IMPLEMENTATION OF A DEPRESSION SCREENING PROGRAM IN LONG-TERM CARE

by

Brooke Lovell Tanner

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As members of the Doctor of Nursing Practice Project Committee, we certify that we have read the Doctor of Nursing Practice project prepared by Brooke Lovell Tanner entitled Implementation of a Depression Screening Program in Long-Term Care and recommend that it be accepted as fulfilling the Doctor of Nursing Practice project requirement for the Degree of Doctor of Nursing Practice.

________________________________________________________ Date: April 9, 2015
Terry A. Badger, PhD, RN, PMHCNS-BC, FAAN, Director of DNP Program

________________________________________________________ Date: April 9, 2015
Ted S. Rigney, PhD, ANP, ACNP-BC, FAANP Clinical Associate Professor

________________________________________________________ Date: April 9, 2015
Kathleen C. Insel, PhD, RN Professor

Final approval and acceptance of this Doctor of Nursing Practice project is contingent upon the candidate’s submission of the final copies of the Doctor of Nursing Practice project to the Graduate College.

I hereby certify that I have read this Doctor of Nursing Practice project prepared under my direction and recommend that it be accepted as fulfilling the practice inquiry project requirement.

________________________________________________________ Date: April 9, 2015
Doctor of Nursing Practice Project Director: Terry A. Badger, PhD, RN, PMHCNS-BC, FAAN
Director of DNP Program
STATEMENT BY AUTHOR

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SIGNED: Brooke Lovell Tanner
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ABSTRACT

Purpose: The purpose of this project was to implement a screening program that would identify older adults with depressive symptoms.

Data Sources: The Mini Mental Status Exam (MMSE) is a baseline cognitive screen used to identify which depression screening tool should be used for the patient. The Geriatric Depression Scale-15 is used to screen patients with a MMSE score of 19 or higher. The Cornell Scale for Depression in Dementia is used for patients with a MMSE of 18 or below.

Conclusions: This project had a small, convenience sample size (n=17). All (n=17) patients were given the cognitive screening. Due to inability to obtain consent, only 70% (n=12) were screened for depression. All 17 patients shared a total of five providers, who were contacted on two different occasions to notify them of the screening results and asked to complete the six-item survey. Two providers responded to the notification and completed the survey. Providers who completed the Likert survey strongly agreed that the depression treatment and tracking (DTT) form: (1) was helpful in documenting depression in the long-term care patients, (2) was easy to use, (3) decreased time spent per patient visit, and (4) was the one they would like to see used in the facility.

Implications for Practice: Implementing a depression screening program through the use of a depression treatment and tracking form will assist staff with ease of documenting and communicating screening results to the patient’s primary care provider. The DTT form supports improved health outcomes for the long-term care patients by giving primary care providers a quick and easy-to-use form they can evaluate to determine if further evaluation and treatment is needed.
CHAPTER 1: INTRODUCTION

BACKGROUND

Depression is the most common mental disorder (NIMH, 2014) and leading cause of disability in the United States (Gonzalez, 2010; Park, 2011). The Diagnostic and Statistical Manuel of Mental Disorders, 5th edition (DSM-V, 2014) defines depression as having "five (or more) of the following symptoms present during the same two-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure. Symptoms include: (1) depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad, empty, hopeless) or observation made by others (e.g., appears tearful), (2) markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation), (3) significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day, (4) insomnia or hypersonmia nearly every day, (5) psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down), (6) fatigue or loss of energy nearly every day, (7) feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick), (8) diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others), (9) recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide."
Older adults, or those persons aged 65 years and older, are at increased risk for depression, with a projected lifetime risk of major depression of 23% by age 75 years (Park & Unutzer, 2012). The Anxiety and Depression Association of America (2014) reports 40 million adults in the United States are diagnosed with depression; however, there are many older adults who remain undiagnosed and untreated (NIMH, 2014; Adams, 2010; Brown, 2009).

Depression is the leading mental disorder in older adults and increases morbidity and mortality by 59% (Adams, 2010); increases health service use and medical costs (Ell, 2005); decreases quality of life, and contributes to extended hospital stay and readmissions (Milisen, 2006). In the United States alone it is estimated over $31 billion a year is lost in productivity because of depression (Mark et al, 2007).

Older adults have four times the risk for depression (McCormack, 2011) compared to their younger cohorts. Co-morbidities contribute to depression in the older population with rates of 36% in those post-stroke, 50% with Alzheimer’s disease, and up to 76% in older adults diagnosed with Parkinson’s disease (Park, 2011). Overall, it is estimated those with chronic co-morbid conditions have up to a 70% likelihood of experiencing depression (Insel & Badger, 2002). Older adults with depression are found to exhibit poorer self-care, difficulty in relationships with family and friends, isolation, and loss of interest in activities that were once greatly anticipated.

Individuals residing in long-term care centers are at greatest risk for developing depression. Half of new patients moving into a long-term care facility report having depressive symptoms shortly after moving into their new residence (Park, 2011; Adams, 2010; Conradsson, 2013; McCormack, 2011). Sixty-three percent of established long-term care patients also report depressive symptoms (Park, 2011; Adams, 2010; Conradsson,
The prevalence of depressive symptoms in long-term care patients is partially contributed to co-morbidities experienced, putting these patients at higher risk for depression than their community counterparts.

