



University of Kentucky
UKnowledge

DNP Projects

College of Nursing


2015

Improving Depression Care for Older Home Health Patients

Sarah R. Schirmer

University of Kentucky, sarah.royse@gmail.com

Follow this and additional works at: https://uknowledge.uky.edu/dnp_etds

 Part of the [Clinical and Medical Social Work Commons](#), [Clinical Psychology Commons](#), [Community Health Commons](#), [Counseling Psychology Commons](#), [Family Practice Nursing Commons](#), [Geriatric Nursing Commons](#), [Nursing Administration Commons](#), [Other Mental and Social Health Commons](#), [Other Nursing Commons](#), [Other Psychology Commons](#), [Psychiatric and Mental Health Commons](#), [Psychiatric and Mental Health Nursing Commons](#), [Psychiatry Commons](#), [Public Health and Community Nursing Commons](#), and the [Social Work Commons](#)

[Right click to open a feedback form in a new tab to let us know how this document benefits you.](#)

Recommended Citation

Schirmer, Sarah R., "Improving Depression Care for Older Home Health Patients" (2015). *DNP Projects*. 44. https://uknowledge.uky.edu/dnp_etds/44

This Practice Inquiry Project is brought to you for free and open access by the College of Nursing at UKnowledge. It has been accepted for inclusion in DNP Projects by an authorized administrator of UKnowledge. For more information, please contact UKnowledge@lsv.uky.edu.

STUDENT AGREEMENT:

I represent that my DNP Project is my original work. Proper attribution has been given to all outside sources. I understand that I am solely responsible for obtaining any needed copyright permissions. I have obtained and attached hereto needed written permission statements(s) from the owner(s) of each third-party copyrighted matter to be included in my work, allowing electronic distribution (if such use is not permitted by the fair use doctrine).

I hereby grant to The University of Kentucky and its agents a royalty-free, non-exclusive and irrevocable license to archive and make accessible my work in whole or in part in all forms of media, now or hereafter known. I agree that the document mentioned above may be made available immediately for worldwide access unless a preapproved embargo applies. I also authorize that the bibliographic information of the document be accessible for harvesting and reuse by third-party discovery tools such as search engines and indexing services in order to maximize the online discoverability of the document. I retain all other ownership rights to the copyright of my work. I also retain the right to use in future works (such as articles or books) all or part of my work. I understand that I am free to register the copyright to my work.

REVIEW, APPROVAL AND ACCEPTANCE

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

Sarah R. Schirmer, Student

Dr. Peggy El-Mallakh, Advisor

Final DNP Project Report
Improving Depression Care for Older Home Health Patients

Sarah Royse Schirmer, M. Ed., BSN, LPCC, RN

University of Kentucky

College of Nursing

Spring 2015

Peggy El-Mallakh Ph.D., PMH APRN-BC – Committee Chair

Lillian Findlay, Ph.D., PMH APRN-BC – Committee Member

Martha Bruce, Ph.D., M.P.H – Committee Member Clinical Mentor

Dedication

In memory of Dad. Your love and support endure.

Acknowledgements

I would like to thank Dan Borraga and Mike Brents for sharing their home healthcare expertise and for providing agency support of this project. Working as a nurse for VNA Nazareth Home Care has been both professionally challenging and rewarding. I'm grateful to have been in the right place at the right time. Drs. Peggy El-Mallakh, Jan Findlay, and Martha Bruce—thank you for your guidance and encouragement all along the way.

Thank you to my colleagues and friends, Autumn, Holly, and Cheryl. You've helped to make these past four years enjoyable and, at times, tolerable. To my friends, old and new, who have encouraged me along the way—thank you.

I have been blessed with a strong and supportive family. Thank you to my in-laws, Chuck and Suzanne, for helping my family in various ways as both my husband and I have been in school.

I owe a special thank you to my parents, Keith and Jeanie, and brother Ben for setting me off in the right direction. From them I have learned tenacity and compassion—important traits for a nurse to have.

Finally, to my son Sam and husband Mark—thank you for being my motivation. Mark, I value your unending commitment to my goals. You are a phenomenal partner and friend.

Table of Contents

Acknowledgements	iii
List of Tables	v
List of Figures	vi
Capstone Report Introduction	1
Manuscript I	4
Manuscript I References	22
Manuscript II	27
Manuscript II References	43
Manuscript III	53
Manuscript III References	66
Capstone Report Conclusion	72
Appendix A	74
Appendix B	75
Appendix C	76
Capstone Report References	77

List of Tables

Table 1 – Coding of Process Indicators/Outcomes	47
Table 2 – Differences in sociodemographic characteristics pre and post-intervention.	48
Table 3 – Process Indicators	49
Table 4 – Process Outcomes	50
Table 5 – Protocol Non-adherence	51

List of Figures

Figure 1 – Percentage of Times Clinicians Properly Documented Non-adherence . . . 52

Capstone Report Introduction

Sarah Royse Schirmer, M. Ed., BSN, LPCC, RN

University of Kentucky

Introduction

The Centers for Disease Control (CDC, 2014) identifies depression as a serious medical illness that can negatively impact a person across all domains of life. Elderly adults, aged 65 and older, are at increased risk for depression because approximately 80% have at least one chronic health condition—depression is a common co-morbid mental disorder among people with ongoing, persistent illnesses (CDC, 2014). Older adults homebound with chronic health conditions use home healthcare (HH) services to help them and their caregivers manage their illnesses at home and prevent hospitalizations. Although depression in this population is associated with increased rates of re-hospitalization, falls, and suicides, it is frequently under diagnosed and under treated (Sheeran, Byers, & Bruce, 2010; Byers et al., 2008; Raue et al., 2006; CDC, 2014). While clinicians who provide care in the home are well positioned to identify depressive symptoms in their patients they must have agency and federal-level stakeholder support to reasonably meet the depression care needs of their patients.

This capstone report presents three manuscripts that explore the provision of depression care in the HH population. The first report is a literature review of 30 articles investigating depression screening and depression care in HH patients. Three main themes emerged from the research: the scope of the problem, depression screening tools, and depression care. Though many barriers hinder the recognition and treatment of depression in this population, training HH professionals and working with specialized mental health providers can improve depression screening and care.

The results of the literature review guided the development and implementation of a depressive disorder protocol in a HH agency designed to improve recognition of depression in HH patients and then facilitate connection to care. The second manuscript describes a process

evaluation of HH clinician fidelity of the protocol and other important process outcomes associated with implementation. This report concludes by identifying ways in which the Doctor of Nursing Practice prepared nurse can promote positive practice change in this area.

The final document is a policy position statement that examines the problem of under identified and under treated depression in HH and then identifies evidence-based interventions designed to improve depression care in this population. This report culminates with recommendations for policy change that will encourage and support HH agencies and clinicians who chose to provide holistic chronic care management by adopting innovative depression care models.

Depression Screening and Care in Home Health: A Review of the Literature

Sarah Royse Schirmer, M. Ed., BSN, LPCC, RN

University of Kentucky

Depression Screening and Care in Home Health: A Review of the Literature

Each day approximately 1.5 million Americans receive home healthcare (HH) from greater than 33,000 providers (National Association for Home Care and Hospice, 2010). HH agencies provide health and social services to chronically ill, homebound older adults who need intermittent skilled nursing care and/or physical, occupational, or speech-language therapies with the goal of improving the patient and caregiver's ability to manage illness at home (U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, 2014). Most HH patients are over the age of 65 and the majority of them carry a chronic health diagnosis (Caffrey, Sengupta, Moss, Harris-Kojetin, & Valverde, 2011). In a report released by the Centers for Disease Control (CDC) in 2011, diabetes (10.1%), heart disease (8.8%), congestive heart failure (4.3%), malignant neoplasm (3.9%), chronic obstructive pulmonary disease (3.4%), hypertension (3.4%), and stroke (3.3%) were the most common HH admission diagnoses. Furthermore, these patients commonly suffered from significant functional impairment (84%), falls, and lack of caregiver involvement (Caffrey et al., 2011).

These ongoing physical and functional stressors place HH patients at risk for depression, a mental health disorder characterized by anhedonia (inability to experience pleasure), lack of energy, and feelings of sadness, hopelessness, and helplessness (Pickett, Raue, & Bruce, 2012; Shao, Peng, Bruce, & Bao, 2011; American Psychiatric Association, 2013). Significant rates of comorbid depression have been identified in patients with conditions such as diabetes, heart failure, and fall risk (Acee, 2014; Mantysekla et al., 2011; Thomas et al., 2008; Byers et al., 2008). Furthermore, depression increases HH patients' risk for re-hospitalization, poorer quality of life, and suicidal ideation (Sheeran, Byers, & Bruce, 2010; Raue, Meyers, Rowe, Heo, & Bruce, 2006; Diefenbach, Tolin, & Gilliam, 2011).

In 2010, Qui et al. summarized the risk factors attributable to older adults becoming and remaining homebound, reporting that patients in need of HH “suffer from physical and psychiatric illnesses at a much higher rate than non-homebound adults” (p. 2423). Additionally, depression is reported to be the second most prevalent psychiatric illness among HH patients (Qui et al., 2010). The following review will examine trends in screening for depression in HH, then analyze evidence regarding the use of standardized screening tools, clinician training, and agency protocols to facilitate the identification and treatment of depression in HH patients.

Methods

Literature Review

A review of the literature was conducted using the following electronic databases from the University of Kentucky Medical Center Library: CINAHL, MEDLINE, PubMed, TRIP, and PsycINFO. Google and Google Scholar were also used to search for evidence regarding depression screening in the HH population. The following search terms were used to find relevant literature: home care, home healthcare, aging/older adults, elderly, screen, detect, identify, recognize, consequences, chronic illness, diabetes, congestive heart failure, cancer, comorbidity, mental illness, mood disorder, depression, major depressive disorder, exacerbation, importance, health outcomes, improve, enhance, develop, elevate, advance, risk (factors), contributing (factors), rates, statistics, Medicare, and Centers for Medicare and Medicaid (CMS). Ancestry searching was also used to find relevant literature. Unpublished studies were not examined. Articles were reviewed considering inclusion and exclusion criteria.

Inclusion/Exclusion Criteria

The analyzed evidence included systematic and integrative literature reviews, randomized and nonrandomized experimental studies, and non-experimental studies. Articles that focused on

prevalence, barriers to screening, improving screening, depression care management, and depression treatment outcomes in HH were included. Articles published before 2000 and research studies conducted in other countries were excluded from this review to ensure relevance to the current HH system in the United States. Research involving the pediatric population was also excluded, as the elderly are the focus of this review. Literature describing screening for depression involving patients with severe dementia was not included because standard depression screening tools were not normed for cognitively impaired patients and, therefore, were not reliable tools for use with this population (Sheeran, Reilly, Weinberger, Bruce, & Pomerantz, 2010). Only in the past fifteen years has depression in HH been of focus in the literature. As a result, articles from as early as 2002 were included.

