scientific foundation of nursing practice has expanded and includes a focus on both the natural and social sciences including human biology, genomics, science of therapeutics, psychosocial sciences, as well as the science of complex organizational structures. In addition, philosophical, ethical, and historical issues inherent in the development of science create a context for the application of the natural and social sciences.</i></p>	<p>2. Synthesize nursing and other scientific and ethical theories and concepts to create a foundation for advanced nursing practice.</p>	<ul style="list-style-type: none"> • (Fall 2015-Summer 2016) Didactic coursework including: Primary Mental Health series, Methods of Translational Science, Pathophysiology, Pathogenesis of Complex Diseases, APRN Physical Assessment and Diagnosis, Pharmacology, Epidemiology, Introduction to Health Care Information Management, Philosophy of Reflective Practice, Health Policy Analysis, Perspectives in Program Planning and Evaluation, Strategic Planning and Quality Initiatives, and Financial Management in Health Systems

		<ul style="list-style-type: none"> • (Fall 2015-Spring 2018) Completed over 1080 clinical hours in psychiatric settings including: Neuro-Behavioral Health Inpatient Unit, Inpatient Psychiatric Clinical Liaison, outpatient psychiatry, Survivors of Torture clinic, San Diego Youth Services, behavioral health student centers, community mental health clinic, and indigent population based care
<p>DNP Essential II: Organizational & System Leadership for Quality Improvement & Systems Thinking</p> <p>NONPF: Leadership Competencies/Health Delivery System Competencies</p> <p><i>Advanced nursing practice includes an organizational and systems leadership component that emphasizes practice, ongoing improvement of health outcomes, and ensuring patient safety. Nurses should be prepared with sophisticated expertise in assessing organizations,</i></p>	<p>5. Design, implement, and evaluate ethical health care delivery systems and information systems that meet societal needs and ensure accountability for quality outcomes.</p>	<ul style="list-style-type: none"> • (Fall 2015) Utilized research to author a paper based on an epidemiological factors of Major Depressive Disorder and created a screening plan for at risk college students in Epidemiology • (Spring 2016-Fall 2016) Didactic coursework including: Methods of Translational

<p><i>identifying system's issues, and facilitating organization-wide changes in practice delivery. This also requires political skills, systems thinking, and the business and financial acumen needed for the analysis of practice quality and costs.</i></p>		<p>Science, Health Policy Analysis, Introduction to Health Care Information Management, Perspectives in Program Planning and Evaluation, Financial Decision Making for Health Care Settings, Strategic Planning and Quality Initiatives</p> <ul style="list-style-type: none"> • (Spring 2016-Fall 2016) Designed and evaluated theoretical health care delivery systems with an electronic medical record implementation. Evaluated for population service, accountability maintenance, outcome quality and financial stability in Health Care Information Management course • (Summer 2016) Created and presented business proposal to address vulnerabilities in health care worker's uniforms in Financial Management in Health Systems course
---	--	--

		<ul style="list-style-type: none"> • (Fall 2017-Spring 2018) EBP project A Common Goal: Primary Care and Psychiatry Improve Depression Detection and Outcomes successfully bridged gap between two specialties to better address mental health needs in the ambulatory setting. Implemented EBP interventions including the Stetler model, telephone follow ups, behavioral health referrals, PHQ screening tool, and collaborative care meetings
<p>DNP Essential III: Clinical Scholarship & Analytical Methods for Evidence-Based Practice</p> <p>NONPF: Quality Competencies/Practice Inquiry Competencies</p> <p><i>Scholarship and research are the hallmarks of doctoral education. Although basic research is viewed as the first and most essential form of scholarly activity, an enlarged perspective of scholarship has emerged through alternative paradigms that involve more than discovery of new knowledge. These paradigms recognize: (1) the scholarship of discovery and integration</i></p>	<p>4. Incorporate research into practice through critical appraisal of existing evidence, evaluating practice outcomes, and developing evidence-based practice guidelines.</p>	<ul style="list-style-type: none"> • (Fall 2015) Reviewed evidence in research paper “Screening for Adverse Childhood Events in Primary Care” using PRISMA checklist and the Delfini evidence grading system • (Fall 2015) Designed and evaluated an evidence-based practice change to increase efficiency of ACE screening tools in Methods of Translational Science course • (Spring 2016) Developed paper investigating the