Long-term care patients with depression are at risk for having negative health outcomes. Patients suffering from depression have poorer quality of life meaning they may begin to disengage themselves from others, take a disinterest in their well-being, withdraw themselves from care, present in a way that demonstrates failure to thrive, and are at an increased risk of passive suicide (Izal, 2010). Passive suicide is demonstrated by behaviors such as refusing meals, medication, or other essential elements to sustain life. Passive suicide attempts occur in a reported 31% of long-term care patients (Adams, 2010), with the highest actual suicide rate being in the depressed older white male (NIMH, 2014; Adams, 2010). Depressed residents— if not effectively treated – no longer participate in activities of daily living, which complicates physical illness and further decreases morbidity, causing increased medical services utilization, pharmacological costs (Izal, 2010) and increased mortality.

Research continues to show depression in the older adult frequently goes undiagnosed and untreated. Park reports that only 40%-50% of depression is detected by an older adult's primary care provider (PCP) (Park, 2011). “In a study of 1,198 consecutive suicide attempters in Helsinki, Finland between 1997 and 1998, Suominen and colleagues (2004) found that during the 12 months immediately before the attempt, most elderly suicide attempters had a contact with a health care agency. Only 4% of these adults had been diagnosed with a mood disorder before the attempt and only 57% after the
attempt. This finding emphasizes the importance of early detection and treatment of late-life depression in primary care” (Park, 2011).

Improving poor outcomes for long-term care patients begins with an effective strategy to recognize when an older adult is suffering from depressive symptoms (Haslam, 2010). The symptoms in this population often go undetected because of the different presentations in symptoms when compared to younger cohorts. Misconceptions of depression or depressive symptoms in the older population by primary care providers also contribute to under and/or missed diagnoses. One dominant misconception leading to missed or underdiagnoses in older adults is that depressive symptoms are a normal part of aging (Coventry, 2011).

Depression in older adults remains a significant public health concern and screening for symptoms in the long-term setting would be the first step to improving depression care for this population (Brown, 2009). Screening patients with a valid and reliable tool will improve recognition of depressive symptoms, improve diagnoses and therefore result in earlier and more effective treatment of this prominent mental illness.

LOCAL PROBLEM

Arizona has comparable rates of depression to the United States at 7% and 6.6%, respectively (National Survey on Drug Use and Health, 2012). However, the Phoenix-Mesa-Glendale area – the setting for this project – has a slightly higher rate than the national average for depression at 7.4% (National Survey on Drug Use and Health, 2012). This figure likely under-represents the problem, since many who suffer from depression are not diagnosed nor do they appear in these statistics. In Arizona, it is estimated that
only 18% of adults who have a mental illness are treated by a health care provider (State Statistics, 2010).

Long-term care facilities are home to over 600,000 individuals in the United States, accounting for 75% of the long-term care housing for the elderly which continues to grow by 15-20% annually (Cummings, 2002). In the Phoenix Metropolitan area there are approximately 161 long-term facilities (ADHS, 2014). Literature clearly states patients of long-term care are twice as likely as their community-dwelling peers to suffer from depression (Coventry, 2011), with 70% of these patients reporting depressive symptoms effect their activities of daily living (Milisen, 2006). Thus, because more attention needs to be given to the mental health of long-term care patients, the purpose of this project was to implement a screening program that would identify older adults with depressive symptoms.

**SETTING**

The setting for this DNP project was at a long-term care facility in Apache Junction, Arizona. This facility was opened in June 2013 and is home for older patients with and without cognitive impairments. This long-term care facility is divided into two homes designed to have a home-like feel with culinary staff preparing meals, pianos in the living room, water features and garden boxes in the back yard. One home is designated as the memory care home and has 15 resident rooms. Each room may have up to two residents who share a bathroom. This memory care home is for residents with severe cognitive impairments who need assistance with all activities of daily living and frequent re-directioning, with some needing feeding assistance.
The second home has 28 resident rooms, each room with its own bathroom and up to two residents per bedroom. The long-term care facility is home to upward 53 residents age 65 and older. All residents of this facility have one or more co-morbidities such as hypertension, diabetes, Parkinson’s disease, or chronic obstructive pulmonary disease. Majority of primary health care providers visit their patients at the long-term care facility on a routine basis; however, there are a small number of patients who continue to see their primary care providers at their offices. Unlicensed medication technicians and caregivers are present at all times in the long-term care home. Medical technicians have completed a course on dispensing medications to long-term care patients. Caregivers have no healthcare educational background but instead are taught patient care through job orientation. Administrative staff is available at the facility normal business hours during the week and are on call 24 hours a day.

