Enhancing Depression Care Outcomes in Primary Care Patients through Secure E-mail Structured Follow-Up Monitoring by Mental Health Nurse Practitioner

Sophia Lawrence APRN
University of San Diego Hahn School of Nursing Health Science, sophialawrence@sandiego.edu

Kathy James DNS
University of San Diego Hahn School of Nursing Health Science, kjames@sandiego.edu

Henry S. Kane MD
Henry.Kane@navy.mil

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Sophia M. Lawrence DNP, MSN, PMHNP-BC, CDR, NC, USN

Henry S. Kane MD, Psychiatrist, CDR, MC, USN

Kathy James DNS, APRN, FAAN

University of San Diego

Hahn School of Nursing Health Science

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ABSTRACT

Purpose: This scholarly project developed a depression follow-up protocol for use by depression care managers in a military primary care clinic. Additionally, this project evaluated the impact of the protocol on HEDIS antidepressant medication measurements (AMM).

Background: Depression occurs in as many as 60% of primary care patients. Significant evidence suggests (a) the prescribing and follow-up management of antidepressant drugs in primary care might not conform to evidence-based clinical guidelines, (b) patients are noncompliant with prescribed medication, and (c) treatment relapse is a major concern. Research indicates that an organized approach to patient follow-up by systematically contacting patients to provide specific interventions, facilitating treatment adherence, and/or monitoring symptoms or adverse effects improves tracking of side effects, increases adherence, and enhances the level of depression care. **Practice Change:** Mental health nurses utilized a standardized depression follow-up management protocol through a structured, secure e-mail follow-up for medication teaching and support. The primary care clinic HEDIS antidepressant medication management scores for both the acute and continuation phase were audited prior to implementation of follow-up and again at 3 months and 6 months to measure improvement in HEDIS scores. **Outcomes:** Post- program evaluations HEDIS scores increased by 3% (Acute phase) and 10% (Continuation phase). **Conclusion:** Secure e-mail follow-up monitoring and feedback was associated with improvement in patient HEDIS scores in the primary care clinic.

BACKGROUND AND EVIDENCE OF THE PROBLEM

Depression is a prevalent condition affecting more than 20 million adults ages 18 and older in the United States and is associated with significant levels of disability, morbidity, and mortality. The World Health Organization (WHO, 2016) underscores the important public

health concerns and costs of depression among U.S. adults. The disorder is associated with

excess resource utilization; an estimated $8,000 per year per patient. Murray and Lopez (1997)

and WHO (2016) also predict that depression will increase from fourth to second place in

contributing to the overall global burden of disease by 2020.

Antidepressant medication and widespread combination psychotherapy has dramatically

changed the disease trajectory and well-being of people living with depression. Antidepressant

use for the treatment of depression has grown dramatically over the past 15 years; however, the

quality of antidepressant treatment has failed to improve, particularly in primary care (Heise &

van Servellen, 2013; Katon, 2010). Comparatively, McManus, Meltzer, Brugha, Bebbington,

and Jenkins (2009) reported that the rates of antidepressant medication adherence were

particularly low in primary care, where 90% - 95% of depression cases are managed.

Over the past 10 years, randomized controlled trials have identified types of depression

treatment changes that should be implemented. These changes have been consistent with

recommendations from the National Committee of Quality Assurance (NCQA), U.S.

Preventative Task Force, and the *Future of Family Medicine* report (Future of Family Medicine

Project Leadership Committee, 2004). The most underscored essential change was the

implementation of a collaborative care model as a method to improve the quality of depression

treatment. Within the collaborative model, one key component was the implementation of a

depression care manager to provide patient self-management support and proactive follow-up

care that was closely integrated with the primary physician. Eghaneyan, Sanchez, and Mitsche

(2014) described collaborative care for depression as a *system level* intervention with four key

characteristics:

1. A professional approach to patient care: This approach required either a general

   practitioner (GP) or family physician along with at least one other health professional

   (e.g., nurse, psychologist, psychiatrist, pharmacist) involved with patient care.

2. A structured management plan in the form of guidelines or protocols: Interventions

   included patient screening and/or patient/provider education.

3. Scheduled patient follow-up: An organized approach to patient follow-up by

   systematically contacting patients, providing specific interventions, facilitating treatment

   adherence, or monitoring symptoms and adverse effects.

4. Enhanced inter-professional communication: Introducing mechanisms to facilitate

   communication between professionals caring for the depressed person. This could

   include written or verbal feedback among providers.