The initial search yielded 35 articles, which were narrowed to 30 after removal of five not specific to the HH population. Of the 30 articles, four were randomized controlled trials, five were nonrandomized controlled trials, seven were observational clinical studies, three were policy briefs, five were clinical intervention descriptions, five were literature reviews, and one was a qualitative study.

Results

The search produced articles with varying perspectives on depression screening in HH. The following themes were discovered in analysis of the resulting literature: scope of the problem, depression screening tools, and depression care models. These themes will be reviewed as they relate to trends in depression screening. Finally, a discussion will incorporate literature found regarding the importance of engaging stakeholders in depression screening and treatment programs in HH.

Scope of the Problem

Rates of depression. Using the Structured Clinical Interview for DSM-IV-Depression, Bruce et al. (2002) interviewed 539 HH patients and determined that 13.5 % met DSM-IV criteria for major depression and 10.8 for minor depression. Nine years later, Shao, Peng, Bruce, and Bao (2011) analyzed data from the 2007 National Home and Hospice Care Survey and found that according to physicians and home health care agencies, 6.4% of the home care population met criteria for depression. Gellis (2010) reported a 5.7% prevalence rate of major depression symptoms in his sample and a 16.4% prevalence rate of sub threshold depressive disorder. This discrepancy (Shao et al., 2011) has raised concerns that depression is under-recognized and under-treated in patients receiving HH (Brown, Kaiser, & Gellis, 2007).

Untreated depression. Rates of clinically significant depression in HH patients have been described to be as low as 8.5% and as high as 25% (Ell et al., 2007; Bruce et al., 2002). Bruce et al. (2002) stated that just as there are concerns that depression often goes undetected in this population, there is evidence to suggest that it is also substantially undertreated. Of 73 HH patients who met the criteria for major depression, only 16 (22%) were being treated with antidepressants and none were involved with counseling or psychotherapy (Bruce et al., 2002). Furthermore, five (31%) of the 16 patients taking antidepressants were not taking therapeutic doses and two reported not taking the medication as directed (Bruce et al., 2002). Adequate depression screening can be an important first step in connecting depressed HH patients to effective care measures.

HH patients who are depressed, not effectively treated, and continue to meet criteria for depressive disorders have increased short-term risk of hospitalization (Sheeran, Byers, & Bruce, 2010) and high rates of suicidal ideation (11.7%; Raue et al., 2006) soon after starting home care

services. Anecdotally, symptoms of depression can also hinder and decrease patient engagement in treatment with physical and occupational therapies intended to improve functional status (Acee, 2014). These examples highlight the importance of establishing adequate depression-screening protocols that will quickly link HH patients to depression care interventions soon after admission to HH.

Barriers to effective depression screening and care. Many barriers prohibit effective depression screening in HH. Patient factors such as stigmatization and poor acceptance of mental illness, especially in older adults, can result in underreporting of depressive symptoms (Brown, Kaiser, & Gellis, 2007; Valente, 2005). Racial disparities in the identification and effective treatment of depression have also been noted—older African-Americans are less likely to be screened for depression compared to Caucasians (Pickett, Raue, & Bruce, 2012).

Clinician factors can also contribute to poor depression screening and care. Studies indicate that nurses and other HH clinicians report receiving inadequate training on how to screen for depression (Brown, Kaiser, & Gellis, 2007; Brown et al., 2010; Bruce et al., 2007; Liebel & Powers, 2013; Valente, 2005). In a qualitative study of nurses' perceptions of depression care management researchers found that subjects were more comfortable managing physical illness and less confident in their ability to provide accurate depression psychoeducation and care (Liebel & Powers, 2013). Also, treating comorbid chronic illness can be time-consuming. HH clinicians may already feel overextended and perceive depression screening as just another task they must complete, resulting in ineffective use of the tools (Valente, 2005). The misperception that depression is a normal part of aging and the masking of depressive symptoms by physical/medical illnesses can also prevent effective depression screening and connection to care (Valente, 2005). Interestingly, clinicians appear to have less confidence in

their ability to identify and manage depression compared to other chronic illnesses commonly found in HH patients (Brown et al., 2010, Liebel & Powers, 2013), especially if they are not aware of how to connect their patients with appropriate depression care resources (Liebel & Powers, 2013).

Medicare policies regulating HH practice and reimbursement also appear to present unfortunate limitations. Bao, Eggman, Richardson, and Bruce (2014) reported on a qualitative study of interviews with nurses and administrators from five HH agencies in which their perspectives on the feasibility of providing effective and evidence-based depression care were analyzed. Results indicated that the way HH agencies were paid did not align with providing quality depression screening and care. The prospective payment system (PPS) pays HH agencies a fixed, lump sum based on patients' diagnosis group. Nurses are held to productivity requirements, usually requiring them to see six to eight patients daily. In the study screening and treating depression required a great deal of time for some patients. However, the payment system and productivity requirements remained the same whether the nurse just completes tasks or if he or she spends adequate time carefully assessing and providing quality care. While some nurses reported wanting to spend more time with complex, depressed patients they reported feeling pressured by productivity requirements to quickly rather than thoroughly complete depression care tasks (Bao, Eggman, Richardson, & Bruce, 2014).

Clinicians are required to complete the Outcomes Assessment and Information Set (OASIS-C), which is a series of questions used to report functional and clinical data on each patient and determine appropriate service utilization. This information is also used to determine how much the HH agency will be paid for the patient's care each 60-day episode. Responses on

this form are completed in full at start of care (SOC) and resumption of care (ROC), while reduced versions are completed at recertification and discharge.

Until the past decade, there has been a lack of importance placed on depression screening and intervention in HH at the policy and regulatory levels. Historically, CMS and the Medicare Home Health Benefit have neither regulated, mandated, nor offered any financial incentives for implementing evidence-based depression screening and care with HH patients (Cabin, 2010). Although there have been important changes made to the required OASIS assessments and required documentation, clinicians still report feeling unsupported by Medicare policy (Bao et al., 2014). As Bao et al. (2014) report, “Medicare’s homebound and skilled need eligibility requirements, inclusion of depression assessment only in the start of care (SOC) OASIS but not at other time points, and lack of minimum standards for vendor developed home health electronic health records (EHR) to support depression care are at odds with evidence-based depression care and the chronic nature of depression” (p. 908).

Depression Screening Tools

Depression screening in home healthcare. Over the past four years there have been significant changes to the way HH clinicians are prompted to screen for depression on the OASIS. Before 2010, clinicians admitting patients to HH used question M0590 on the OASIS, which was not a standardized tool and only measured one of the two “gateway” symptoms of depression (Sheeran et al., 2010). Updated in 2010, the OASIS-C now includes item M1730, which asks clinicians if they have screened their patient for depression using the Patient Health Questionnaire-2 (PHQ-2) or another tool. This approach prompts the admitting clinician to screen for depression, provides the PHQ-2 for a quick two-question screen, and allows for other tools to be used if appropriate. Including an easy to use measure increases the likelihood that

overwhelmed HH clinicians will take the time to screen their patients for depression (Cabin, 2010; Sheeran et al., 2010). Additionally, the PHQ-2 is now being used more frequently in primary care clinics. This enables HH clinicians to communicate about patients' depressive symptoms with primary care providers, increasing their ability to work together in the assessment and treatment of their elderly, homebound patients (Sheeran et al., 2010).

Including the PHQ-2 on the OASIS-C improves depression screening of HH patients by providing clinicians with a valid tool (Chunyu et al., 2007) that assesses both of the main symptoms of major depression: depressed mood and anhedonia (Sheeran et al., 2010). Chunyu et al. (2007) evaluated the PHQ-2's criterion validity against the diagnostic criteria for depression and construct validity with the six scales of the Medical Outcomes Study 12-item Short Form Questionnaire. At a score of two or greater, with a sensitivity of 100% and a specificity of 77% for major depressive disorder in older adults (Chunyu et al., 2007), this screening tool can help HH clinicians determine who may need further screening and intervention (Sheeran, et al., 2010).

While the PHQ-2 has been determined to be a valid and reliable screening tool in older adults, with a sensitivity of 77%, Chunyu (2007) recommended that a more in-depth tool be administered if the patient screens positive for depression. The Patient Health Questionnaire-9 (PHQ-9) is one such tool used to follow up positive screens on the PHQ-2. It has been found that routine depression screening of HH patients using the PHQ-9 is relatively easy to implement and can help to identify depression in this population (Ell et al., 2005; Ell et al., 2009). Bruce et al. (2011) recommend using the PHQ-9 because it is an "efficient, evidence based approach to quantifying depression severity and changes in severity over time" (p. 483). Like the PHQ-2, the PHQ-9 is commonly used in primary care, and can therefore be more easily discussed and

understood between clinicians than the previously used OASIS question (Bruce et al., 2011). As aforementioned, the HH clinician can opt to use a different depression screener. Madden-Barer et al. (2013) reported that the Geriatric Depression Scale (GDS), when used as part of a larger depression care management program, effectively screens for and measures symptom severity over time. Like the PHQ-9, the GDS is longer than the PHQ-2, with fifteen items (McCormack et al., 2011). The sensitivity and specificity are comparable to that of the PHQ-9 (Madden-Barer et al., 2013).

Furthermore, Gellis (2010) describes a depression-screening model HOME: Home Care and Mental Health for the Elderly. In this model, the eleven-item Center for Epidemiological Studies-Depression screening tool (CES-D) was completed at SOC. However, in this study it was found that depression severity was inaccurately assessed using the CES-D. Importantly, this was thought not attributable to the properties of the standardized screening tool, but to be more a function of patient underreporting of symptoms, lack of rapport with the clinician, and clinician attempts to reduce the number of false positive referrals to the depression care program (Gellis, 2010).

In sum, while the PHQ-2 is a simple, 2-question tool that improves the likelihood that HH clinicians will actually screen their patients for depression, its questionable reliability and sensitivity warrant a more thorough investigation of depressive symptoms. The PHQ-9, GDS, and CES-D can be confidently used to follow-up positive screens of the PHQ-2. Furthermore, none of the previously mentioned tools should be used in isolation to make a diagnosis of depression by a qualified health professional.

Training to improve depression screening. Evidence suggests that training clinicians to screen for depression can improve their ability to effectively complete the task (Brown et al.,

2010; Bruce et al., 2007). Both Gellis (2010) and Bruce et al. (2007) trained agency clinicians on depression screening and the protocols for depression care referrals. Educators used strategies such as didactic instruction on depression screening, tool kits on the measurement tools, video, role-playing, and behavior rehearsal with case examples.