INTENDED IMPROVEMENT

The purpose of implementing a depression screening program was to identify all older adults with depressive symptoms who reside in a long-term care facility. Screening and recognition of depressive symptoms was the first step in treatment (Adams, 2010). Improvement of depressive symptoms was projected to be achieved once those diagnosed through screening were started on effective treatment. However, older adults have shown to take longer than their younger cohorts to display symptomatic improvement when started on antidepressant therapy (Mulsant et al., 2006). Mulsant, et al. (2006) stated within twelve weeks of initial antidepressant pharmacological intervention 66.3% of older adults will show full response or resolution of depressive symptoms. Remission rates of up to 67% have been reported in older adults without adequate depression treatment (Park,
Resolution of depressive symptoms increases quality of life, reduces health care use, limits hospital stay and readmissions, and decreases health care costs, morbidity and mortality of the older adult.

Studies suggest only one in five older adults presently receive effective treatment for their depression (Gonzales, 2010; Park, 2011). Under treatment and under diagnosis is partly due to misconceptions health care providers have about depression in older adults (Coventry, 2011; Park, 2011; Milisen, 2006). Many health care providers presume depression to be a normal consequence of aging or that depression is inevitable (Coventry, 2011). Other providers misdiagnose patients attributing symptoms to normal grief of physical illness, or dementia (Park, 2011). Educating primary care providers through the implementation of depression screening during admission into the long-term care facility will assist in correcting this prominent but treatable mental health problem.

Long-term care centers have the opportunity to monitor depression in the older adult population as depression may become recurrent or chronic in some situations (Park, 2011). Continuous monitoring and screening should lead to improved intervention and treatment of depression in the long-term care setting.
STUDY QUESTIONS

The study question proposed for this DNP project was: Will implementing a depression screening program into the long-term care setting improve recognition of depression symptoms in the older adults? A secondary question was: Does improved recognition of depressive symptoms in the older adult prompt further evaluation and treatment for the patient within two weeks of screening?

CHAPTER 2: METHODS

FRAMEWORK

This feasibility study was done using the Plan, Do, Study, Act or PDSA model [Figure 1], also called Rapid Cycle Improvement Model (The W. Edwards Deming Institute, 2014.). This model has four stages which represent a cycle used to test out ideas, while being able to simultaneously assess the impact the changes are making on the subject at hand (NHS Institute for Innovation and Improvement, 2008). The PDSA cycle involves testing new change ideas on a small scale initially and through successes gradually move to larger scales (NHS Institute for Innovation and Improvement, 2008). This method of change is effective when internal (patients) and external (stakeholders) individuals affected by the change are able to provide feedback regarding what is or is not working with the implemented change (MDH, 2014).
Planning is the first phase in the PDSA cycle. Planning entails defining the objective for the study and asks the questions: “What are we trying to accomplish?” (NHS Institute for Innovation and Improvement, 2008), “How will we know that a change is an improvement?” and “What change can we make that will result in improvement?” (MDH, 2014). Processing the change to be implemented and posing predictions that answer who, what, where, and when of the feasibility study (NHS Institute for Innovation and Improvement, 2008) adds depth to the planning phase. Planning to identify and implement a change also includes getting to know the stakeholders, or those who will be involved and affected by the change. Internal (patients) and external (stakeholders) individuals will provide insight to the project (MDH, 2014) in the way of forward-thinking. Forward-thinking provides information that may not have been provided by one individual alone.
Brainstorming is part of forward-thinking that examines the process. Questions asked during brainstorming include: “What is being done now? How is it being done? What are the major steps to change how things are being done? Who will be involved? What is currently being done well? What could be done better?” (MDH, 2014). Timelines, roles, and responsibilities are also established in the planning phase of the P.D.S.A model (MDH, 2014).

Do is the second phase. This phase is intended to complete the cognitive and depressive screenings (NHS Institute for Innovation and Improvement, 2008). This phase may encounter unforeseen obstacles or effects that are important to recognize and become a part of data collection (MDH, 2014). General observations are also part of the data that should be collected (MDH, 2014). Once data is analyzed, the project moves on to the next phase in the P.D.S.A model: Study.

The study phase reviews data collected before and after the change (NHS, 2008). Studying the data also allows for comparing predictions made in the planning phase with the actual results of the change (NHS Institute for Innovation and Improvement, 2008). Questions answered in this phase include: “Does the plan result in an improvement? By how much/little was the action worth the investment? Were there trends? Were there unintended side effects?” (MDH, 2014). Once data is reviewed a summary of what was learned from the change is concluded (NHS Institute for Innovation and Improvement, 2008).

Act is the model’s last phase in the cycle. The act phase decides whether the change can be implemented, implements the full change, or plans another change to begin in the next phase (NHS Institute for Innovation and Improvement, 2008). A successful
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implementation results in standardization of the change (MDH, 2014). If the implementation was not found successful, the cycle continues with moving back to the planning phase, making adjustments and following through the cycle an additional time (MDH, 2014).

INTERVENTION

This DNP project is based on the American Geriatric Societies recommendations for depression screening in the long-term care patient (American Geriatric Society & American Association of Geriatric Psychiatry, 2003; Snowden et al., 2003). Administration of initial cognitive and depression screenings was done by the PI conducting this DNP project. Documentation of screening results was given to the resident’s primary care provider with request for an in-person visit. Follow up visits requested of the primary care provider included reviewing the depression screening results and assessing whether or not the patient has depression.