Despite consensus on the value of a collaborative model, this approach has not been the

norm (Simon et al., 2011; Solberg, Trangle, & Wineman, 2005). Relapse has been common and

the risk of developing more chronic forms of depression has increased. Considering the

prevalence, complication, and cost to the healthcare system, the implementation of a

collaborative-care approach to depression management with emphasis on proactive treatment and

follow-up in primary care could improve treatment adherence as well as prevent relapses and

serious complications.

One of the most widely used sets of healthcare data-performance measured in the United

States is the Healthcare Effectiveness Data and Information Set (HEDIS). HEDIS measures

have been useful in promoting population health for wide-ranging chronic disorders.

Conversely, other measures, such as those for Antidepressant Medication Management (AMM),

have been less successful. Current HEDIS data suggests considerable opportunities for

improvement in the quality of mental health services (National Committee Quality Assurance

Managed Behavioral Healthcare Organization Accreditation, 2014).

SIGNIFICANCE & AIMS

At the primary care military facility where this project was implemented, frequency and

continuity of follow-up care often lacked minimal recommendations. Analysis of primary care

antidepressant HEDIS data demonstrated rates well below the HEDIS benchmark. Despite the

organization's ongoing efforts to improve antidepressant data scores, their score (43%) was

lower than the average (72%) for other major military healthcare facilities. The data suggested

that significant number of patients began antidepressant in primary care but did not make any

follow-up appointments or refill their prescriptions. Therefore, a telephone follow-up

management strategy to improve antidepressant HEDIS measure was considered to address these

gaps. Reliance on live contacts during periods of staff shortages made such programs less

available and less timely with additional expense. For instance, patients needed to receive a call

when nursing staff was available, repeated missed contacts were the norm, with approximately

one-half of the attempts being unsuccessful, and each contact required up to 45 minutes of

clinician time. Furthermore, there was an absence of a standardized protocol to guide the

delivery of the follow-up contact by the staff.

In an attempt to improve depression outcome and the quality of depression care delivered

in the primary care clinic, this evidence-based practice (EBP) project aimed to implement best

practices in response to the question: In primary care where adult patients are prescribed

antidepressant therapy, what is the effect of a structured protocol integrating depression

screening and patient education to guide secure e-mail, as compared to the present practice of no

protocol in improving depression outcomes?

LITERATURE REVIEW

Introduction to the Evidence

The evidence for the project was found using the following information sources: PubMed, Cochrane, PsycInfo, and Psychotherpy.net. Searches were restricted to systematic reviews, meta-analyses, randomized controlled trials, and observational studies from January 2005 to February 2015. Articles were identified by combining terms *treatment* and *depression* in both MeSH terms and text words. Additionally, these terms were paired with *primary care*, *HEDIS*, *best practices*, *internet or computer or tele-health or online*. Furthermore, the search was limited to adults over 18 years old and restricted to studies within the last 10 years. The evidence was reviewed for discussions on follow-up strategies to improve depression outcome. Next, the evidence presented different elements of successful collaborative care strategies, including telephone and e-mail follow-up interventions. Lastly were the meta-analyses of a collaborative-care-based intervention in the treatment of depression. Evidence was arranged in a sequential order by date.

The Evidence

Wagner et al. (2016) and Heise and van Servellen (2013) reported that proactive follow-up significantly lowered depression severity. Similarly, Richards et al. (2013) revealed that appropriate, reliable follow-up was highly correlated with improved response and remission scores. As cited in an Agency for Healthcare Research and Quality (AHRQ; 2014) study, one point often overlooked was that the depressed patient's pessimism, low motivation, low energy, and sense of isolation and guilt might lead to nonadherence with treatment. Therefore, successful care of major depression required active engagement of each patient plus ongoing education beginning at the time of diagnosis. A study by Katon et al. (1996) uncovered that

improved attitudes towards antidepressant medications along with the patient's ability to handle

medication side effects were key factors in promoting greater adherence and maintenance

treatment, thus greater likelihood of preventing relapse. Several studies (Heise & van Servellen,

2013; Unutzer & Park, 2012) cited the PHQ-9 as a questionnaire useful for follow-up and well-

validated for assessing diagnosis, severity, outcomes, and monitor progress over time.