In addition, agencies benefit from working with specialized mental health professionals when developing and implementing these training protocols (Gellis, 2010; Madden-Baer et al., 2013). A key component of Gellis' (2010) training for the HOME program was the use of a specialized, interdisciplinary team consisting of social workers, a mental health therapist, PhD-level geriatric depression specialist, and a nurse supervisor. This team worked together to develop and disseminate the depression-screening training throughout the agency. The study compared trained clinician scores of depression on the CES-D to researchers' scores on the Structured Clinical Interview for Diagnostic and Statistical Manual-IV (SCID-IV). There was a fair to moderate agreement between researcher and trained-nurse ratings of depression (Gellis, 2010).

Similarly, the Training In the Assessment of Depression (TRIAD) intervention was developed through collaboration between the involved agencies and researchers to avoid "increasing nurse burden, devaluing nurses' clinical skills, or further stigmatizing depression" (Bruce et al., 2007, p. 1794). Bruce et al.'s (2007) RCT compared trained nurses' assessment of depression using OASIS item M0590 (OASIS item used to screen for depression before changes in 2010) to researchers' assessment of depression symptoms using the SCID-IV. There was no significant difference in depression ratings between groups and, furthermore, trained nurses assessments led to appropriate referrals for depression care treatment (Bruce et al., 2007).

Madden-Baer et al. (2013) used a team of “specialty-trained psychiatric home care nurses” (p. 34) to screen for depression in their large HH agency. Psychiatric mental-health nurses have specific education and/or clinical experience in the field of mental health beyond what is required of a traditional registered nurse. CMS dictates the requirements needed for a mental health nurse (MHN) to become Medicare-certified. These requirements vary depending on the education level and years of clinical experience in psychiatric and mental health nursing, but must be met in order for the care provided by the mental health nurse to be reimbursable through Medicare (Thobaben, 2013).

The authors (Madden-Baer et al., 2013) conducted a retrospective chart review from September 2010 to September 2011 to determine if an evidence-based depression care management (DCM) protocol can be implemented in a financially, operationally, and clinically feasible manner at the Visiting Nurse Service of New York. The MHNs used the GDS to screen for depression and used cognitive-behavioral therapy (CBT) techniques to assist patients with goal setting and exploring negative thoughts and feelings. The MHNs also provided medication monitoring and psychoeducation. Additionally, psychiatrists and psychiatric nurse practitioners provided home-based evaluations and consultations including recommendations for medications that were communicated to primary care providers. In this case, using specialty mental health nurses led to accurate screening and improved access to depression care, reducing patients’ symptoms of depression. This highlights the need for including specialized training, education, and/or experience with depression screening—it is not sufficient to simply include a depression screener in an admission protocol. Clinicians must be familiar with the tool and the mental health disorder as it presents in elderly, homebound patients.

Therefore, Sheeran et al. (2010) provided an in-depth review of the history of depression screening included on the OASIS and described the rationale for including the PHQ-2 on the tool. This descriptive review reads as a training guideline educators can use to orient HH clinicians to depression screening. Sheeran et al. (2010) highlight the need to describe major depression and screening and treatment barriers in the HH population. Also, the PHQ-2 should be thoroughly understood by HH clinicians as should methods for discussing depression treatment with patients and making appropriate referrals for care (Sheeran et al., 2010).

Screening as Part of Larger Depression Care Models

The U.S. Preventative Services Task Force (USPSTF, 2012) provides screening recommendations for adults; however, these are not specific to geriatrics or HH. The recommendations state that routine screening for depression is suggested only if there are proper supports in place to ensure accurate diagnosis, treatment, and follow-up. Evidence suggests that providing depression care management in the home can alleviate depressive symptoms in homebound adults (Cabin, 2010; Ell et al., 2007; Madden-Baer et al., 2013). For that reason, the Community Preventative Services Task Force (2014) recommends depression care at home when indicated.

Over the past decade innovative depression care programs have been developed to meet this need. Accurate depression screening must precede depression treatment and, therefore, is included in all of these programs. Results of the depression screening should guide clinicians as they determine if patients are appropriate for depression care programming (Bruce et al., 2011a; Bruce et al., 2011b; Ell et al., 2005; Ell et al., 2007; Gellis, 2010; Gellis, Kenaley, & Have, 2014; Madden-Baer et al., 2013). These programs vary in terms of the screening tools and treatment modalities used as well as in the mental health professionals available for consultation and

collaboration. Depression care models such as I-TEAM (Gellis, Kenaley, & Have, 2014), HOME (Gellis, 2010), Visiting Nurse Service of New York's Behavior Health Program (Madden-Baer et al., 2013), and Homecare to Overcome Problems of Elders with Depression (HOPE-D; Ell et al., 2005; Ell et al., 2007) were developed with the available resources and infrastructure already in place within their respective HH agencies and surrounding communities.

The HOPE-D (Ell et al., 2007) intervention was designed to improve quality of depression care to HH patients by including routine depression screening using the PHQ-9 and collaborative care elements such as using a depression care manager and psychiatric prescriber, outcome measurement, and algorithm-based care similar to that used in the IMPACT outpatient intervention (Untzer, Harbin, & Schoenbaum, 2013). Patients who did not receive the intervention did receive enhanced care as usual, which was provided by nurses newly trained on depression screening and care techniques (Ell et al., 2007). While depression scores of patients who received care in the intervention group were consistently better, the differences did not reach statistical significance. Researchers believe training the entire nursing staff on depression management and implementing new techniques in both groups enhanced nursing care regardless of whether or not the algorithm was used. Of most significance, this study demonstrated that training staff and implementing depression care is feasible and can improve depressive symptoms (Ell et al., 2007).

Bruce et al. (2011a) and Bruce et al. (2011b) developed CAREPATH as a result of their 2007 trial (Bruce et al., 2007) evaluating the impact of depression screening training on depression evaluation and referral skills. Built around the use of the PHQ-2 imbedded in the OASIS-C, they provide a detailed guide for developing depression care programs in Medicare-certified HH agencies. The authors emphasize that program developers must be cognizant of

policies and procedures that are unique to each agency and encourage developers to consider ways in which the HH infrastructure must support the program (Bruce et al., 2011a). For instance, CAREPATH's guidelines for case coordination are adaptive depending upon the resources available to the HH. As the authors pointed out, "Typically these guidelines require clinicians to contact the patient's physician, although agencies with psychiatric nurses, clinically trained social workers, or access to other mental health specialists may designate these clinicians as the initial point of contact." (Bruce et al., 2011b, p. 484).

Researches launched a large-scale, randomized trial involving six agencies to determine if patients who receive the CAREPATH intervention show greater improvements in depression scores compared to patients who receive usual care as determined by each individual agency (Bruce et al., 2015). Patients who scored 3 or greater on the PHQ-2 were eligible for randomization to either group. The CAREPATH intervention provided clinicians with a clinical protocol and agency support for depression care. CAREPATH encourages agencies to train all nurses to deliver depression care management if indicated with patient scores 3 or greater on the PHQ-2. The protocol directs nurses to further assess depression using the PHQ-9 to focus resources on patients who have the greatest need for depression care. Investigators used the Hamilton Scale for Depression (HAM-D) to measure the intervention. The results showed that, while in the full sample the intervention had no effect, patients with severe depression who participated in CAREPATH had lower depression scores compared to similar patients who received usual depression care.

Using their agency's available resources, Gellis, Kenaley, and Have (2014) developed an innovative telehealth model known as I-TEAM for depression care provided to HH patients—the only use of telehealth in the literature reviewed. The PHQ-2 was used to screen for depression in

a moderately large (9,000 patients annually) HH agency. Patients who scored three or greater were included in this study and were randomly assigned to either care as usual or the treatment group. The intervention consisted of remote assessment and treatment of chronic illnesses such as congestive heart failure, alongside treatment of depression using a focused, problem-solving approach. Pre and post depression scores using the PHQ-9 and the Hamilton Depression Rating Scale were compared to a group of HH who scored 3 or greater on the PHQ-2 at admission, but received care as usual (psychoeducation, medication management, etc.). PHQ-9 and Hamilton Depression Rating Scale scores were 50% lower in the treatment (I-TEAM) group compared to those who received care as usual.

Overall, the literature reviewed pointed to the importance of adopting screening and treatment protocols that could make use of and work with existing resources as much as possible (Bruce et al., 2011b). While some additional policies and procedures may need to be implemented to promote safety and quality, successful depression care programming is careful to minimize financial and work burden to the agency and keep all stakeholders' goals in mind

Discussion

Over the past six years there have been some policy changes within the Centers for Medicare and Medicaid (CMS) that have improved HH clinician access to standardized screening tools for depression. However, several barriers to depression screening and care still exist in this setting. For instance, screening for depression is not mandatory (Cabin, 2010). Furthermore, while the PHQ-2 is included on the OASIS-C and it is recommended that a positive screen be followed-up with a more in-depth evaluation, CMS provides no guidance concerning the most appropriate instruments to use. This may result in difficulty comparing depression scores and program effectiveness across HH agencies.

The most striking barriers, however, are at the organizational and financial levels. While HH clinicians are prompted to screen for depression, there is no indication that scores will have any impact on Medicare payments (Bao et al., 2014; Cabin, 2010). HH companies, therefore, have been reluctant to spend time and money on programming that will have little to no apparent financial benefit.

According to this review of the literature, DCM protocols that include depression screening have been developed but are sparsely implemented in HH agencies throughout the country. Presumably this is because of the lack of support from CMS and the home health benefit in leveraging agency resources to address depression in this population. Future research, then, should focus on describing the cost-effectiveness of implementing depression care management protocols in agencies across the country in a variety of settings and communities. Researchers should focus on combining recommendations for evidence-based depression screening and practice in the home with ways to make this programming financially feasible. This way, HH agencies will be more likely to embrace existing protocols. Researchers may want to focus on highlighting how addressing depressive symptoms early on in the HH admission may cut down on costly re-hospitalizations, falls, and hip fractures, for example. Overall, this body of research would be enhanced with the addition of more rigorous examples of depression care protocols implemented in clinically and cost-effective ways.

Conclusions

Due to the HH population's high risk for depression, screening and care management interventions for depression are recommended. Changes to the OASIS-C assessment have improved clinician access to standardized screening; however, there is little financial benefit, nor other types of incentives, for HH agencies to promote DCM. Furthermore, there are also patient

and clinician barriers that make screening for depression among HH patients difficult. Future research should focus on examining not only the clinical benefit, but also the financial benefit of implementing such protocols. Depression care management protocols that include cost-saving ideas may help put this body of research into much needed action all over the country.