<p><i>“reflects the investigative and synthesizing traditions of academic life”; (2) scholars give meaning to isolated facts and make connections across disciplines through the scholarship of integration; and (3) the scholar applies knowledge to solve a problem via the scholarship of application that involves the translation of research into practice and dissemination and integration of new knowledge.</i></p>		<p>gap in San Diego availability of Acute Psychiatric Beds and need. Based on evidence in literature and evaluating outcomes based on data in Health Care Information Management course</p> <ul style="list-style-type: none"> • (Spring 2016) Synthesized and disseminated evidence-based research in Complementary and Alternative Medicine Presentation: Green Tea in Pharmacology in Health Management course • (Summer 2017- Spring 2017) Completed literature review to create and implement an evidence based protocol to standardize depression screening and referral in the ambulatory care setting for the DNP Scholarly Practice EBP project • (Spring 2018) Completed literature review to create and implement a 10 week DBT group therapy course in the outpatient
--	--	--

		psychiatric setting in the Psychotherapy with Group and Family Systems course
<p>DNP Essential IV: Information Systems/Technology & Patient Care Technology for Improvement & Transformation of Health Care</p> <p>NONPF: Technology & Information Literacy Competencies</p> <p><i>DNP graduates are distinguished by their abilities to use information systems/technology to support and improve patient care and health care systems, and provide leadership within healthcare systems and/or academic settings. Knowledge and skills related to information systems/technology and patient care technology prepare the DNP graduates apply new knowledge, manage individual and aggregate level information, and assess the efficacy of patient care technology appropriate to a specialized area of practice along with the design, selection, and use of information systems/technology to evaluate programs of care, outcomes of care, and care systems. Information systems/technology provide a mechanism to apply budget and productivity tools, practice information</i></p>	<p>7. Incorporate ethical, regulatory, and legal guidelines in the delivery of health care and the selection, use, and evaluation of information systems and patient care technology.</p>	<ul style="list-style-type: none"> • (Fall 2015) Obtained Biomedical Research Human Certification – Basic/Refresher Course through CITI in the Epidemiology Foundations of Evidence-Based Practice course • (Spring 2016) Researched current APRN legislation and analyzed proposed legislation. Developed paper to examine the impact on telehealth and healthcare accessibility through the passage of SB 323 in the Health Policy Analysis Course • (Fall 2016-Spring 2018) Didactic course work including Health Care Information Management and Primary Mental Health series • (Summer 2017-Spring 2018) Researched efficacy of electronic check-in and screening tools via iPads in the ambulatory care setting and

<p><i>systems and decision supports, and web-based learning or intervention tools to support and improve patient care.</i></p>		<p>performed related data-analysis for efficiency for the DNP EBP project</p> <ul style="list-style-type: none"> • (Fall 2016-Spring 2018) Experience operating multiple electronic medical health records in inpatient, outpatient, community, and ambulatory care settings
<p>DNP Essential V: Health Care Policy for Advocacy in Health Care</p> <p>NONPF: Policy Competencies</p> <p><i>Health care policy, whether created through governmental actions, institutional decision-making, or organizational standards, creates a framework that can</i></p>	<p>3. Demonstrate leadership in collaborative efforts to develop and implement policies to improve health care delivery and outcomes at all levels of professional practice (institutional, local, state, regional, national, and/or international).</p>	<ul style="list-style-type: none"> • (Spring 2016) Didactic coursework including Health Policy Analysis • (Spring 2016) Developed a policy brief regarding the ACA and the current prescription drug policy in Health Policy Analysis course

<p><i>facilitate or impede the delivery of health care services or the ability of the provider to engage in practice to address health care needs. Engagement in the process of policy development is central to creating a health care system that meets the needs of its constituents. Political activism and a commitment to policy development are central elements of DNP practice.</i></p>		<ul style="list-style-type: none"> • (Spring 2016) Letter written to state congressman and senators in support of SB 323 • (Spring 2016) Presented policy gaps in evidence-based synthesis and pathogenesis presentation of Huntington's Disease in Pathogenesis of Complex Diseases course • (Spring 2016-Spring 2018) Became a student member of California Association of Nurse Practitioners (CANP), American Association of Nurse Practitioners (AANP), American Psychiatric Nurses Association (APNA), Healthcare Information and Management Systems Society (HIMSS), and Sigma Theta Tau International Honor Society of Nursing
<p>DNP Essential VI: Interprofessional Collaboration for Improving Patient & Population Health Outcomes</p> <p>NONPF: Leadership Competencies</p> <p><i>Today's complex, multi-tiered health care</i></p>	<p>1. Demonstrate advanced levels of clinical practice within defined ethical, legal, and regulatory parameters in designing, implementing, and evaluating evidenced-based, culturally competent therapeutic interventions for individuals or aggregates.</p> <p>3. Demonstrate leadership in collaborative efforts to</p>	<ul style="list-style-type: none"> • (Fall 2015-Spring 2018) Didactic coursework including Pathogenesis of Complex Diseases, Epidemiology Foundations of Evidence-Based Practice, Strategic Planning and Quality Initiatives,