A randomized control trial conducted by Wagner et al. (2016) utilized two models to

facilitate depression care delivered by providers. One utilized a structured protocol; another

relied on clinical acumen in 10 HIV clinics. The two models were compared based on (a) the

proportion of all patient participants to those clinically depressed, based on a follow-up PHQ-9

and (b) the proportion of clinically depressed patients who were prescribed antidepressant

therapy. Findings confirmed that those in the structured protocol were significantly more likely

to received further evaluation by the provider utilizing the PHQ-9 (84% vs. 49%; $p = .01$). These

results suggested that a structured protocol model could be advantageous for ensuring that

positively-screened clients received depression evaluation.

Richards et al. (2013) conducted a randomized control trial to test the clinical

effectiveness of collaborative care with usual care in the management of patients with moderate-

to-severe depression. Collaborative care intervention included depression education, drug

management, behavioral activation, relapse prevention, and primary care liaisons delivered by

depression care managers. Furthermore, collaborative care involved 6 to 12 contacts with

participants over 14 weeks supervised by a mental health specialist. The primary outcome was

the depression symptoms score (PHQ-9), anxiety score (generalized anxiety disorder 7; GAD-7),

and quality of life (short 36 questionnaire; SF-36). The collaborative care group comprised 276

participants and 305 participants were allocated to usual care group. Results indicated that

quality of mental health was significantly better in collaborative care group than the usual care group and patients were significantly more satisfied. At 4 months, the mean depression score was 11.1 ($SD = 7.3$) for collaborative care group and 12.7 ($SD = 6.8$) for usual care group. After adjustment for baseline depression, the mean depression score was 1.33 PHQ-9 points lower (95% CI [0.35, 2.31], $p < .01$) for participants receiving collaborative care than in those receiving usual care. Collaborative care participants had persistent, positive effects up to 12 months after initiation of the intervention and was preferred by patients over usual care.

Simon et al. (2011) conducted a randomized controlled trial comparing typical primary care treatment for depression to primary care supported by online care management. The primary outcomes were the score on the Depression Symptom Checklist Scale and patient satisfaction with care. Secondary outcomes (i.e., antidepressant adherence, use of health record services) were assessed using computerized medical records. Nine primary care clinics enrolled 208 patients beginning antidepressant therapy. Online care management contacts with a trained psychiatric nurse included a structured assessment, algorithm-based feedback to the patient and treating physician, and as-needed facilitation of follow-up care.

Groups were similar in baseline characteristics. The primary outcome demonstrated that patients offered the online program had higher rates of antidepressant adherence (81% vs. 61% continued treatment > 3 months, $p = 0.001$), lower symptoms checklist depression scores after 5 months (0.95 vs. 1.17, $p = 0.043$), and greater satisfaction with depression treatment (53% vs. 33% *very satisfied*, $p = 0.004$; Simon et al., 2011). Although the study results suggested greater treatment adherence, there were limitations to the study. While the study evaluated two treatment delivery methods, the results applied only to patients utilizing online messaging.

In a meta-analysis, Krebs et al. (2010) compared the effects of tailored versus non-tailored web-based interventions on health behaviors and explored the influence of key moderators on treatment outcomes. Forty experimental and quasi-experimental studies ($N = 20,180$) met criteria for inclusion. The findings indicated that web-based-tailored interventions resulted in significantly greater improvement in health outcomes as compared with control conditions, both at post testing and at follow up. There were no limitations identified with this meta-analysis; the authors found no evidence of publication bias.

Results of Krebs et al. (2010) meta-analysis indicated that nurse-based telehealth patients with or without peer support experienced 50% improvement on the Hamilton Depression Rating Scale at 6 weeks (50% vs. 37%, $p = .01$) and 6 months (57% vs. 38%; $p = .003$), on the Beck Depression Inventory at 6 months (48% vs. 37%; $p = .05$), and a reduction in symptom scores on the Hamilton scale at 6 months (10.38 vs. 8.12; $p = .006$). Telehealth care improved mental functioning at 6 weeks (47.07 vs. 42.64; $p = .004$) as well as treatment satisfaction at 6 weeks (4.41 vs. 4.17; $p = .004$) and 6 months (4.20 vs. 3.94; $p = 0.001$). The study concluded that nurse tele-health care improved clinical outcomes of antidepressant drug treatment, patient satisfaction, and fit well within busy primary care settings.

Thota et al. (2012) conducted a systematic review and meta-analysis of current literature to assess the effectiveness of collaborative care for improving the management of depression. These authors defined collaborative care model as a multi-component system-level intervention that utilized a depression care manager to link primary care providers, patients, and mental health specialists. Inclusion criteria for the meta-analysis were randomized controlled trials that compared a form of collaborative care with usual or enhanced care. The analysis included 37

randomized control trials of collaborative care studies published through 2004 with an additional

32 studies published between 2004 and 2009.