References

- Acee, A. (2014). Diabetes, depression, and OASIS-C. *Home Healthcare Nurse, 32*(6), 362-369.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Bao, Y., Eggman, A., Richardson, J., & Bruce, M. (2014). Misalignment between medicare policies and depression care in home health care: Home health provider perspectives. *Psychiatric Services, 65*(7), 905-910.
- Brown, E., Kaiser, R., & Gellis, Z. (2007). Screening and assessment of late-life depression in home healthcare: Issues and challenges. *Annals of Long-Term Care, 15*(10), 2-7.
- Brown, E., Raue, P., Roos, B., Sheeran, T., & Bruce, M. (2010). Training nursing staff to recognize depression in home healthcare. *Journal of the American Geriatrics Society, 58*, 122-128. doi: 10.1111/j.1532-5415.2009.02626.x.
- Bruce, M., Brown, E., Raue, P., Mlodzianowski, A., Meyers, B., Leon, A., . . . Nassisi, P. (2007). A randomized trial of depression assessment intervention in home health care. *Journal of the American Geriatrics Society, 55*, 1793-1800. doi: 10.1111/j.1532-5415.2007.01419.x.
- Bruce, M., McAvay, G., Raue, P., Brown, E., Meyers, B., Keohane, D., . . . Weber, C. (2002). Major depression in elderly home health care patients. *American Journal of Psychiatry, 159*(8), 1367-1374.
- Bruce, M. L., Raue, P. J., Reilly, C. F., Greenberg, M. S., Meyers, B. S., Banerjee, S. . . Leon, A. C. (2015). Clinical effectiveness of integrating depression care management into medicare home health: The depression CAREPATH randomized trial. *Journal of American Medical Association Internal Medicine, 175*(1), 55-64.
doi:10.1001/jamainternmed.2014.5835

- Bruce, M., Raue, P., Sheeran, T., Reilly, C., Pomerantz, J., Meyers, B., . . . Zukowski, D. (2011a). Depression care for patients at home: Depression CAREPATH: Home care depression care management protocol, part 2. *Home Healthcare Nurse, 29*(8), 480-489.
- Bruce, M., Sheeran, T., Raue, P., Reilly, C., Greenberg, R., Pomerantz, J., . . . Johnston, C. (2011b). Depression care for patients at home: Depression CAREPATH: Intervention development and implementation, part 1. *Home Healthcare Nurse, 29*(7), 417-426.
- Byers, A., Sheeran, T., Mlodzianowski, A., Meyers, B., Nassisi, P., & Bruce, M. (2008). Depression and risk for adverse falls in older home health care patients. *Research in Gerontological Nursing, 1*(4), 245-251.
- Cabin, W. (2010). Lifting the veil from depression: OASIS-C and evidence-based practice. *Home Health Care Management & Practice, 22*(3), 171-177.
doi:10.1177/1084822309348693
- Caffrey, C., Sengupta, M., Moss, A., Harris-Kojetin, L., & Valverde, R. (2011). Home health care and discharged hospice care patients: United States, 2000 and 2007. *National Health Statistics Reports, 38*, 1-28.
- Chunyu, L., Friedman, B., Conwell, Y., & Fiscella, K. (2007). Validity of the Patient Health Questionnaire 2 (PHQ-2) in identifying major depression in older people. *Journal of American Geriatrics Society, 55*(4), 596-602.
- Diefenbach, G., Tolin, D., & Gilliam, C. (2011). Impairments in life quality among clients in geriatric home care: Associations with depressive and anxiety symptoms. *Geriatric Psychiatry, 27*, 828-835.

- Ell, K., Unutzer, J., Aranda, M., Gibbs, N., Lee, P., & Xie, B. (2007). Managing depression in home health care: A randomized clinical trial. *Home Health Care Services Quarterly*, 26(3), 81-103.
- Ell, K., Unutzer, J., Aranda, M., Sanchez, K., & Lee, P. (2005). Routine PHQ-9 depression screening in home health care: Depression prevalence, clinical and treatment characteristics, and screening implementation. *Home Health Care Services Quarterly*, 24(4), 1-19.
- Gellis, Z. (2010). Depression screening in medically ill homecare elderly. *Best Practices in Mental Health*, 6(1), 1-16.
- Guide to Community Preventative Services. (2014). Interventions to reduce depression among older adults: Home-based depression care management. Retrieved from <http://www.thecommunityguide.org/mentalhealth/depression-home.html>.
- Liebel, D., & Powers, B. (2013). Home health care nurse perceptions of geriatric depression and disability care. *The Gerontologist*. 1-15. doi: 10.1093/geront/gnt125.
- Pickett, Y., Raue, P., & Bruce, M. (2012). Late-life depression in home healthcare. *Aging Health*, 8(3), 273-284. doi: 10.2217/ahe.12.28.
- Madden-Baer, R., McConnell, E., Rosati, R., Ronsenfeld, P., & Edison, I. (2013). Implementaion and evaluation of a depression care model for homebound elderly. *Journal of Nursing Care Quality*, 28(1), 33-42.
- Mantyselka, P., Korniloff, K., Saaristo, T., Koponen, H., Eriksson, J., Puolijoki, H., . . . Vanhala, M. (2011). Association of depressive symptoms with impaired glucose regulation, screen-detected, and previously known type 2 diabetes. *Diabetes Care*, 34(1), 71-76.

- National Association for Home Care & Hospice. (2010). *Basic Statistics About Home Care*. Retrieved from http://www.nahc.org/assets/1/7/10HC_Stats.pdf.
- Qiu, W., Dean, M., Liu, T., George, L., Gann, M., Cohen, J., & Bruce, M. (2010). Physical and mental health of homebound older adults: An overlooked population. *The American Geriatrics Society, 58*, 2423-2428.
- Raue, P., Meyers, B., Rowe, J., Heo, M., & Bruce, M. (2006). Suicidal ideation among elderly homecare patients. *International Journal of Geriatric Psychiatry, 22*, 32-37.
- Shao, H., Peng, T., Bruce, M., & Bao, Y. (2011). Diagnosed depression among medicare home health patients: National prevalence estimates and key characteristics. *Psychiatric Services, 62*(5), 538-540.
- Sheeran, T., Byers, A., & Bruce, M. (2010). Depression and increased short-term hospitalization risk among geriatric patients receiving home health care services.
- Sheeran, T., Reilly, C., Weinberger, M., Bruce, M., & Pomerantz, J. (2010). The PHQ-2 on OASIS-C: A new resource for identifying geriatric depression among home health patients. *Home Health Care Nurse, 28*(2), 92-102.
- Thobaben, M. (2013). Psychiatric home health care skilled nursing services. *Home Health Care Management & Practice, 25*(1), 32-34.
- Thomas, S., Chapa, D., Friedmann, E., Durden, C., Ross, A., Lee, M., & Lee, H. (2008). Depression in patients with heart failure: Prevalence, pathophysiological mechanisms, and treatment. *Critical Care Nurse, 28*(2), 40-55.
- Unutzer, J., Harbin, H., & Schoenbaum, M. (2013). The collaborative care model: an approach for integrating physical and mental health care in Medicaid health homes. Retrieved from

<http://www.medicaid.gov/State-Resource-Center/Medicaid-State-Technical-Assistance/Health-Homes-Technical-Assistance/Downloads/HH-IRC-Collaborative-5-13.pdf>.

U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services. (2014). Home health services. In *Your Medicare Services*. Retrieved from <http://www.medicare.gov/coverage/home-health-services.html>.

Valente, S. (2005). Detecting and evaluating depression among elderly patients in home health. *Home Health Care Management & Practice, 17*(2), 101-108.

Depression Screening Protocol in a Home Healthcare Agency:
A Process Evaluation

Sarah Royse Schirmer, M. Ed., BSN, LPCC, RN

University of Kentucky

Introduction

Homebound status, decreased functionality, and co-morbid chronic illnesses increase home healthcare (HH) patients' risk for depression; the diagnosis of a chronic disease raises the likelihood of a depressive disorder (Center for Disease Control and Prevention, CDC, 2012). Egede (2007) reported that the age-and-sex-adjusted odds ratio of having comorbid depression with any chronic disease is 2.6, meaning that the likelihood of having depression increases by 160% when an individual has a chronic illness. Elderly adults receiving HH experience depression at a disproportionately higher rate, with almost one third of home care patients meeting criteria for major depression (Pickett, Raue, & Bruce, 2012). Home healthcare patients over 65 years of age more commonly have a diagnosis of depression compared with their same-age peers in primary care (Bruce et al., 2002).

Depression correlates with poorer health outcomes and greater healthcare costs (Katon, 2011; Fulop, Strain, & Stettin, 2003). Depressive symptoms demonstrate a strong association with mortality in cancer and diabetes patients (Park, Katon, & Wolf, 2013) elevated rates of re-hospitalization following acute myocardial infarctions (Reese, Freeland, Steinmeyer, Rich, Rackley, & Carney, 2011), and greater use of medical resources in patients with congestive heart failure (Fulop, Strain, & Stettin, 2003). Despite the negative impact, depression often remains undetected and unaddressed in this population (Bruce et al., 2002; Brown, Kaiser, & Gellis, 2007).

Screening for Depression in the Home Care Population

Understanding the need to screen home health patients for depressive symptoms, in 2010 the Centers for Medicare and Medicaid Services (CMS) included the Patient Health

Questionnaire-2 (PHQ-2; Appendix A) on the Outcome and Assessment Information Set-Clinical (OASIS-C), an admission form required for all Medicare patients receiving HH. The PHQ-2, a standardized depression-screening tool, has proven reliable in detecting major depression in older adults (Chunyu, Friedman, Conwell, & Fiscella, 2007; Sheeran et al., 2010). The PHQ-2 consists of two questions (the first two questions of the Patient Health Questionnaire-9; PHQ-9), which assess the main symptoms of major depression: depressed mood and anhedonia (i.e., the inability to experience pleasure). Assessors ask patients to think about their mood over the previous two weeks and then answer the screening questions, indicating the frequency of the symptoms. PHQ-2 scores can range from 0-6; a cutoff score of three or greater has a sensitivity of 87% and a specificity of 78% for major depressive disorder (Sheeran et al., 2010). Therefore, researchers recommend that patients who score three or greater on the PHQ-2 should subsequently receive a more thorough evaluation (Bruce et al., 2011, Chunyu et al., 2007; Sheeran et al., 2010), such as the PHQ-9. This screening tool—readily available from CMS—allows for easy administration with HH patients and can help identify depression in this population (Ell, Unutzer, Aranda, Sanchez, & Lee, 2005; Ell et al., 2007).

Need for Training

While these tools are available in HH, many nurses say that they feel unprepared or inadequately trained to screen for depression (Brown, Kaiser, & Gellis, 2007; Brown, Raue, Boos, Sheeran, & Bruce, 2010; Bruce et al., 2007; Valente, 2005). Nurses report feeling uncomfortable asking the screening questions because of fear of what the patient might say and then not knowing what to do with the answers (Liebel & Powers, 2013). Providing nurses with depression care management training can resolve this problem (Bruce et al., 2015). Nurses

trained to screen for depression and to use agency-specific protocols for connecting patients to depression care show increased confidence in their ability to complete the screening (Brown et al., 2010). In addition, training improves nurses' abilities both to identify patients who would benefit from further evaluation and care, and to complete the referral process (Bruce et al., 2007). For patients who have moderate-to-severe depression, a nurse-led combination screening and care management model can significantly decrease depression scores (Bruce et al., 2015). Although examples of depression care programming exist (Bruce et al., 2015), the resources required to complete depression screening and care may deter overextended HH clinicians and financially minded administrators (Bao, Eggman, Richardson, & Bruce, 2014; Valente, 2005). As a result, agencies must look for ways to reinforce depression screening and to build depression care into their existing operational structure and budget (Bao et al., 2014).