<p><i>environment depends on the contributions of highly skilled and knowledgeable individuals from multiple professions. In order to accomplish the IOM mandate for safe, timely, effective, efficient, equitable, and patient-centered care in this environment, health care professionals must function as highly collaborative teams. DNP graduates have advanced preparation in the Interprofessional dimension of health care that enable them to facilitate collaborative team functioning and overcome impediments to Interprofessional practice. DNP graduates have preparation in methods of effective team leadership and are prepared to play a central role in establishing Interprofessional teams, participating in the work of the team, and assuming leadership of the team when appropriate.</i></p>	<p>develop and implement policies to improve health care delivery and outcomes at all levels of professional practice (institutional, local, state, regional, national, and/or international).</p>	<p>Perspectives in Program Planning, Primary Mental Health series</p> <ul style="list-style-type: none"> • (Summer 2016) Created a paper based on my nursing praxis using the Model of Structured Reflection, multiple ontologies, multiple theorists, and ethical principles in Philosophy of Reflective Practice • (Spring 2017) Completed literature review and analysis to evaluate the efficacy of transdisciplinary practice models between primary care and psychiatry in Perspectives in Program Planning and Evaluation course • (Spring 2017) Completed clinical rotations that practiced within transdisciplinary practice models including IMPACT • (Summer 2017) Completed literature review for evidenced-based transdisciplinary practice models for DNP Scholarly Practice course and EBP project
--	--	---

		<ul style="list-style-type: none"> • (Summer 2017-Spring 2018) Implemented collaborative care and referral protocol between primary care and psychiatry for DNP EBP project • (Summer 2017-Spring 2018) Wrote and implemented an evidence-based depression screening protocol for a transdisciplinary team setting in two outpatient clinics for DNP Scholarly Practice and EBP project
<p>DNP Essential VII: Clinical Prevention & Population Health for Improving Nation's Health</p> <p>NONPF: Leadership Competencies</p> <p><i>Consistent with national calls for action and with the longstanding focus on health promotion and disease prevention in nursing, the DNP graduate has a foundation in clinical prevention and population health. This foundation enables DNP graduates to analyze epidemiological, biostatistics, occupational, and environmental data in the development, implementation, and evaluation of clinical prevention and population.</i></p>	<p>6. Employ a population health focus in the design, implementation, and evaluation of health care delivery systems that address primary, secondary, and tertiary levels of prevention.</p>	<ul style="list-style-type: none"> • (Fall 2015-Spring 2018) Didactic coursework including Primary Mental Health series, Epidemiology Foundations of Evidence-Based Practice, Perspectives in Program Planning and Evaluation, Strategic Planning and Quality Initiatives • (Fall 2016) Presented health care gaps in diagnosis and treatment of Huntington's Disease in Pathogenesis of Complex Diseases • (Spring 2017) Completed a

		<p>literature review and analysis to evaluate the efficacy of PHQ screening protocols for depression detection in the ambulatory care setting in Perspectives in Program Planning and Evaluation course</p> <ul style="list-style-type: none">• (Spring 2016-Spring 2018) Attended transdisciplinary staff meetings at Family Health Center and Nestor Community Health Center• (Spring 2018) Presented health care gaps in detection of depression in primary care settings and transdisciplinary screening and referral protocol and Graduate Nurses Student Academy national conference
--	--	---