The results from the Thota et al. (2012) meta-analyses suggested robust evidence of

effectiveness of collaborative care in improving depression symptoms (standardized mean

difference [*SMD*] = 0.34), adherence to treatment (*OR* = 2.22); response to treatment (*OR* =

1.78); remission of symptoms (*SMD* = 0.12); and satisfaction with care (*SMD* = 0.39) for

patients diagnosed with depression; all effects estimates were significant. The analysis

concluded that collaborative care models were effective in achieving clinically meaningful

improvements in depression outcomes as well as public health benefits in a wide range of

populations, settings, and organizations. Furthermore, collaborative care interventions provided

a supportive network of professionalism and peers for patients with depression, especially at the

primary care level.

NEED FOR PRACTICE CHANGE PROJECT

HEDIS is a set of quality indicators that the Military Health System Population Health

Portal (MHSPHP) uses to benchmark performance metrics in their medical treatment facilities.

Quality indicators for HEDIS Antidepressant Medication Management measures focus on

compliance with medication regimens and appropriate follow-up as the key to improved

depression care. At the military primary care facility where this project was implemented, a

significant number of patients beginning antidepressant in the primary care clinic do not make

any follow-up appointments or refill their prescriptions. Therefore, frequency and continuity of

follow-up care often fall short of minimal guideline recommendations. In fact, analyses of

primary care antidepressant data showed rates well below the HEDIS benchmark.

In an effort to improve HEDIS antidepressant scores, the telephone follow-up call-management strategy has been implemented to address these gaps. However, follow-up calls did not include the monitoring of depression severity, a repeat of the PHQ-9 at each contact or at least every 3 to 6 months, and progress on the patient's self-management or treatment plan. Additionally, the challenge with that standard of care involved the lack of consistent staff assignments to provide the follow-up care. This made follow-up care less available, less timely, and more expensive. For instance, patients received calls only when nursing staff would be available; repeated, missed contacts were the norm. Each contact required up to 1 hour of clinician time, one-half of that time was spent on unsuccessful attempts.

Despite the organization's ongoing efforts to improve the antidepressant data scores, their results were consistently lower than the national benchmark. To analyze factors determining non-compliance from the patients' viewpoint, 100 patients from the clinic antidepressant HEDIS list of 82 patients were surveyed. As demonstrated in Figure 1, results suggested that factors influencing adherence to antidepressant varied.
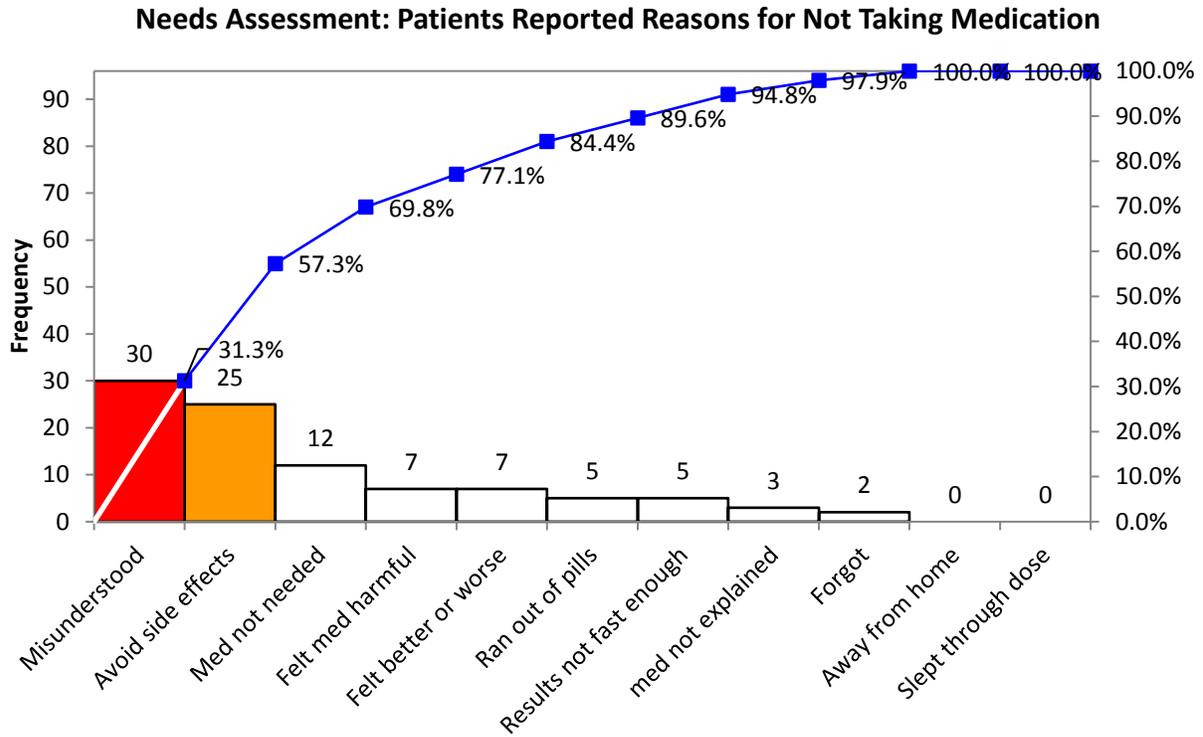
Needs Assessment: Patients Reported Reasons for Not Taking Medication