In order to accomplish this DNP project, all four cycles of the P.D.S.A. model were used to assess feasibility of implementing depression screening into the long-term care setting. As part of planning, the three questions mentioned previously “What are we trying to accomplish?” (NHS Institute for Innovation and Improvements, 2008), “How will we know that a change is an improvement?” and “What change can we make that will result in improvement?”(NHS Institute for Innovation and Improvements, 2008) were answered.

The first question, “What are we trying to accomplish” is answered simply by stating we are trying to improve depression screenings in long-term care patients. The second question, “How will we know that change is an improvement” is more complex
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and involves brainstorming questions such as “What is being done now? How is it being done? What are the major steps to change how things are being done? Who will be involved? What is currently being done well? What could be done better? and Who are the stakeholders?” (MDH, 2014). Presently, depression screenings are not being done at the long-term care facility chosen to participate in this project. Care of patients is being provided by trained caregivers and medication technicians. Patients have primary care providers who oversee their healthcare; some primary care providers come to the long-term care facility while others see the patient in their private practice office. To improve depression in the long-term care facility, depression screenings should be implemented.

The third question asked in the planning phase of the P.D.S.A model is “What change can we make that will result in improvement.” Screening patients as recommended by the American Geriatric Societies (AGS) could result in improved recognition of depressive symptoms in the long-term care patient. The AGS recommendation is to screen long-term care patients 2-4 weeks after admission into the facility with repeat screenings every six months (Brown, 2009).

Lastly, we need to identify who the stakeholders are. Internal stakeholders – or those in the project who would work directly with the depression screening program – include the patients, the supervisor, facility manager, and medication technician if they were trained to perform the screenings. External stakeholders, or those not directly working with the depression screening program but would be affected in some way, would include: the patient’s families and friends, and to some extended health care systems such as hospitals and skilled nursing facilities.
Implementation planning also included asking questions that look for barriers to implementation. The first barrier was getting consent from patients or from the individual who holds the power of attorney to conduct the screenings with the patient. To help with this perceived barrier a letter of permission to screen cognition and depression was obtained from patient’s legal power of attorney or the resident themselves if they were able to sign for consent. Those patients who did not have a designated power of attorney were presumed to represent themselves. If any patient who did not have a designated power of attorney had shown cognitive decline on the MMSE (18 or below), they were withdrawn from the study. The patient’s MMSE record was then given to the manager who was notified that a depression screening was not done at this time. The manager then filed the patient’s MMSE into their chart for the primary care provider to review.

A second perceived barrier was that health care providers and staff did not feel included as part of the implementation or did not accept the change. This barrier was addressed using two methods. First, a letter detailing the study purpose was given to administration, medication technician staff, patients, patient’s power of attorney, and provider affiliates of the long-term care facility [APPENDIX A]. Along with the letter, a brief in service was given via phone call or in person to further explain study purpose and answer any questions.

After barriers to implementation were identified and planning the study was complete, the second phase of the PDSA cycle began. The second phase in the PDSA cycle is the “Do” phase. A letter for permission to conduct the study was obtained from the long-term care facility to implement a depression screening program [APPENDIX B]. Patients of the long-term care facility able to participate in the project currently do not
have a depression screening recorded in their health records therefore, the depression screen collected as part of this project served as a baseline for each of the patients. In order to obtain the most accurate results from each screening it was important to determine the patient’s cognitive status prior to performing the depression screening.

Those patients identified with having severe cognitive impairment or a score of 18 or less on the MMSE were to be given the depression screening, Cornell Scale for Depression in Dementia (CSDD) (Alexopoulos, Abrams, Young & Shamoian, 1988). The CSDD screening is more sensitive to assessing depression in older adults with moderate to severe cognitive impairment while patients with mild to no cognitive impairment were given the Geriatric Depression scale (GDS) screening. The CSDD is specifically designed to screen older adults with moderate to severe cognitive impairments for depression (Kroner et al, 2006), and has a sensitivity and specificity of 93% and 97% (Milisen et al, 2006) respectively.

The Geriatric Depression Scale is considered the most valid, reliable, and used depression screening tool for the older population with mild to no cognitive impairment (Milisen, 2006). Research literature reports the short form GDS-15 to have a sensitivity of 80.5% (Marc et al, 2008) to 84.3% (Mitchell et al, 2010), and specificity of 73.8% (Mitchell et al, 2010) to 75.0% (Marc et al, 2008). Reliability for the GDS-15 was not calculated in this study because of the small sample size.

The cognitive assessment tool used prior to initial depression screening is the Folstein, Folstein, & McHughs (1975) Mini Mental State Examination (MMSE). This screening tool determined which patients would be given the CSDD rather than the GDS-15. Determination of which depression screen was given to each patient was based on the
MMSE interpretation of results which is as follows: no cognitive impairment or score of 23-30, mild to moderate cognitive impairment or score of 19-22, and severe cognitive impairment or score of 0-18 (Folstein, Folstein & McHughes, 1975). Patients who score an 18 or less on the MMSE, or have severe cognitive impairment were given the CSDD (Alexopoulos, Abrams, Young, & Shamoian, 1988; Brown 2009). Patients who score 1-30 on the MMSE, or have no cognitive impairment to mild/moderate cognitive impairment were given the geriatric depression scale-15 (GDS-15) screening (Brown, 2009). Patients that refuse to complete the MMSE would have been withdrawn from the project.