<p>DNP Essential VIII: Advanced Nursing Practice</p> <p>NONPF: Independent Practice/Ethics Competencies</p> <p><i>The increased knowledge and sophistication of healthcare has resulted in the growth of specialization in nursing in order to ensure competence in these highly complex areas of practice. The reality of the growth of specialization in nursing practice is that no individual can master all advanced roles and the requisite knowledge for enacting these roles. DNP programs provide preparation within distinct specialties that require expertise, advanced knowledge, and mastery in one area of nursing practice. A DNP graduate is prepared to practice in an area of specialization within the larger domain of nursing.</i></p>	<p>1. Demonstrate advanced levels of clinical practice within defined ethical, legal, and regulatory parameters in designing, implementing, and evaluating evidence-based, culturally competent therapeutic interventions for individuals or aggregates.</p>	<ul style="list-style-type: none"> • (Fall 2015) Performed literature review and described the disparity in college aged patients and mental health needs with possible solutions in Epidemiology Foundations of Evidence-Based Practice • (Spring 2018) Collaborated and co-facilitated with MFTs and LSWs to deliver an evidence-based DBT group therapy course in the clinical setting for the Psychotherapy with Group and Family Systems course • (Spring 2018) Collaborated with MFTs and MDs to create and i deliver evidence-based CBT therapy treatment plan for Individual Psychotherapy series
--	---	--

DNP Essential I: Scientific Underpinnings for Practice

Objective 2: Synthesize nursing and other scientific and ethical theories and concepts to create a foundation for advanced nursing practice.

All didactic course work contributed to creating the foundation of my evidence-based practice in the Advance Practice Registered Nurse role. The coursework prepared me for the 1080 hours of clinical experience which was where I was able to truly implement the learned theories and concepts. A specific clinical experience that stands out was the San Diego Youth Services rotation. This clinical site provides psychiatric services for homeless and at risk youth. I had to combine nursing theory, evidence-based interventions, and ethical approaches to be effective in the APRN role.

DNP Essential II: Organizational & System Leadership for Quality Improvement & Systems Thinking

Objective 5: Design, implement, and evaluate ethical health care delivery systems and information systems that meet societal needs and ensure accountability for quality outcomes.

The Health Care Information Management course provided me with the excel skills needed to evaluate and present data points in graph form. Combining these skills with the research skills cultivated during Methods of Translational Science prepared me to evaluate the availability of in-patient psychiatric beds with the overall need in San Diego County. I was able to clearly present the large gap between need and resources offered within our own city.

DNP Essential III: Clinical Scholarship & Analytical Methods for Evidence-Based Practice

Objective 4: Incorporate research into practice through critical appraisal of existing evidence, evaluating practice outcomes, and developing evidence-based practice guidelines.

My evidence-based practice project would not have been possible without the didactics offered throughout this program. I was able to search for research, identify quality studies, analyze the literature, and translate and implement it into clinical practice because of USD's curriculum.

DNP Essential IV: Information Systems/Technology & Patient Care Technology for Improvement & Transformation of Health Care

Objective 7: Incorporate ethical, regulatory, and legal guidelines in the delivery of health care and the selection, use, and evaluation of information systems and patient care technology.

The Epidemiology Foundations of Evidence-Based Practice course instilled the importance of ethical and legal practice standards for APRNS. This was clearly demonstrated when I successfully completed the Biomedical Research Human Certification course through CITI. Without this certification, I would not have been able to show I was competent in ethical practices for the IRB. It is very crucial all APRNs practice under ethical, regulatory, and legal guidelines when providing care.

DNP Essential V: Health Care Policy for Advocacy in Health Care

Objective 3: Demonstrate leadership in collaborative efforts to develop and implement policies to improve health care delivery and outcomes at all levels of professional practice.

The Health Policy Analysis course highlighted the importance of APRNs becoming active at the legislative level. During this course I wrote a letter to state congressman and senators in support of SB 323, full practice authority for APRNs in California. I also developed a policy brief on SB 323 which I presented to my classmates to ensure they also were informed and new ways to become involved. I also became a student member of California Association of Nurse Practitioners (CANP), American Association of Nurse Practitioners (AANP), American Psychiatric Nurses Association (APNA), Healthcare Information and Management Systems Society (HIMSS) during this program.

DNP Essential VI: Interprofessional Collaboration for Improving Patient & Population Health Outcomes

Objective 1: Demonstrate advanced levels of clinical practice within defined ethical, legal, and regulatory parameters in designing, implementing, and evaluating evidenced-based, culturally competent therapeutic interventions for individuals or aggregates.

Objective 3: Demonstrate leadership in collaborative efforts to develop and implement policies to improve health care delivery and outcomes at all levels of professional practice.

Because of the didactics offered throughout this program I was able to implement an evidence-based practice project focused on Interprofessional collaboration for improving patient and population health outcomes. My EBP project implemented a standard procedure and collaborative care service between behavioral health and primary care to improve the detection, treatment, and outcomes of adult MDD patients in the primary care setting.