Figure 1. Results of Patients Survey on Reason for Antidepressant Non-adherence

In an attempt to improve depression outcome and the quality of depression care delivered in the primary care clinic, this EBP quality improvement project aimed to implement best practices in response to the PICO question below.

PICO

In a primary care setting where adult patients are prescribed antidepressant therapy, what is the effect of secure e-mail and telephone follow-up utilizing a nurse-guided depression follow-up protocol, as compared to usual follow-up monitoring without the protocol.

MODEL-THEORY

The Iowa Model of Evidence-Based Practice (EBP) served as a framework to improve patient outcomes, enhance nursing practice, and monitor health care cost (Rycroft-Malone & Bucknall, 2010 p. 139); therefore, this model reflected the best approach to address the problem

identified in this project. The model's algorithm was easily comprehensible and consistent with the organization's emphasis on promoting the use of teams and organizational buy-in. Furthermore, the Iowa Model, as evidenced within its second step, emphasized determining the relevance to organizational priorities. Military health care facilities have been especially invested in depression treatment efficacy for active duty members and their family members. HEDIS antidepressant scores are measured and reported to key military leaders on a quarterly basis.

Parallel to the EBP models, it was important to consider nursing theories in the utilization of practice change guided by evidence and research. Roy's Adaptation Model views the individual as a set of interrelated systems (i.e., biological, psychological, social) in constant interaction with a changing environment (Roy Adaptation Model, 2016). An individual's experience with depression and the ability to adhere to the medication regimen could be varied. Likewise, by appreciating the bio-psycho-social system, nurses anticipated that the initial medication side effects could present differing barriers to adherence. Without first assessing the patient's thoughts and behaviors towards taking antidepressants, nurses could not address any adherence issues. With appropriate and consistent follow-up, nurses could support the patient in understanding their medication, exploring the factors for non-adherence, and providing education or recommending changes as needed.

METHODS

Overview

This EBP project was based upon literature supporting an organized approach to patient follow-up by systematically contacting patients by phone, e-mail, or in person to provide specific interventions, facilitate treatment adherence, and monitor symptoms or adverse effects. The EBP

goal was to evaluate whether the implementation of follow-up monitoring by secure e-mail and telephone utilizing a systematic nurse-guided approach would increase the outcome of care, improved depression symptoms over three months, as well as HEDIS scores.

Sample and Participants

Thirty-four patients identified from the aggregate primary care clinic provided an adequate sample for the EBP project based on the following inclusion/exclusion criteria. Inclusion criteria included: (a) *new* antidepressant prescription from the clinic primary care prescriber, where new was defined as no antidepressant use in the previous 120 days; (b) ages 18 and older; (c) ability to speak and read the English language; (d) secure e-mail account; and (e) telephone access. Exclusion criteria included: (a) patient received antidepressant(s) to treat conditions other than specified in inclusion criteria, and (b) patient unable to speak and read English.

Change Process Intervention

The follow-up monitoring protocol was implemented on June 1, 2016. The protocol included a flow chart guiding scheduled patient follow-up by telephone or e-mail. A list of eligible patients was forwarded to the assigned clinic nurse. Each patient was immediately enrolled to the hospital electronic health e-mail communication database and received a welcome message from the depression care manager describing the follow-up protocol. The follow-up secure e-mail contacts were scheduled and initiated by the clinic nurse within two weeks of antidepressant prescription.