Home Care Agency Background

In order to meet the depression care needs of its patients, a large HH agency in the Midwest developed and adopted a mental health program featuring a depressive disorder protocol. The agency has an average monthly census of approximately 2,386 patients and served 14,021 patients in 2014, approximately 61.5% of who receive Medicare (M. Brents, personal communication, March 2, 2015). Operating six branches and employing approximately 150 registered nurses and 90 therapists, this organization is the largest HH agency in the region (M. Brents, personal communication, March 2, 2015).

Prior to administration recognizing that the agency would benefit from formalized mental health programming, ten mental health nurses (MHN) managed the care of patients with mental illnesses across the service area. Mental health nurses working in home care "... have special training and/or experience beyond the standard curriculum required for a registered nurse (U.S

Department of Health and Human Services, 2011, p. 56). These specially trained nurses provide evaluation, psychotherapy, and education required of patients presenting with mental health problems or recent changes in psychiatric care (U.S Department of Health and Human Services, 2011). Before the development and implementation of the depressive disorder protocol the agency had unclear standards for screening and the referral process for connecting patients to a MHN. The newly designed depressive disorder protocol outlines specific steps for depression screening and guidelines for making a referral to a MHN within the agency for further evaluation and care (Appendix B). The purpose of this paper is to describe a process evaluation intended to measure clinician adherence to the depressive disorder protocol and other important process outcomes.

Process Evaluation

Objectives

The principal investigator (PI) conducted a process evaluation to assess HH clinician adherence (fidelity) to the depressive disorder protocol implemented at a HH agency during the summer of 2014. Process evaluations yield important information concerning whether or not program protocols and interventions were implemented as intended (Grembowski, 2001). Measurement of fidelity, one important process evaluation component, tells us how well clinicians adhere to intervention procedures according to the program design (Hodges & Videto, 2011).

The evaluation addressed the following questions: What is the level of HH clinician adherence to the program's depressive disorder protocol? Was there a difference in clinician screening and referral practices pre- versus post-program implementation? Agency leaders will use this information to determine how well the depressive disorder protocol is being followed and

to uncover significant barriers toward program implementation. Protocol adaptations will be made accordingly.

The process evaluation also investigated whether patients who have clinically significant PHQ-2 scores were more likely to be diagnosed with depression. An additional goal was to determine if a PHQ-2 score of ≥ 3 is associated with changes in psychopharmacology treatment approaches after program implementation. The researcher sought to know if agency training could be associated with the frequency of which patients are prescribed an antidepressant or benzodiazepine while receiving HH. A review of diagnoses will provide some indication of whether or not depression care programming is associated with changes in HH coding practices, which might indicate an increased awareness of depression in the agency and willingness to document it as a primary problem. A review of pharmacologic interventions will allow program developers to determine if depression care programming is associated with appropriate psychopharmacological treatment choices for depressed HH patients.

Methods

Study design

A descriptive, retrospective design was used to examine the research questions. A convenience sample was selected for participation in the study. The Medical Institutional Review Board approved all study procedures prior to conducting the study. Procedures for ensuring participant anonymity and confidentiality were followed throughout the duration of the study.

Sample. The study sample consisted of all HH patients admitted to the agency between April 1, 2014 through April 30, 2014 and September 1, 2014 through September 30, 2014. All patient admissions during these time periods were reviewed to identify patients who met

inclusion criteria. Inclusion criteria were: a HH patient aged 60 or older who had a Medicare health plan as their primary health insurance. The researcher obtained additional data only from patients who scored ≥ 3 on the PHQ-2 screener at admission, because these scores trigger further action according to the protocol (Appendix B). Exclusion criteria were documentation of severe cognitive impairments and non-English speakers because these factors prevent accurate administration of the PHQ-2 screener.

Study Procedures

Staff training. During the summer of 2014 all field clinicians who administer the OASIS-C admission (registered nurses and therapists) completed two, one-hour training sessions consisting of didactic instruction and case study review on depression screening for HH patients. A total of 250 staff members participated in the training. The training included the following content: Appropriate administration of the PHQ-2 (Appendix C); identification of patients who need further evaluation by a MHN, according to the depressive disorder protocol (Appendix B); how to make an in-house referral for a MHN for further evaluation. In addition to the agency-wide training, the MHNs received two, three-hour training sessions reviewing the mental health program. Approximately one hour of this training was spent reviewing and becoming familiar with the depressive disorder protocol and reviewing appropriate administration of the PHQ-2 and PHQ-9. Mental health nurses were also made aware of how other field clinicians would be prompted to refer for a MHN evaluation.

Data extraction. The PI collected data from the EMR at the following time points: April 1, 2014 through April 30, 2014 and September 1, 2014 through September 30, 2014. A total of 1,318 OASIS-C admissions were reviewed. These included 664 patients that were admitted between April 1, 2014 and April 30, 2014, and 654 that were admitted between September 1,

2014 And September 30, 2014. The researcher reviewed the EMR to obtain the following patient/admission information: age, race, sex, primary and secondary diagnoses, and medications. In addition, specific depression screening data were obtained, including presence of PHQ-2, PHQ-2 score, presence of MHN referral, reason for absence of a MHN referral in those with an indication, presence of PHQ-9, PHQ-9 score, and reason for absence of score in those with an indication. The PI extracted all data. The researcher reviewed the data taken from each patient admission located on the EMR and then coded (Table 1) and recorded it on the demographic collection (Appendix E) and study variables extraction forms (Appendix F).

A master list containing patient identifiers and an assigned ID acted as the only link between the data and the patient record. The researcher de-identified (except for the master list) and electronically saved the data on a password protected SPSS version 21 file on an encrypted, password protected thumb drive. All protected health information was accessed electronically and no printing or recording of protected health information occurred.

Data analysis. Means and standard deviations were used to measure characteristics of the study sample. Chi-square analysis with Yates' Continuity Correction was used to measure differences in the frequency of MHN referrals pre-and post training, and independent t-tests were used to measure differences in PHQ-2 scores pre-and post-intervention. In addition, Fisher's Exact Test was used to measure differences in the rates of PHQ-9 use pre-and post intervention. A p value of .05 was used for all analyses. All statistical analyses were conducted using SPSS version 21.

Results

Among the 1,318 admissions that had a documented PHQ-2 score, no significant differences appeared between the average PHQ-2 scores pre ($M=0.40$, $SD=1.09$) versus post

($M=0.42$, $SD=1.03$) training. In addition, 30 pre-training patient admissions in April, and 28 post-training admissions in September met criteria for further review (score of ≥ 3 on the PHQ-9). Statistical analyses revealed no significant differences in demographics (age, sex, and ethnicity) between the patients of whom the admissions were reviewed pre vs. post groups (Table 2). A comparison of the PHQ-2 scores for the pre and post groups who met inclusion criteria (Table 3) indicated that there were no significant differences between the scores for pre-intervention ($M=4.67$, $SD=1.028$) and post-intervention ($M=4.21$, $SD=0.995$; $t(58) = 1.70$, $p = 0.95$, two-tailed).

No significant difference was found between the frequencies of clinicians making MHN referral when indicated pre vs. post intervention, $\chi^2(1, n=58) = .079$, $p = .778$, (Table 3). The PHQ-9 was administered at a significantly higher rate in the post-intervention group ($p = .038$), but there was not a significantly higher average PHQ-9 score in the post-intervention group (pre: $M = 7.5$, $SD = 4.9$, post: $M = 15.75$, $SD = 4.7$), $t(1.5) = 1.126$, $p = .208$ (Table 3). There were no significant differences found between pre- and post-intervention groups with respect to having a primary or secondary mood diagnosis ($p = .905$) or being prescribed an antidepressant ($p = .80$) or benzodiazepine ($p = .72$) during the HH episode(s) of care (Table 4).

Clinicians documented a total of six reasons for not adhering to the depressive disorder protocol (Table 5). Two patients refused a MHN evaluation pre-intervention and one patient post. Documented reasons for not following up positive screens of the PHQ-2 with the PHQ-9 included, “GAD completed instead. Anxiety primary problem,” and “Geriatric depression scale used,” and “Not appropriate for patient presentation.” Overall reasons for not adhering to the depressive disorder protocol were not well documented in either group, with a slight worsening of percentages post-intervention (Figure 1).

Discussion

After clinician training on the use of a newly implemented depressive disorder protocol, clinicians increased use of PHQ-9 to follow up positive screens on the PHQ-2. The average post-intervention PHQ-9 score (17.75) was not significantly higher due to the small sample size, however; the pre-intervention average was substantially lower (7.5). This suggests that the likelihood of clinicians using the PHQ-9 increased when included in a formalized protocol and reviewed in training sessions. Clinicians may have been more comfortable asking the screening questions and recording the answers post-intervention. This may be because trained clinicians knew how to ask the questions and had programming available to help them decide how to make clinical decisions accordingly.

The idea that HH clinicians tend to be uncomfortable with depression screening, but that training can increase confidence, has been reported previously in the literature (Ell et al., 2005; Leibel & Powers, 2013; Brown et al., 2010). Ell et al. (2005) reported in their study of depression screening in HH that nurses expressed feeling uncomfortable asking highly emotional questions and tended to avoid or put off discussions of difficult topics that would have come up during the screening process. In a descriptive study of how HH nurses perceive depression management researchers found that some nurses believe they are unqualified to provide depression care alongside other chronic diseases (Leibel & Powers, 2013). Generalist-nurses relayed feeling self-conscious (afraid of saying the wrong thing) when asking depression-screening questions (Leibel & Powers, 2013). The authors (Leibel & Powers, 2013) reinforce that training and formalized agency support for depression screening and care management leads to increased clinician comfort with depression screening and care (Brown et al., 2010). In a randomized study of the effects of the Training in the Assessment of Depression (TRIAD)

program, researchers found that nurses who received training had significantly higher confidence in their ability to assess depressed mood (Brown et al., 2010).

An alternative interpretation of the PHQ-9 being administered more frequently post-implementation points to the role of the MHN as an important factor. The protocol urged clinicians to refer patients with elevated PHQ-2 scores (three or greater) to the MHN who would then further evaluate using the PHQ-9 and follow up with depression care. The specialized experience and training required of the MHNs may explain the increased rate of PHQ-9 administration. This factor was not controlled for and as a result complicates interpretation of this data point.