**DNP Essential VII: Clinical Prevention & Population Health for Improving
Nation's Health**

Objective 6: Employ a population health focus in the design, implementation, and evaluation of health care delivery systems that address primary, secondary, and tertiary levels of prevention.

During the didactics of this program I was able to identify, evaluate, and present health care gaps in detection of depression in primary care settings. I was also able to effectively provide and implement solutions to target these health care gaps. The clinical experiences also gave me the opportunity to implement learned evidence-based practices including motivation interviewing, psychoeducational services, and family incorporated care at the in-patient, out-patient, and primary care settings.

DNP Essential VIII: Advanced Nursing Practice

Objective 1: Demonstrate advanced levels of clinical practice within defined ethical, legal, regulatory parameters in designing, implementing, and evaluating evidence-based, culturally competent therapeutic interventions for individuals or aggregates.

Because of the program didactics I was able to successfully co-facilitate a 12-week dialectic behavioral therapy group. This program targeted emotional regulation for individuals suffering from posttraumatic stress disorder and generalized anxiety disorder. Without education provided by this program I would not have been able to consult and analyze the evidence, identify an evidence-based program curriculum, create a collaborative process between myself and licensed social workers, and offer a successful and therapeutic group for patients.

APPENDIX G

OFFICIAL PROTOCOL

CLINICAL DEPRESSION SCREENING AND FOLLOW UP USING THE PATIENT HEALTH QUESTIONNAIRE

I. PURPOSE

To outline the procedure for screening patients for clinical depression and choosing the appropriate follow-up plan.

II. DEFINITIONS:

- A. PHQ-2: Patient Health Questionnaire 2 is a brief tool to screen for depression.
- B. PHQ-9: Patient Health Questionnaire 9 is a tool used to screen for depression, measure symptom severity, and measure a patient's response to treatment.
- C. BH: Behavioral Health.
- D. EHR: Electronic health record.
- E. PCP: Primary care provider/community clinic provider. Includes medical doctors, doctors of osteopathy, and nurse practitioners.
- F. Behavioral Health Provider. Community clinic behavioral services staff. Includes psychiatrists, psychologists, and LCSWs.

III. TEXT

- A. The PHQ-2 tool will be administered to screen for clinical depression. Annual screening is required for every patient ≥ 12 -year-old. Additional screening criteria for primary care and behavioral health listed in procedure section A.
- B. The primary care provider will be notified of patients who score ≥ 15 on the PHQ-9 or if answer to letter 'i' is not "not at all" (letter i: thoughts that you would be better off dead or of hurting yourself in some way).
- C. The primary care provider will use the PHQ-2 and 9 scores along with clinical judgement to determine if referral to behavioral health is appropriate. Note: Behavioral Health referral is required for all patients who score ≥ 15 on the PHQ-9 or give any answer other than "not at all" for letter 'i' on PHQ 9.
- D. All screening and follow up procedures will be documented in the electronic medical record.

IV. PROCEDURE

PROCEDURE	RESPONSIBILITY
<p>A. Patients to be screened for clinical depression using the PHQ-2 electronic tool.</p> <p>Primary Care patients required to screen:</p> <ol style="list-style-type: none"> 1. Patient is ≥ 12 years old and has not completed a PHQ in the last calendar year 2. New to clinic 3. Re-establishing care 4. ESBIRT program eligible <p>Additional screening is suggested for:</p> <ol style="list-style-type: none"> 5. High risk populations. Includes existing or new diagnosis of cancer, diabetes, myocardial infarction, stroke, HIV, chronic pain, substance abuse, childhood trauma. <p>Behavioral Health patients required to screen</p> <ol style="list-style-type: none"> 1. Initial BH appointment 2. Each follow up appointment 	Administrative Staff
<p>B. Patients screened by administration of electronic PHQ-2. If indicated by PHQ-2 answers, patients are prompted to complete the electronic PHQ-9. Results will automatically be documented in the patient's EHR.</p> <ol style="list-style-type: none"> 1. Educate patient to complete the PHQ tool based on the last two weeks. 	Administrative Staff
<p>C. If screening indicated "Depression Screening Protocol" will be ordered under 'assessment and plan'.</p>	Medical Assistant
<p>D. Documentation of PHQ score in EHR verified. Primary care provider notified if necessary.</p> <p>Provider to be notified if:</p> <ol style="list-style-type: none"> 1. Patient scores ≥ 15 on the PHQ-9 2. Patient answer to section 'i' of PHQ-9 with any answer excluding "not at all." 3. Patient refused to complete PHQ 	Medical Assistant