Each monitoring contact began with an outreach message from the nurse containing to an online assessment, including the current use of antidepressant, side effects, severity of symptoms, self-care, education, and care support. The assessment also included the PHQ

depression questionnaire every two weeks. Those not responding were sent three reminders. A

follow-up procedure was developed to standardize the phone calls and e-mail contacts and

ensure antidepressant efficacy, safety, and adherence. Completed follow-up encounters were

documented in the EMR using a standardized template and forwarded to the primary care

prescribing provider.

Data Collection

Pre-identified antidepressant HEDIS data were extracted from the Command's Business

Report portal comprising of the score for the antidepressant HEDIS indicator, performance

percentile, and target score to reach respective benchmarks for three fiscal years (i.e., 2013,

2014, 2015) prior to implementing the EBP project in 2016. This data was specific for HEDIS

antidepressant, effective, acute-phase treatment (i.e., adults who remained on antidepressant

medication for at least 84 days/12 weeks) and continuation phase treatment (i.e., adults who

remained on antidepressant medication for at least 180 days/6 months). For the acute phase of

treatment, the March 2015 HEDIS scores were 47%; the March 2016 HEDIS data scores were

52%, and the national average was 74% (NCQA, 2014).

Retrospective baseline HEDIS data from the primary care clinic site were collected from

the previous 12 months and evaluated to determine if there was a need for the practice change.

The EBP project obtained approval from the Naval Medical Center San Diego and the

University of San Diego Institutional Review Boards, and was conducted in compliance with all

applicable federal regulations governing protection of human subjects in research (CIP#

NMCSD. #2016.0044 and CPI#USD.2016-06-241).

Data Analysis

Data analysis employed quantitative, statistical process control. Control charts with 12 monthly data points allowed for the identification of variation in the data. A patient survey in August 2015 assisted in analyzing the factors for non-compliance of medication adherence and follow-up from the patients' perspective. These findings further demonstrated the need for this EBP quality improvement project.

Following a six month follow-up trial period according to the new protocol, the pre- and post-data was analyzed to determine if the project intervention outcomes demonstrated improvement in the facility HEDIS scores.

The primary goals were to achieve a 10% increase in the HEDIS effective acute phase treatment and a 10% increase in HEDIS effective continuation phase treatment. HEDIS data were tracked prior to project implementation, three months after implementation, and six months post implementation.