The “Act” phase is the third in the P.D.S.A model. The GDS-15 short form screening tool was used for initial depression screening and recommended to be used for follow up screenings to track treatment and symptom progress (Park, 2011). This long-term care facility utilizes a paper charting system for resident’s medical records, which are kept in individual three ring binders. Electronic medical record (EMR) systems are not used for provider progress notes or orders; therefore, the simplest method of ongoing screening and intervention is through a depression tracking and treatment (DTT) form [APPENDIX C]. The DTT form provided to the primary care provider allowed for documentation of any intervention utilized and easy recall of treatment for follow up visits.

Assessment results with the attached flow sheet were placed in the patient’s chart for convenience of tracking and treatment, along with the depression screening for both health care provider and caregiver staff. Patient’s primary care providers were notified the screenings were done and what the results were by the PI conducting the study through
the PCP notification letter [APPENDIX D] and phone call. Follow up screening visits were recommended to be done according to the AGS recommendations.

The GDS-15 form as a geriatric screening tool has shown to have an overall usefulness for assessing depression in older adults with a MMSE score of 10 or more (Conradsson et al, 2013). However, for the purpose of this project, the GDS-15 were given to patients with mild/moderate or no cognitive impairment as determined by the MMSE of score 19 or greater.

In the future, six month follow up screenings are recommended to be given by the medical technician after being trained on how to perform a cognitive and depression screening. Record keeping was suggested to be done through the Depression Tracking and Treatment (DTT) form [APPENDIX C] which the PI created for facility convenience. Primary care provider (PCP) notifications are suggested to be done with same process the PI utilized during the project. This process entailed a courtesy phone call notifying the PCP that the screening was done then documenting the MMSE, GDS-15 or CDSS results on the DTT form. The cognitive and depression screenings should then be filed into the patient’s chart. The CSDD will remain the screening tool for patients with severe cognitive impairment.

To prompt medical technicians a patient is due for a follow up depression screening, an example of a calendar flow sheet was provided by the PI [Appendix F]. This flow sheet uses a month to month format, making it easy for the medical technician to recognize when a patient is due for a depression screening; additionally, it allow the technician to document the primary care provider was notified of screening results.
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After notification, primary care providers were asked to review their patient’s depression screening on their next follow up visit. Two weeks after primary care providers are notified the MMSE and depression screenings were completed, a chart audit was done to assess whether the screening has been acknowledged and/or acted upon if needed. If no acknowledgement of the depression screening had occurred after one week, a reminder call to the primary care provider was made. If the primary care provider assessed the screening results, a brief DTT feasibility survey was given to the PCP to evaluate their opinion of the DTT form [APPENDIX E]. Review of the implemented depression screening program was done two weeks after all depression screenings were completed. The screening process and provider feedback was discussed and any adjustments to the program were made as needed.

ETHICAL ISSUES

All participants in this depression screening were patients of the long-term care facility. Permission to perform depression screenings was obtained through informed consent. The patient’s designated power of attorney or the patient themselves, if cognitively able, signed the approved informed consent form prior to the project beginning. Identifying material was used for the purpose of communicating screening results with each patient’s primary care provider and for the purpose of data analysis. All identifying material was placed in each patient’s medical chart by the facilities manager. Patient participation was performed through completing a depression screening.

The benefit of this feasibility study was knowledge generation. Risks to the long-term care patients were possible cognitive strain, or emotional stress. Monitoring of the
data will be done as previously stated throughout the PDSA stages of the feasibility study. This project was approved by the Institutional Review board at the University of Arizona. This approval was accepted by the practice site.

**METHODS OF EVALUATION**

Evaluation of the primary care provider’s acknowledgement of the depression screenings results was done over the two weeks following the baseline assessment of depression and notification of the primary care provider (PCP). The first week of evaluation focused on collecting the data as it pertained to the PCP reviewing their patient’s depression screening results. Data was collected on whether or not the depression screening result prompted: (1) recognition of depression and/or (2) further evaluation or intervention by the primary care provider.

Patients whose PCP had not reviewed depression screening results by the first week follow up evaluation were given a courtesy reminder call by the PI conducting the study. The second week evaluation continued completion of the remaining data and responses of the PCP’s.

Within two weeks, the evaluation was predicted to have 50% of resident’s primary care providers having acknowledged the depression screening results. Informational data (MMSE, GDS-15 results) was collected on all patients who participated in the project and the number of providers who acknowledged the depression screening results.

Primary care providers were given a brief feasibility survey [APPENDIX E] which was used to analyze their perspective of the depression screening program and feasibility of the depression tracking and treatment flow sheet provided. The feasibility survey rated
the depression tracking and treatment flow sheet in the following areas: usefulness in identifying depression in long-term patients; ease of use; if the DTT form decreased time spent per patient; if they would like the DTT form to be used in the facility; if they felt the staff members; if trained, could perform the MMSE and Depression screenings for the patients; if after reviewing the results do they plan on implementing an intervention.