Clinicians referred patients with a PHQ-2 score of three or greater for a MHN evaluation at the same rate pre- and post-intervention. This result may be interpreted several ways. First, clinicians documented that a total of three patients refused the MHN evaluation when offered. Although, clinicians were trained to record a reason for not adhering to the protocol (to assist with program monitoring and modification) this was not routinely completed pre (13.3% completion) or post-training (8.3%). Thus, rates of referring to a MHN per the protocol are probably not accurately described and may actually be higher than the data suggests.

The lack of change in rate of referral may also be explained by patient factors. The stigma of mental illness continues to be a great barrier preventing many people from seeking care for treatable mental health conditions (Brown et al., 2007; Valente, 2005). Even if the MHN referral was offered it is possible that some patients refused because of the negative associations that go along with admitting depression. In other cases patients have established rapport and built trust with specific clinicians and so are reluctant to open up and tell their story again (Valente, 2005).

Clinician and agency dynamics may also play a role in the low referral rate post program implementation. Throughout the duration of agency-wide training, currently employed MHNs resigned, and newly hired MHNs began orientation. The PI conducted training and gathered the data during a time of transition on the mental health team. It takes time to train new nurses and prepare them for fieldwork; therefore staff coverage in some regions was light occasionally during the study. Anecdotally, some field clinicians indicated that it could take up to several weeks for a patient to be seen by a MHN. It is suspected that in a few cases the patients who scored greater than three on the PHQ-2 were not seen by a MHN because of staffing problems or because referring clinicians grew weary of the waiting and simply did not refer. However, the rationales for lack of referral were often not documented, and it is difficult to determine the impact of this factor on protocol adherence.

Among patients who scored three or greater on the PHQ-2 there were no significant differences in psychopharmacological treatment choices pre- versus post-implementation of the depressive disorder protocol. This could partially be explained by the nature of the intervention. The depressive disorder protocol used at this agency urged clinicians to screen and then refer patients to a MHN for further evaluation and treatment. Patients who were receiving care from a MHN were not clearly identified and this factor was not controlled for in the data analysis; therefore this outcome is difficult to measure.

There was also no difference in the frequency of being diagnosed with a mood disorder pre- versus post-implementation. It is probably true that this variable was measured too soon after implementation of the program and likely a better indicator of program impact on the agency coding and billing practices as well as Medicare reimbursement rules. Medicare home health conditions of participation and payment structure tend to emphasize physical health and

create barriers for administrators and clinicians who strive to make providing quality mental health care a priority (Bao et al., 2014; Cabin, 2010). Before design and implementation of the intervention agency leaders worked hard to justify the financial benefits of the mental health program and disprove fear that focusing clinician resources on depression and other mental illness would be financially untenable for the agency. While this evaluation was not concerned with the cost-effectiveness of providing depression care, future research should focus on this area so that HH leaders are assured that depression care models can be comfortably implemented in the home care setting while improving the health of their patients.

Limitations

Several limitations of the depressive disorder protocol process evaluation emerged and warrant mention. First, the descriptive design makes interpretation and generalization of the process evaluation results difficult. Secondly, the sample size was quite small because of the limited time frames from which the data was reviewed and the infrequency of patients meeting inclusion criteria. In charts of patients who did meet criteria for inclusion, the PI found data in various places within the EMR. Clinicians did not use the same areas of the EMR to document information regarding the depressive disorder protocol or non-adherence to the guidelines. In this case accuracy of data retrieval is challenged. Both of these limitations call into question the ability of the data to explain current practices and, thus, make it difficult to make informed recommendations.

Before future program monitoring efforts begin it is recommended that clinicians be notified of exact locations in the EMR where they are to document specific pieces of information about the depressive disorder protocol. Also, researchers are encouraged to utilize a time series approach over periods of months in lieu of a descriptive design so that threats to validity are

decreased and so that evaluation results are more clearly a reflection of the current state of practice (Linden, Adams, & Roberts, 2003).

The Doctor of Nursing Practice to Promote Positive Change

As the terminal practice degree in the field, the Doctor of Nursing Practice (DNP) prepares clinical nurse scholars to lead the dissemination of safe, quality, and innovative healthcare around the globe (Chism, 2010). With a firm understanding of how the evidence-base should inform and guide practice, the DNP is well positioned to improve how depression is addressed and treated in the elderly HH population. The DNP curricula cultivate competencies necessary for leadership and growth in all nursing specialties, including psychiatric/mental health care. Using the eight Essentials of Doctoral Education for Advanced Nursing Practice developed by the American Association of Colleges of Nursing, the DNP education prepares nurse leaders who understand the complexities of healthcare systems and who are also dedicated to continuous practice improvement at all stakeholder levels. These essentials help to explain how the DNP can be leveraged to promote positive practice change in this area (Chism, 2010).

DNP graduates are trained to use information technology to track program, financial, and clinical outcomes in order to evaluate and enhance practice (*Essential IV*; Chism, 2010). Before administrators endeavor to conduct future evaluations of the mental health program, steps should be taken to improve the agency's ability to use software and reports to monitor mental health program processes and clinical outcomes. First it is critical that clinicians are documenting information in the same place within the EMR. This agency uses a software package that encourages thoroughness of documentation, however; data collection can be time consuming and difficult if the data are not located in a predetermined location. One solution is to direct clinicians to create a case communication note with a heading "Mental Health" to communicate

their impressions, assessments, interventions, and referral suggestions as they pertain to the patient's mental health as well as the patient's response. This could involve a "cut and paste" of a clinical note or additional documentation of their concerns and recommendations.

Similarly, evaluations could be conducted more smoothly if quick reports could be generated. It is common within this agency to keep track of patient and clinician statistics with the simple click of a mouse and conjuring of a report. Patients who receive services from a MHN should be assigned to a mental health team and important clinical and financial outcomes should be defined in the treatment plan. This evaluation could have been more in depth if the PI had been able to generate a report of all the patients who scored three or greater on the PHQ-2. However, every patient admission (over 1,300) had to be opened and screened for the PHQ-2 score first. As a marker for depression and depressive disorder protocol use, it is recommended that administrators request that reports of patients who screen positive on the PHQ-2 be available through their software vendor(s).

Understanding the importance of using data to inform practice, the DNP prepared nurse uses scientific findings from a variety of sources to evaluate and further develop care delivery (*Essentials I, II, & III*; Chism, 2010). It is recommended in this case that this descriptive evaluation be followed up by a qualitative design investigating clinician perceptions of the usefulness and function of the mental health program and depressive disorder protocol. It is important to know from the people who see and care for these patients every day, "Is it working?" The agency may find common themes emerge that would identify areas for process and quality improvement.

Even with a fairly large mental health team this process evaluation indicated that some patients who have clinically significant depression scores were not seen by a MHN. It is not

reasonable for ten nurses to serve the depression care needs of 310 patients (13% of average monthly census—estimated population of HH patients who will meet criteria for clinically significant depression). One solution to problems with coverage and long wait times is to train *all* nurses to manage depression. Embracing more of a collaborative care model, the agency might choose to train all 150 nurses to manage depression like other chronic diseases. Doctoral-level prepared psychiatric/mental health nurses are trained to emphasize the importance of collaborative care among interdisciplinary teams and can provide specialized education on depression screening and care to skilled nurses and other HH personnel (*Essential VI*; Chism, 2010).

DNP clinicians examine healthcare policy at all stakeholder levels and create feasible solutions to increase access to quality healthcare (*Essential V*; Chism, 2010). As described, some existing HH policies do not support the provision of depression care in this population. The following manuscript considers this and offers suggestions for sensible policy changes at both federal and local levels.

References

- Bao, Y., Eggman, A., Richardson, J., & Bruce, M. (2014). Misalignment between medicare policies and depression care in home health care: Home health provider perspectives. *Psychiatric Services, 65*(7), 905-910.
- Brown, E., Kaiser, R. M., & Gellis, Z. D. (2007). Screening and assessment of late-life depression in home healthcare: issues and challenges. *Annals of Long-Term Care*. Retrieved from <http://www.annalsoflongtermcare.com/article/7853/page/0/3>
- Brown, E., Raue, P., Roos, B., Sheeran, T., & Bruce, M. (2010). Training nursing staff to recognize depression in home healthcare. *Journal of the American Geriatrics Society, 58*, 122-128. doi: 10.1111/j1532-5415.2009.02626.x.
- Bruce, M., Brown, E., Raue, P., Mlodzianowski, A., Meyers, B., Leon, A., . . . Nassisi, P. (2007). A randomized trial of depression assessment intervention in home health care. *Journal of the American Geriatrics Society, 55*, 1793-1800. doi:10.1111/j.1532-5415.2007.01419.x.
- Bruce, M. L., McAvay, G. J., Raue, P. J., Brown, E. L., Meyers, B. S., . . . Weber, C. (2002). Major depression in elderly home health care patients. *American Journal of Psychiatry, 159*, 1367-1374.
- Bruce, M., Raue, P., Reilly, C., Greenberg, R., Meyers, B., Banerjee, S. . . . Leon, A., (2014). Clinical effectiveness of integrating depression care management into Medicare home health. *The Journal of the American Medical Association*, doi:10.1001/jamainternmed.2014.5835.

- Centers for Disease Control and Prevention. (2012). Depression is not a normal part of growing older. *Healthy Aging*. Retrieved from <http://www.cdc.gov/aging/mentalhealth/depression.htm>.
- Chism, L. A. (2010). *The Doctor of Nursing Practice: A Guidebook for Role Development and Professional Issues*. Sudbury, MA: Jones and Bartlett.
- Chunyu, L., Friedman, B., Conwell, Y., & Fiscella, K. (2007). Validity of the Patient Health Questionnaire 2 (PHQ-2) in identifying major depression in older people. *Journal of American Geriatrics Society*, 55(4), 596-602.
- Egede, L. E. (2007). Major depression in individuals with chronic medical disorders: prevalence, correlates, and association with health resource utilization, lost productivity, and functional disability. *General Hospital Psychiatry*, 29(5), 409- 416.
- Ell, K., Unutzer, J., Aranda, M., Gibbs, N., Lee, P., & Xie, B. (2007). Managing depression in home health care: A randomized clinical trial. *Home Health Care Services Quarterly*, 26(3), 81-103.
- Ell, K., Unutzer, J., Aranda, M., Sanchez, K., & Lee, P. (2005). Routine PHQ-9 depression screening in home health care: Depression prevalence, clinical and treatment characteristics, and screening implementation. *Home Health Care Services Quarterly*, 24(4), 1-19.
- Fulop, G., Strain, J. J., & Stettin, G. (2003). Congestive heart failure and depression in older adults: clinical course and health services use 6 months after hospitalization. *Psychosomatics*, 44(5), 367-373.
- Grembowski, D., (2001). *The Practice of Health Program Evaluation*. Thousand Oaks, CA: Sage Publications.