RESULTS

As demonstrated in Figure 2 and 3, the results were positive. The benchmark targeted to improve HEDIS antidepressant scores by 10% was met for the continuation phase. The benchmark targeted to improve HEDIS antidepressant scores by 10% was not met for the acute phase. However, there was an improvement from baseline scores and an increased by 4%.
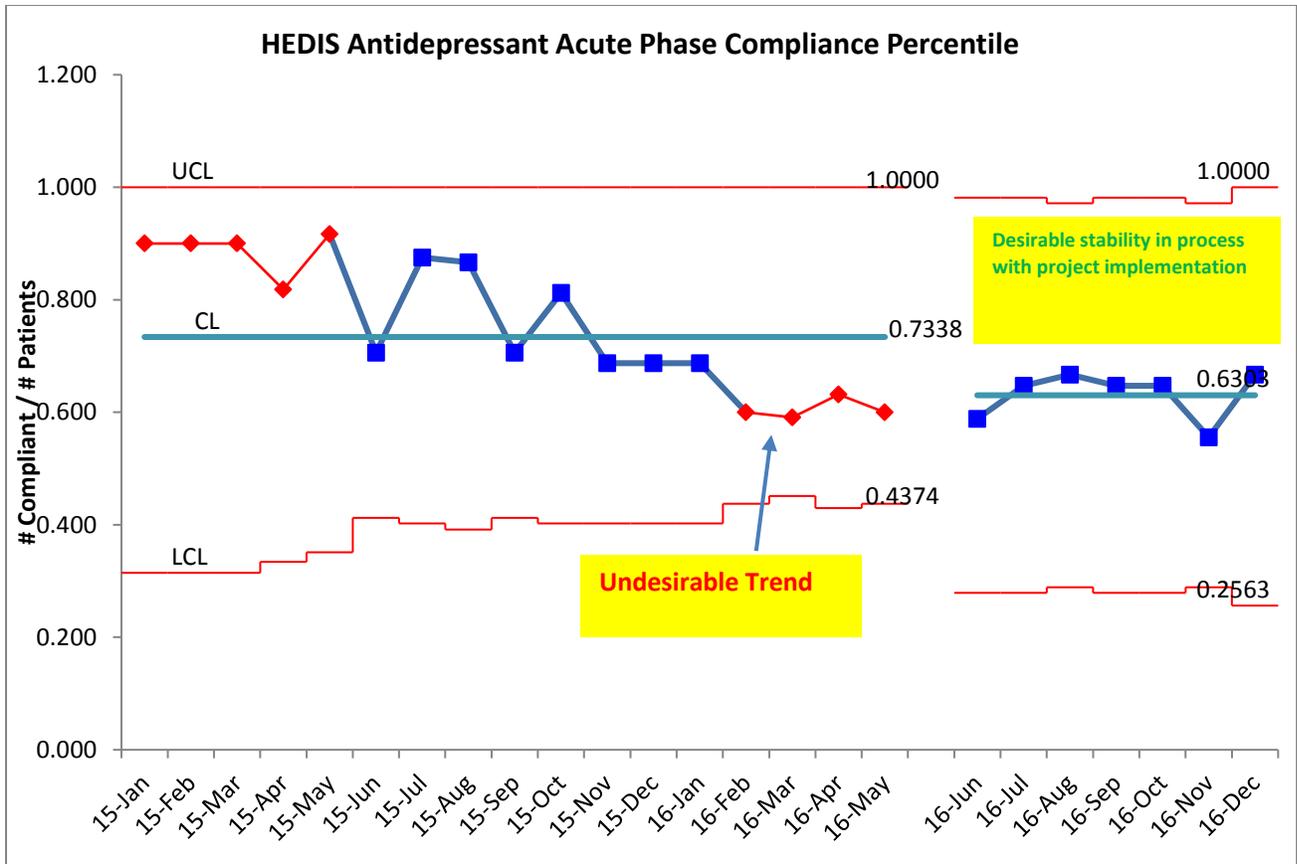
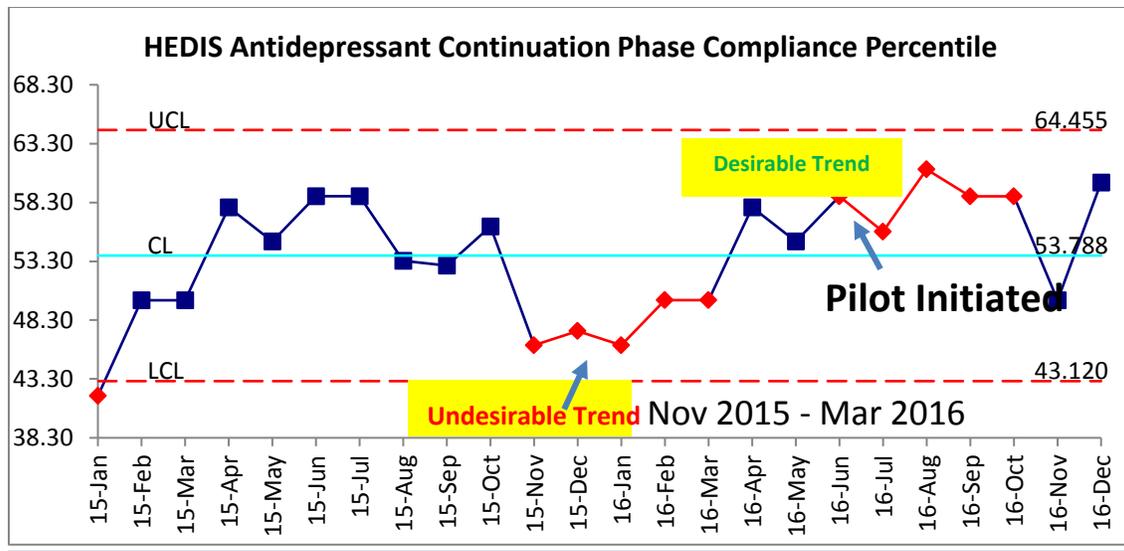*Figure 2*. HEDIS Antidepressant Medication Management Acute Phase

Figure 3. HEDIS Antidepressant Medication Management Continuation Phase

COST BENEFIT ANALYSIS

Incorporating the use of electronic health e-mail communication to monitor patients'

progress and provide medication support in primary care setting cost benefits are positive and

substantial. The cost-benefit analysis indicates that the net savings to the military government is

$814,702, more than 10 times the project cost. In other words, for every $1 spent on the

program, $12 could be saved. Key benefits resulting from this project are described in Tables 1

and 2.