<p>E. Provider reviews score. Treatment action plan determined by score and clinical judgement. Document plan in EHR. See attachments A and B for additional score based instruction.</p> <p>Primary Care PHQ-9 Score action plan:</p> <ol style="list-style-type: none"> 1. 0-14 use clinical judgement. Refer to attachment A for suggested interventions. 2. ≥ 15 discuss results with patient. Must place referral to Behavioral Health, complete warm-handoff. <p>Behavioral Health: PHQ-9 Score action plan:</p> <ol style="list-style-type: none"> 1. Decrease by ≥ 5 points from baseline indicates adequate treatment response. 2. Drop of 4 or less points from baseline, consider adjusting treatment plan. Refer to attachment B for suggested interventions. 	<p>Primary Care Provider / Behavioral Health Provider</p>
<p>F. Behavioral Health Referral. Case manager will triage patient and coordinate appropriate integrative services. Consult in person whenever possible. If unable, perform telephone consult.</p> <p>Face to Face consult:</p> <ol style="list-style-type: none"> 1. Provide letter explaining Integrative Behavioral Health Services 2. Offer patient psychiatric, psychotherapy, and care coordination services. 3. Schedule intake appointments. Notify provider via patient message if appointment availability too limited. Place patient on waiting list when necessary. 4. Document interaction as mental health note. <p>Telephone Consult:</p> <ol style="list-style-type: none"> 1. Provide explanation of Integrative Behavioral Health services via phone. 2. Follow above steps 2 and 3. 	<p>Behavioral Health Case Manager</p>

<p>3. If unable to reach patient after two phone calls, send Integrative Behavioral Health Services letter. No further interventions needed.</p> <p>4. Document interaction as mental health note.</p>	
<p>G. Weekly report will be generated for all patients screened using PHQ. Will be sent to behavioral health case management providers.</p> <p>IT report items:</p> <ol style="list-style-type: none"> 1. Patient's demographics including name and birthdate. 2. Medical record number. 3. Date of screening 4. PHQ score 5. Name of PCP 	Information Technology Department
<p>H. Behavioral Health case managers will review report to ensure all PHQ scores were appropriately addressed. Reports documented and saved each week in clinic G file.</p> <p>BH report items:</p> <ol style="list-style-type: none"> 1. Items 1-5 of sections G 2. Documented intervention addressing PHQ scores ≥ 15. Interventions include consult to psychiatric services, scheduled appointments, attempts to reach patient, or refusal of services. 	Behavioral Case Manager

V. ATTATCHMENTS

A. Proposed Treatment Actions by PHQ 9 Score¹

PHQ 9 SCORE	DEPRESSION SEVERITY	PROPOSED TREATMENT ACTIONS
0-4	None-Minimal	None.
5-9	Mild	Watchful waiting; repeated PHQ 9 at follow-up
10-14	Moderate	Treatment plan, consider counseling, follow-up, and/or pharmacotherapy

15-19	Moderately Severe	Behavioral Health Referral required. Consider active treatment with pharmacotherapy and/or psychotherapy
20-27	Severe	Behavioral Health Referral required. Consider immediate initiation of pharmacotherapy and, if severe impairment or poor response to therapy, expedited referral to behavioral health services.

B. Treatment Response and Plan Change in PHQ 9 Score²

PHQ 9 Score at 4-6 Weeks	Treatment Response	Treatment Plan
Drop of 5 points from baseline	Adequate	No treatment change needed. Follow up in 4 weeks.
Drop of 2-4 points from baseline	Possibly Inadequate	May warrant an increase in antidepressant dose or increase therapy intensity. Follow up in 2-4 weeks.
Drop of 0-1 point from baseline	Inadequate	Increase dose; Augmentation; Informal or formal collaborative care meeting. Follow up in 1-2 weeks.

VI. REFERENCES

1. Instruction Manual: Instructions for Patient Health Questionnaire (PHQ) and GAD-7 Measures. Available at <https://phqscreeners.pfizer.edrupalgardens.com/sites/g/files/g10016261/f/201412/instructions.pdf> Published December 2014.
2. The University of Washington's AIMS Center. Copyright 2016 University of Washington. <https://aims.uw.edu/>