- Hodges, B. C., & Videto, D. M. (2011). *Assessment and Planning in Health Programs*. Sudbury, MA: Jones & Bartlett Learning.
- Katon, W. J. (2011). Epidemiology and treatment of depression in patients with chronic medical illness. *Dialogues in Clinical Neuroscience, 13*(1), 7-23.
- Liebel, D., & Powers, B. (2013). Home health care nurse perceptions of geriatric depression and disability care. *The Gerontologist, 53*(1), 1-15. doi:10.1093/geront/gnt125.
- Linden, A., Adams, J. L., Roberts, N. (2004). Evaluating disease management program effectiveness adjusting for enrollment (tenure) and seasonality. *Research in Healthcare Financial Management, 9*(1), 57-68.
- Park, M., Katon, W. J., & Wolf, F. M. (2013). Depression and risk of mortality in individuals with diabetes: a meta-analysis and systematic review. *General Hospital Psychiatry, 35*(3), 217-225.
- Pickett, Y., Raue, P., & Bruce, M. (2012). Late-life depression in home healthcare. *Aging Health, 8*(3), 273-284.
- Reese, R. L., Freedland, K. E., Steinmeyer, B. C., Rich, M. W., Rackley, J. W., & Carney, R. M. (2012). Depression and rehospitalization following acute myocardial infarction. *Circulation: Cardiovascular Quality and Outcomes, 4*(6), 626-633.
- Sheeran, T., Reilly, C., Raue, P., Weinberger, M., Pomerantz, M. S., & Bruce, M. L. (2010). A new resource for identifying geriatric depression among home health patients. *Home Healthcare Nurse, 28*(2), 92-104.
- U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services. (2014). Home health services. In *Your Medicare Services*. Retrieved from

<http://www.medicare.gov/coverage/home-health-services.html>.

Valente, S. (2005). Detecting and evaluating depression among elderly patients in home health.

Home Health Care Management & Practice, 17(2), 101-108.

Table 1. Coding of Process Indicators/Outcomes

Process Indicator/Outcome	Chart Item Reviewed	Coding– Present/Not Present
Was PHQ-9 administered according to protocol?	PHQ-9 completed	1/0
Was a MHN referral made according to protocol?	MHN referred and completed evaluation. Reviewed orders, case communication notes, and visit tree.	1/0
Did patient have primary or secondary mood disorder diagnosis?	Home health diagnoses found on patient profile	1/0
Was patient prescribed an antidepressant during home health episode(s) of care?	Medication list	1/0
Was patient prescribed a benzodiazepine during home health episode(s) of care?	Medication list	1/0

Table 2. Differences in sociodemographic characteristics pre- and post-intervention

	Overall sample (N=58)	Pre (n=30)	Post (n=28)	<i>p-value*</i>
<i>Age, mean</i>	71.5	72.2	70.7	.78
<i>Female, n (%)</i>	41 (70.6)	20 (66.6)	21 (75)	.48
<i>Race/ethnicity, n (%)</i>	48 (82.7)	24 (80)	24 (85.7)	.76 ^τ
White, non-Hispanic				

**p*-values based on *t*-test or chi-square analysis

^τ White, non-Hispanic vs. others

Table 3. Process Indicators

	Overall sample (N=58)	Pre (n=30)	Post (n=28)	<i>p</i> -value*
<i>PHQ-2 score, mean</i>	4.44	4.67	4.21	.095
<i>PHQ-9, n (%)</i>	10 (17.2)	2 (6.6)	8 (28.6)	.038 ^τ
<i>PHQ-9 score, mean</i>	14.1	7.5	17.75	.06
<i>MHN referral, n (%)</i>	31 (53.4)	15 (50)	16 (57.1)	.61

**p*-values based on *t*-test or chi-square analysis

^τ fisher's exact test

Table 4. Process Outcomes

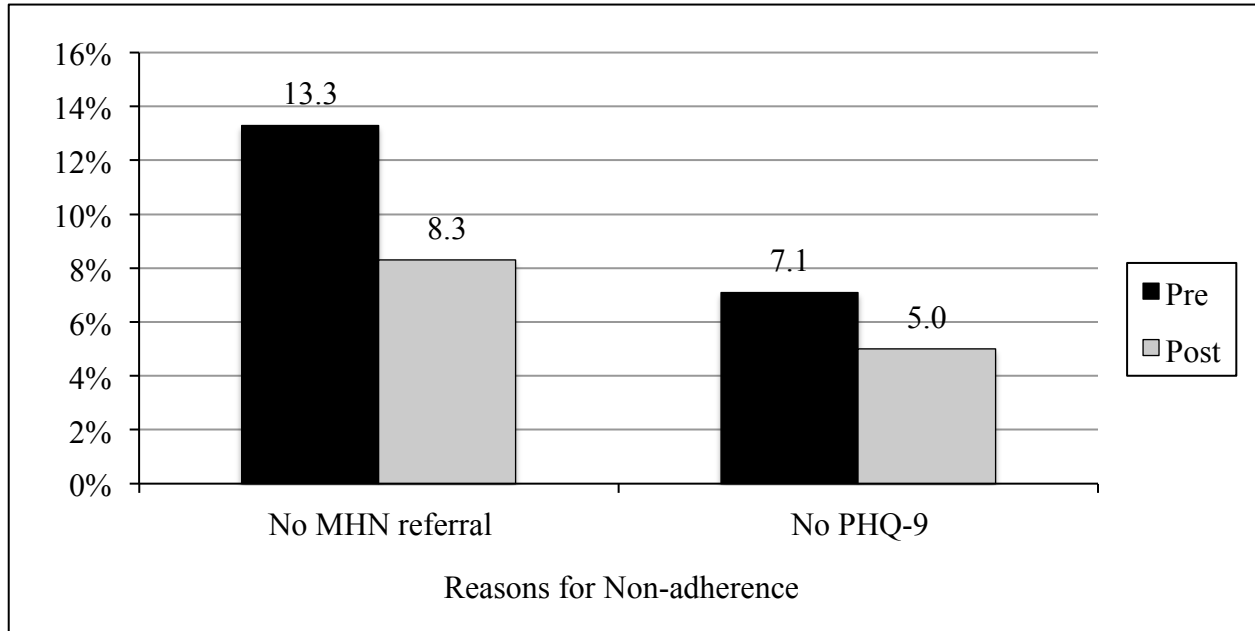
	Overall sample (N=58)	Pre (n=30)	Post (n=28)	<i>p-value*</i>
<i>1 or 2 Mood D/O dx, n (%)</i>	10 (17.2)	5 (16.6)	5 (17.9)	.905
<i>Antidepressant, n (%)</i>	30 (51.7)	16 (53.3)	14 (50)	.80
<i>Benzodiazepine, n (%)</i>	20 (34.5)	11 (36.6)	9 (32.1)	.72

**p*-values based on *t*-test or chi-square analysis

Table 5. Protocol Non-Adherence

Documentation of protocol non-adherence	Pre	Post
Use of PHQ-9	GAD completed instead. Anxiety primary MH problem. Geriatric depression scale used.	Not appropriate for patient presentation.
MHN referral	Pt. refused MHN service (n = 2)	Patient refused MHN service (n =1)

Figure 1. Percentage of Times Clinicians Properly Documented Non-adherence



Improving Depression Care for Elderly Home Health Patients:
Suggestions for Policy Change

Sarah Royse Schirmer, M. Ed., BSN, LPCC, RN

University of Kentucky

Improving Depression Care for Elderly Home Health Patients: Suggestions for Policy Change

Depression is a widespread mental health issue in the home healthcare (HH) population (Bruce et al., 2015). Depressive symptoms exhibited by homebound and chronically ill older adults often go under reported and undertreated (Sheeran et al., 2010) and are associated with increased rates of re-hospitalization (Sheeran, Byers, & Bruce, 2010), falls (Byers et al., 2008), and suicides (Raue et al., 2006). Additionally, healthcare costs are two times higher for patients diagnosed with diabetes or heart disease with a co-morbid diagnosis of depression (INFOMC, 2013). In 2011 the Centers for Medicare and Medicaid (CMS) recommended the use of a quick, two-item depression-screening tool, the Patient Health Questionnaire (PHQ) 2, on the Outcome and Assessment Information Set (OASIS) C to promote recognition of depression in the HH population. “How often the HH agency checked patients for depression” is now a quality measure tracked by CMS. This CMS policy change has prompted HH agencies to recommend that clinicians screen for depressive symptoms and screening is facilitated by inclusion of the PHQ-2 in the OASIS-C assessment. However, CMS and the HH model offer little else to encourage and support depression care. Therefore, additional policies at both the national and local levels are needed to improve the provision of depression care in this population. This manuscript will describe depression in the HH population and explore current evidence-based programming options for HH agencies. Finally, recommended national and local level policy changes will be identified.

The Problem of Depression

Older adults in need of HH services are typically homebound and require care and monitoring of chronic health conditions such as cardiovascular diseases, diabetes, and chronic

pulmonary disorders (Qui et al., 2010). Beck et al. (2009) reported that over 40% of homebound elders in their program were diagnosed with at least two comorbid medical and mental illnesses.

Twelve to 25% of elders receiving HH meet the criteria for clinical depression, and these estimates are considered conservative because mental illness is frequently not recognized (Bruce et al., 2002; Bruce et al., 2015). In one study only 22% of elders who met criteria for depression were being treated with antidepressants, and none were involved with psychotherapy (Bruce et al., 2002). Raue et al. (2011) found that 32% of patients who met criteria for major or minor depression were being treated with an antidepressant; however, none were receiving psychotherapy, despite the finding that 18% reported wanting to be involved with this type of treatment. These data highlight significant gaps in mental health care treatment for elderly HH patients, particularly regarding depression, even though the consequences of untreated depression have been well described.

Depression complicates the treatment of chronic illness from multiple angles (Katon, 2011). The mood disorder can impede chronic care management and worsen the symptom burden of illnesses common in older age (Katon, 2011). Negative thinking and feelings of apathy and hopelessness characteristic of depressive illnesses can lead to poor adherence to strict medical regimens needed to keep chronic illnesses like diabetes (Acee, 2014) and heart failure (Thomas et al., 2008) under control. Even the practitioner-patient relationship can be negatively impacted due to the practitioner perceiving the treatment course as more complicated and involved when a patient is depressed (Katon, 2011). Also, hormonal and immune responses typical of depressive states can exacerbate chronic illness and limit treatment efficacy (Katon, 2011; Thomas et al., 2008).