The feasibility survey asked for written response to questions regarding its strength, weaknesses, limitations, any changes that should be made to the depression tracking and treatment (DTT) flow sheet, and if they would have liked to see the DTT flow sheet implemented into routine practice.

Evaluation of the feasibility survey and analysis of the study was done in week four. It was anticipated a majority of primary care providers would appreciate the depression tracking and treatment form and consider it easy to use and a quick reference for assessing progress in a patient’s depression. The possibility of medication technicians not appreciating the added responsibility of performing the cognitive and depression screenings for each of the patients was also anticipated as an obstacle to implementation of the depression screening program. This is why the feasibility survey asked for input on whether or not the PCP’s felt any trained staff member could perform the MMSE and GDS-15, or CSDD.

**CONTENT ANALYSIS**

Quantitative methods were used to analyze the process and implementation of depression screening in the long-term care facility. Process analysis was done through study of the quantitative data obtained through the cognitive and depression screening and feasibility survey [APPENDIX E]. Initial data collection was done through screening patients for depression. Data
collected through the depression screening was obtained through depression screening scores. Percentages were taken on the number of patients who scored positive (n=3) for depressive symptoms (25%) verses the number who scored no depressive symptoms (n=9) on the screening (75%). Post implementation data was gathered through analysis of data from the number of primary care providers who acknowledged the depression screenings (n=2) and performed follow up visits with their patients to review the results (n=2). Other post implementation data was gathered through the feasibility survey that included questions regarding strengths, weaknesses, limitations, and intent for further use of the depression treatment and tracking (DTT) flow sheet.

RESULTS

This feasibility project had a small, convenience sample size of seventeen patients. One hundred percent (n=17) of patients were given the cognitive screening. The long-term care manager asked that the remaining 20 patients due to health, or family circumstances not be given the cognitive screening until the patient’s power of attorney were contacted. Of those patients given the cognitive screening, 70% (n=12) were screened for depression (Figure 2). Three (n = 25%) of the 12 patients were found to have a score of five or greater on the GDS-15 suggesting symptoms for depression and warrants further comprehensive assessment. The 25% found to have depressive symptoms on the GDS-15 screening is significantly less than the 63% of long-term patients reported to have depressive symptoms in the literature (Park, 2011; Adams, 2010; Conradsson, 2013; McCormack, 2011).
The four patients given the cognitive screen and not depression screen scored lower than 18 on the Mini Status Mental Examination (MMSE) and were therefore excluded from the project until consent to screen for depression was received by their power of attorney. Unfortunately, consents to screen these four patients for depression were not received throughout the course of the project; therefore, the patient’s MMSE was placed in each of their medical charts by the manager for their primary care provider to review.

The Geriatric Depression Scale-15 was used for all 12 patients screened for depression. Table 1 documents the average GDS-15 score being 3.33, with a median result

Figure 2. Geriatric Depression Scale – 15 and Mini Mental Status Exam Patient Results.
of 3, and mode of 4. A result of five or greater on the GDS-15 is suggestive for depression (Milisen, 2006).

Table 1

<table>
<thead>
<tr>
<th>Item</th>
<th>Screenings</th>
<th>Total Number of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMSE</td>
<td>n=17</td>
<td>n = 17</td>
</tr>
<tr>
<td>GDS-15</td>
<td>n=12</td>
<td>n= 17</td>
</tr>
<tr>
<td>GDS-15</td>
<td>Mean 3.33</td>
<td>Range 0-7</td>
</tr>
</tbody>
</table>

The twelve patients screened for depression shared a total of five providers; two nurse practitioners and three physicians. Each provider was contacted on two different occasions to notify them of the screening results and asked to complete the six-item feasibility survey. Two providers – both of whom were nurse practitioners – responded to the notification and completed the survey. This varied from the predicted outcome of having 50% of the patient’s primary care providers respond within two weeks of the screenings. This is possibly due to many of the providers only making monthly visits. One of the providers who responded had been in practice at this long-term facility three years, the other for two. The two providers who completed the DTT feasibility survey strongly agreed the DTT form was both helpful in documenting depression in long-term care patients and easy to use. This response suggests that implementing the DTT form would
IMPLEMENTATION OF A DEPRESSION SCREENING PROGRAM

improve recognition of depressive symptoms in the older adults, which was the initial study question for this project. Providers further stated they strongly agreed using the DTT decreased time spent per patient visit and they would like to see the DTT form used in this facility. Providers strongly agreed that if the DTT was implemented into practice they believed staff members, if trained, could perform the MMSE and Depression Screening for the patients. The last question on the DTT feasibility survey asked “If after reviewing the results of the depression screening, have you or do you plan on implementing an intervention.” This question had varied responses. One provider responded yes, and the other no. No rationale for their response to this question was given by either primary care provider, which did not assist in evaluating the second study question for this project: does improved recognition of depressive symptoms in the older adult prompt for further evaluation and treatment for the patient within two weeks of screening. It was also learned in this study that a two week time frame for providers to see their patients needed to be extended, as not all the primary care providers visit their patient’s on a weekly to bi-weekly basis.