Table 1

Cost Avoidance

Cost of Depression Treatment
• The average depression treatment = $160/hour
• Treatment failure due to non-adherence to antidepressant medication = $3,480 annually per patient ($160/hr. X 2 one hour treatment session per month = $320 X 12 months/yr. = $3,840)
• Currently 227 patients are enrolled to the clinics are receiving care for depression ($3,840 X 227 patients = $871,680

Note. Adapted from "Treatment costs of Depression," by Depression D. Retrieved from http://depressiond.org/treatment-costs-of-depression/

Table 2

Cost Benefit

COST BENEFIT	
Project Cost	$67,200
Psychiatric MH RN to provide the follow - up care - 1 FTE/clinic	
1 Nurse = $35/hour x 8 hour/day = $280 x 8 weeks	
Project Benefits	
Reduction in depression treatment	($871, 680)
Net Benefits	($804,480)

LIMITATIONS

Although the project results were positive, there were limitations. Certain barriers

hindered smooth implementation. The secure e-mail communication adopted by the command

did not have features to incorporate the PHQ-9 questionnaire for the patient self-report, which

was an essential component to measure patient depression severity and outcome. As a result,

there was a lengthy delay in piloting the intervention. Evaluation of the intervention over a

longer period could have provided greater detail about changes over time. Furthermore,

identifying the desired background for the depression care manager delayed the implementation

process. The majority of patients in the Medical Home Port (MHP) clinic had an assigned social

worker. It would have been more practical to utilize the social worker to serve as the depression

care manager for the project, but there were concerns about social workers not having adequate

knowledge about the antidepressant medication to monitor medication responses and facilitate

changes. Also, the transiency of patient population and lag time for updated population/health

HEDIS metrics presented further limitations. The HEDIS database included patients who

transferred out of the command. A mechanism to update the Command's Business Report

capturing patients on the HEDIS list in real time is lacking. The project was restricted to a small sample size of 34 patients and a small pilot clinic that served active duty military patients only. The small number of subjects limited the power to detect to differences in HEDIS scores for the entire command.

DISCUSSION

The recommendations regarding treatment and ongoing management for depression highlighted the need for systematic and close monitoring. The evidence suggested substantial potential to improve the management of depression in primary care. A major component of multimodal strategies to improve patient outcomes generally incorporated close follow-up monitoring of patients, patient education, medication counseling, coordination of care, monitoring of symptoms, and adherence to treatment plan. However, these strategies often involve intensive, one-on-one interventions with primary care providers and can be time consuming, complex, and expensive for providers. The result of the EBP project was consistent with findings from studies conducted by Thota et al. (2012), Wagner et al. (2016) and Heise and van Servellen (2013) demonstrating a potential improvement in depression treatment outcomes by utilizing a mental health nurse to supplement the primary care clinician's in-office intervention. Greater attention could focus on follow-up monitoring including medication support, feedback, and education reinforcement on antidepressant common side effects. Furthermore, the use of an online, secure communication as an adjunct to phone for supplemental follow-up support has proved to be a suitable EBP option. Another advantage of the computer web-based communication is that it provides for quick and easy access to engage the patients at times and places convenient to them.

The evidence also supported the use of a guide or protocol to enhance the delivery of systematic, supportive follow up contacts by a nurse or other non-mental health professional utilizing phone, e-mail, or in-person methods. The follow-up algorithm-based protocol was developed to provide staff with a guide to a systematic, multimodal follow-up approach in the primary care clinics despite staffing challenges. Although it is not the solution or substitution for a mental health nurse, it represents a necessary step towards improving depression care in the primary care clinic. The blueprint, resources, and implementation tools for establishing a depression follow-up protocol were adapted from the following sources: American Psychiatric Association Practice Guidelines (2010), Agency for Healthcare Research and Quality (2014), ICSI Institute for Clinical Systems Improvement (2016), Pietruszewski (2010), Unützer and Park (2012), and U.S. Preventative Services Rask Force (2009).

CONCLUSION

One feasible method of improving depression care can be accomplished by utilizing a mental health nurse to supplement the primary care clinician in-office intervention with greater attention on providing a systematic, multimodal approach to follow-up and follow-through of patients. Six months after implementation, the structured, multimodal, secure e-mail follow-up protocol was associated with improvement in patient outcome and HEDIS antidepressant measurements for the primary care clinic. Furthermore, the project was associated with a high degree of patient satisfaction. Given the plethora of evidence to support this approach together with the positive and substantial cost benefit, evidence suggests facilitating this program throughout the command in order to approach the top decile (90th percentile) HEDIS antidepressant national benchmark for Naval Hospital Camp Pendleton.

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