DISCUSSION

SUMMARY

This feasibility project was done to determine if implementing a depression screening program into the long-term facility would improve recognition of depressive symptoms in long-term care patients. Lack of time was a barrier to obtaining consents to screen the patients for depression. It was learned early in the project that the long-term care manager appointed the facilities supervisor, who had a very busy schedule, to make initial contact with the powers of attorney so that the PI could follow up and obtain
IMPLEMENTATION OF A DEPRESSION SCREENING PROGRAM

consent. This failed to occur because the supervisor believed with her other duties she did not have the time to contact patient’s power of attorneys; therefore, the project resulted in a less than anticipated number of people consented to be screened.

The depression treatment and tracking form (DTT) was used in this project to help facilitate ease of documentation and communication with the patient’s primary care providers. The providers answered positively to the DTT when they completed the brief six-item Likert survey. Their responses indicated that a positive change could occur if the DTT became a routine part of the patient’s depression screening.

IMPLEMENTATION

In the future, six month follow up screenings are recommended to be given by the medical technician after they are instructed on how to perform the cognitive and depression screenings. Record keeping may be done through record tracking, which the PI conducting the study has created or through other means which the medication technician finds effective. Primary care provider notifications are to be done with same process the PI utilized during the project, which entailed a courtesy phone call notifying the PCP the screenings were done and documentation – MME followed up by GDS-15 or CDSS – will be in the patient’s chart. The CSDD will remain the screening tool for residents with severe cognitive impairment. Primary care providers will be reminded of follow up depression screening by medical technicians who are responsible for provider visits and medications. To prompt medical technicians a patient is due for a follow up depression screening, an example of a calendar flow sheet was provided by the PI. This flow sheet is done in a month to month format making it easy for the medical technician to recognize
when a patient is due for a depression screening, and documents the primary care provider was notified of screening results and that a follow up visit is needed.

**RELATION TO OTHER EVIDENCE**

Previous research has documented that primary care providers often misinterpret depressive symptoms in older adults (Coventry, 2011). Utilizing a method to systematically screen and track screening such as the developed DTT form did show that use of the screening and form would assist in the ease of recognizing depressive symptoms, documenting and communicating depression screening results to the primary care provider. The primary care provider can objectively determine if a patient needs further evaluation and treatment for their symptoms.

**STRENGTHS AND LIMITATIONS**

This study was done with a varied group of elderly adults in their place of living and is not generalizable beyond this facility. An additional limitation to this project was the sample size being small, as less than half the residents were not screened due to inability to obtain informed consent from the powers of attorneys, in addition to limited response by the primary care providers. However, the study could easily be replicated in other long-term care facilities.

**INTERPRETATION**

The two responses to the feasibility survey indicated the DTT form would be helpful to the primary care providers in monitoring patient’s depression screening results; however, due to the supervisor showing some dissatisfaction about contacting the patient’s power of attorneys, because it increased current work load, it is not anticipated
the depression screenings will continue beyond this project. A suggested solution would be to implement an institution policy change that would include obtaining written consent at the time of patient move-in allowing cognitive and depression screening to be performed. The lack of knowledge by the staff regarding depression and its negative consequences to older adults living in long-term care is a barrier consistent with current literature (Coventry, 2011; Park, 2011; Milisen, 2006); ongoing education about the negative effects of depression with this population and the importance of screening long-term care patients will be required.

Along with education, discussion with staff on the best method of implementing depression screenings and documenting the screenings on the DTT forms as recommended by the AGS would need to be included (Brown, 2009). This projects’ implications for practice supports current findings which state more education is needed in improving recognition of depressive symptoms in older adults (NIMH, 2014; Adams, 2010, Brown, 2009). Advanced practice nurses (APRN) can become leaders and assist in developing and implementing depression screening programs into the long-term care setting, thus improving recognition of depressive symptoms and the mental health of long-term care patients. This would support the APRN role of refining current health care practice while screening for depression to improve mental health outcomes and reducing overall healthcare cost.
CONCLUSION

Depression is a significant mental health concern in the long-term care population. Implementing a depression screening program through the use of the GDS-15 depression screening tool and a depression treatment and tracking form would assist staff with ease of documenting and communicating screening results to the patient’s primary care provider. The DTT form supports improved health outcomes for the long-term care patients by giving the primary care provider a quick and easy-to-use form they can evaluate for results, and determine if further evaluation and treatment is needed. Additional education of long-term care staff and management would be required to increase awareness of the problem of depression in the long-term care settings; additionally, educating staff on appropriately screening their patients would need to be performed. Suggestions for further studies would include (1) examine methods of performing the depression screenings without increasing caretaker work load, and (2) evaluate the decision making process of primary care providers to treat or not treat depressive symptoms of long-term care patients. Depression in long-term care patients continues to be a health concern and improving recognition of depressive symptoms in this population through screening is a first step to improving the mental health of these patients.
Dear Health Care Providers,

My name is Brooke Tanner. I am a doctoral student in the College of Nursing at the University of Arizona.

Currently, I am working on my Doctor of Nursing Practice project entitled “Improving Depression Screening in the Long-Term Care Setting.” This study is approved by the University of Arizona and IRB and its purpose is to improve detection of mental health issues of the residents of Beehive Home of Apache Junction through implementing a convenient and easy to use depression screening tool.

The American Geriatric Society recommends that all residents of long-term care facilities be screened for cognitive state and depression initially at 2-4 weeks after moving into the new residence, then every six months thereafter (Brown, 2009). For the purpose of this study, I will complete the initial screenings to assess the ease and convenience of the depression screening and tracking flow sheet, then recommend that the AGS recommendation of continual six month screenings be done by the nursing staff. All screening results will be placed into each resident’s medical chart. Assessment and interventions are encouraged to be documented on the depression screening and tracking flow sheet in an effort to monitor improvement or decline in the resident’s mental health.

I appreciate and thank you in advance for your help and feedback with this project.

Sincerely,

Brooke Tanner

References:


BEEHIVE HOME OF APACHE JUNCTION

1510 E. BROADWAY AVENUE

9/10/2014

Director:
Beehive Home of Apache Junction
1510 E. Broadway Avenue

Brooke Tanner
btanner@email.arizona.edu

Dear Brooke Tanner,

Beehive Home of Apache Junction is willing to participate in the research study “Implementation of a Depression Screening Program into Long Term Care.” We understand that Brooke Tanner will be meeting with our residents to perform cognitive and depressive screenings. Results of the screenings will be placed into the residents chart and each resident’s primary care provider will be notified that a cognitive and depression screen were done. Any concerns regarding the study will be given directly to the researcher. All suggestions will be written and discussed throughout the study to best accommodate our residents.

Sincerely,

[Signature]

Director:
Beehive Home of Apache Junction
Disclosure Statement

The purpose of this study is to improve recognition of depressive symptoms in older patients who reside in long-term care settings. As part of this research, I have screened long-term care patients for depression and have placed those results of their depression screening on the depression treatment and tracking form (DTT) which is now in the medical record that you are reviewing. For this study, we are asking you, as the primary care provider, to review this form and complete the survey that it attached and give the completed survey to Emily Lowe for me to collect at a later time. The purpose of this survey is to evaluate the usefulness of the DTT sheet. By completing this survey you are allowing your responses to be used as part of this research study.

Depression Screening Tracking and Treatment Flow Sheet

Visit Date:

Patients Name:

MMSE result:


GDS-15 /CSDD result:

GDS-15: >5 suggestive of depression and warrants a follow-up comprehensive assessment, ≥10 almost always indicative of depression.

CSDD: ≤6 normal, 7-17 probable major depression, ≥18 definite major depression.

Depression screen examiner signature:

Primary Care Provider signature:
Dear Health Care Provider,

A depression screening has been done on your patient ________________ who resides at Beehive Home of Apache Junction. The screening tool used was the Geriatric Depression Screen-15 or The Cornell Scale for Depression in Dementia. The chosen depression screen is based upon each patient’s mini mental status examination results. Results for your patient’s screen are on a Depression Tracking and Treatment flow sheet located in the patient's chart. We ask that you review the patient’s depression screening results at your next visit. If you have any questions please call Brooke Tanner at 480-888-5162.

Sincerely,

Brooke Tanner
Doctor of Nursing Practice Student
Disclosure Statement

The purpose of this study is to improve recognition of depressive symptoms in older patients who reside in long-term care settings. As part of this research, I have screened long-term care patients for depression and have placed those results of their depression screening on the depression treatment and tracking form (DTT) which is now in the medical record that you are reviewing. For this study, we are asking you, as the primary care provider, to review this form and complete the survey that it attached and give the completed survey to Emily Lowe for me to collect at a later time. The purpose of this survey is to evaluate the usefulness of the DTT sheet. By completing this survey you are allowing your responses to be used as part of this research study.

Likert Scale Feasibility Questionnaire. Please help evaluate the Depression Tracking and Treatment (DTT) flow sheet by answering the following questions:

What is your position at this long-term care facility? MD, DO, NP, PA. How long have you worked with patients at this facility?_______

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Disagree</th>
<th>Neither</th>
<th>Strongly Agree</th>
</tr>
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<tbody>
<tr>
<td>1. The DTT was helpful in documenting depression in long-term care patients</td>
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<td>2. The DTT was easy to use.</td>
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<td>3. Using the DTT decreased the time spent per patient visit.</td>
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<td>4. I would like to see the DTT form used in this facility.</td>
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<tr>
<td>5. If the DTT is implemented into practice I feel staff members, if trained, could perform the MMSE and Depression Screenings for the patients.</td>
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<tr>
<td>6. After reviewing the results of the depression screening, have you or do you plan on implementing an intervention?</td>
<td>Yes (please explain to what extent)</td>
<td></td>
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</table>
### DEPRESSION SCREENING FLOW SHEET CALENDAR: APRIL 2015

Residents documented on flow sheet are due for their MINI MENTAL STATUS EXAM and subsequent Depression Screening (Geriatric Depression Screen for MME ≥18, or Cornell Scale for Screening Depression in Dementia for MME ≤17).

<table>
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<tr>
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Resident: _____________________________ Provider notified: date/time ________________________
Resident: _____________________________ Provider notified: date/time ________________________
Resident: _____________________________ Provider notified: date/time ________________________
Resident: _____________________________ Provider notified: date/time ________________________
Resident: _____________________________ Provider notified: date/time ________________________
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