This may partly explain why depression increases elderly HH patients' risk for short-term re-hospitalization (Sheeran, Byers, & Bruce, 2010). CMS is focusing on reducing rates of hospitalization as part of ongoing efforts to reduce costs in an out-of-control healthcare spending climate; therefore, it is worthwhile to better understand complex factors that contribute to these rates. In one study, depressed patients were hospitalized sooner after admission to HH than non-depressed patients (Sheeran, Byers, & Bruce, 2010). Also, the depressed patients had a significantly higher risk of re-hospitalization within the first 2-3 weeks of receiving HH (Sheeran, Byers, & Bruce, 2010). In another study of a sample population with a mean age of 61, depressive symptoms were associated with increased rates of re-hospitalization following an acute myocardial infarction (MI; Reese et al., 2011). Of additional importance, 33% of elderly adults fall each year and are hospitalized for fall-related injuries five times more often than for any other adverse event (Centers for Disease Control [CDC], 2014). In a 2008 (Byers et al.) study it was found that HH patients who fell were twice as likely to be depressed. Clearly, screening and interventions for depression should be a priority in HH efforts to prevent adverse events and treat chronic illnesses.

Depression Care in Home Health Policy

Since July of 1999 Medicare has required clinicians who admit Medicare recipients to HH to complete the OASIS—a lengthy and comprehensive assessment that calculates each patient's Home Health Resource Group (HHRG) score and case-mix adjustment index. Home healthcare agencies are paid for each 60-day episode of care using a prospective payment system (PPS) that adjusts payment to reflect each patient's HHRG and case-mix.

Until January 2010, OASIS item M0590, which consisted of a checklist of some of the symptoms of major depression, was used to screen for depression. While this item required the

HH clinician to address depression in some form, it lacked standardization, assessment of anhedonia, and symptom degree as well as persistence, failing to capture the full patient presentation. Perhaps most importantly, the item was placed on the OASIS without direction about how to ask the questions or what to do with the answers (Sheeran, Reilly, Weinberger, Bruce, & Pomerantz, 2010).

In 2010 the OASIS-C was introduced and item M0590 was replaced by M1730, which addressed some of these deficits. Item M1730 asks whether a standardized tool was used to screen the patient for depression, allowing each agency to choose which tool they use. This item outlines instruction for administration of the PHQ-2 if no other instruments are used, providing access to a quick, standardized depression-screening tool. The PHQ-2 measures both key symptoms of depression (depressed mood and anhedonia) as well as symptom pervasiveness and persistence (Sheeran, Reilly, Weinberger, Bruce, & Pomerantz, 2010). This tool even gives the clinician some guidance on how to ask the questions and score the answers, and it encourages the clinician to consider whether additional evaluation is necessary. Noticeably, improvements have been made to the way in which the OASIS *prompts* clinicians to screen for depression. However, individual HH agencies vary widely in their use of this tool in the home setting.

Ongoing Effort to Integrate Depression Care in Home Health

According to The United States Preventative Services Task Force it is recommended that clinicians conduct “screening for depression in adults aged 18 and older when staff-assisted depression care supports are in place to assure accurate diagnosis, effective treatment, and follow-up” (2002). In other words, unless an agency has a clear action plan for treatment in the event of a positive depression screen, the USPSTF recommends against screening. CMS does not mandate that HH agencies screen for depression; however, the rate at which the HH agency

checked for depression is a quality measure CMS monitors and publicizes. Also, the OASIS-C asks that clinicians consider if depression intervention(s) such as medication, referral for other treatment, or a monitoring plan for current treatment will be used. Again, however, care management of depression is not required. These prompts and reportable quality measures appear to be the extent of the oversight CMS provides to HH agencies for depression care.

Unfortunately, several broad-based Medicare policies do not make provision of depression care appealing to HH agencies and, as a result, depression care is rarely integrated into HH. Cabin (2010) addressed this issue writing, “To date, the OASIS has not placed any burden on Medicare HH agencies to assess, screen, or intervene for depression, nor is there any reward in the per-episode payment or quality measurement system” (Cabin, 2010, p. 172).

The presence (or absence) of a diagnosis of depression in a HH patient has no effect on the HHRG score and, therein, has no impact on the amount of money paid to the HH agency to care for the patient. In other words, there are no explicit financial incentives for providing quality depression care. In fact, some HH agencies consider the provision of depression care a financial nightmare. The PPS system financially incentivizes seeing as many patients as possible in as little time as possible. This reward system is heavily misaligned with provided quality and thorough chronic care management, especially potentially time-intensive depression care (Bao, Eggman, Richardson, & Bruce, 2014). As a result, most HH agencies do not see the value in or financial feasibility of integrating depression care programming in operations. Even though leaders may understand the importance of identifying and addressing depression, some say it is difficult to see financial benefit. (Bao et al., 2014).

Evidence-Based Depression Care for Home Health

The U.S. Department of Health and Human Service Substance Abuse and Mental Health Services Administration (SAMHSA, 2011) recognizes that many older adults do not have access to evidence-based depression support when needed. To address this need the agency stated, “EBPs must be available in the settings where older adults receive their care” (SAMHSA, 2011, p. 10). What better place to intervene than in the homes of older homebound adults?

Researchers have recognized the need for HH-friendly, evidence-based depression care management programs and a few have been developed (Bruce et al., 2015; Ell et al., 2007; Madden-Baer, McConnell, Rosati, Rosenfeld, & Edison, 2013). For example, the Psychogeriatric Assessment and Treatment in City Housing (PATCH) is an in-home program that stresses depression education for important people in seniors’ lives as well as care coordination (Robbins, Rye, German, Tlasek-Wolfson, Penrod, Rabins, & Black, 2000). The Program to Encourage Active Rewarding Lives for Seniors (PEARLS) uses goal setting and problem solving in the home to reduce depressive symptoms and improve patients’ quality of life (SAMSHA, 2011). Other in-home depression care programs for seniors emphasize staff education and encourage case communication among providers to report depressive symptoms and response to treatment, monitoring of medications, goal setting, and connection to community-based services (Pickett, Raue, & Bruce, 2012). A few have been developed with stakeholder interests and HH agency realities in mind (Bruce et al., 2015; Gellis, Kenaley, & Have, 2014).

Depression care can be successfully adopted and integrated into routine HH agency operations and can result in clinically significant outcomes in moderately to severely depressed patients (Bruce et al., 2015). Six HH agencies from across the nation participated in a randomized trial to test the clinical effectiveness of Depression CAREPATH, a program for

integrating depression care into routine nursing practice. Depression CAREPATH is unique in that agencies are encouraged to train *all* nurses to assess for depression and provide a variety of interventions as appropriate or as time allows. In this way depression is viewed as a chronic illness that the nurse would address alongside other diseases (Bruce et al., 2015).

This method of depression care is based on the Collaborative Care Model [CCM], which is recognized globally as an effective and necessary method of integrating mental and physical health care (Ngo et al., 2013). The CCM encourages a team-based approach to the identification and treatment of mental illness so that roles are adapted to:

Routinely identify patients who need care; assess risk factors; educate patients about their illness, risk factors and treatment; intervene with a combination of brief evidence-based pharmacological and psychosocial treatments; teach self-management skills; monitor patients' progress and adherence to treatment; and follow-up over the long term (Ngo et al., 2013, p. 1).

Multiple randomized-controlled trials have reported that collaborative outpatient care for common mental health conditions, such as depression, is more clinically- and cost-effective compared to standard treatment options (Unutzer, Harbin, & Schoenbaum, 2013). Improving Mood, Promoting Access to Collaborative Care (IMPACT, 2012) is a well-described and thoroughly researched collaborative care model implemented in primary care clinics where older adults receive care. This model uses collaboration, depression care managers, psychiatrists, outcome measurement, and an evidence-based treatment algorithm to treat depression in older adults (IMPACT, 2012). In 2012, IMPACT had twice the effectiveness of treating depression than treatment as usual. These positive effects lasted for at least one year after treatment ceased.

For this reason, researchers are recommending that this model be implemented in the newly developed Medicaid Health Homes (Unutzer, Harbin, & Schoenbaum, 2013).

Clearly, researchers have created, tested, and made solutions available. The next steps are engaging stakeholders and implementing these programs for the benefit of our older American citizens.

Stakeholder Interests

When a need for integrated depression care for older adults has been identified, large-scale government agencies have called for solutions (SAMHSA, 2011). Delegates from the 2005 White House Conference on Aging reported the need to “improve recognition, assessment, and treatment of mental illness and depression among older adults” as one of the top 10 resolutions. The 2015 Conference will continue to explore healthy aging. In addition, CMS has expressed a commitment to address the issue, although on a broader scale. The center has recently submitted a proposed rule that would change the HH agency conditions of participation to encourage a “more continuous integrated care process across all aspects of home health services, based on a patient-centered assessment, care planning, service delivery, and quality assessment and performance improvement” (Medicare and Medicaid Program: Conditions of Participation for Home Health Agencies, 2014, p. 61166). The proposed changes emphasize the importance of assessing patients’ psychosocial status and improving clinicians’ ability to understand how social and emotional factors contribute to health outcomes (Medicare and Medicaid Program: Conditions of Participation for Home Health, 2014).

The successful passage of these resolutions by congressional committees depends on the ability of CMS and HH agencies to identify and implement cost-effective and clinically efficacious ways to integrate care of common physical and mental health problems. CMS needs

to encourage this practice without creating exorbitant costs to the already financially strapped Medicare fund. In addition, HH agencies should implement these changes without breaking the budgets of HH agencies or expanding the workloads of already-overwhelmed HH clinicians. Both groups should ideally identify and implement solutions that have been shown to effectively adapt to HH operations and be useful rather than burdensome for HH clinicians.

Generalist nurses have asked for training that enhances their ability to accurately assess depression and provide effective management of this mental health problem (Liebel & Powers, 2013). HH nurses, due to their holistic training and approach to care, would like to be able to intervene when their patients are depressed (Bao, Eggman, Richardson, & Bruce, 2014).

Depression is not a normal part of aging. Older adults deserve to have the option for care and treatment of this disabling mental condition. In one study only 10% of patients who met criteria for depression preferred to do nothing about their mental distress—the majority reported wanting to feel better (Raue, Weinberger, Sirey, Meyers, & Bruce, 2011). While stigma and negative attitudes toward mental health treatment persist among older adults, HH clinicians should be prepared to identify and discuss depressive symptoms with their patients.

Policy Changes

Given the breadth of the problem of depression in the HH population and the consequences of leaving it unaddressed, CMS and HH agency policy changes are needed. Policy options range from doing nothing to fully restructuring the reimbursement policies for HH agencies provision of care to depressed patients. However, it is crucial to identify and implement policies that optimize integration of physical and mental health care, yet simultaneously maintain reasonable clinician workloads. Common sense, low-risk actions can be taken at both a federal and local level.

Policy Recommendations

Recommendation 1: Provide additional access to evidence-based depression care programming through the CMS website. Currently CMS provides an OASIS-C1/ICD-9 Guidance Manual available for download on their website. This manual was recently posted to the CMS website (2014) and includes resources for various aspects of HH agency operations, including depression care and administration of the PHQ-2; however, the information pertaining to depression care is limited and out of date. The last update to the information was made in 2012 using research and resources that were developed before 2011, before significant changes were made to the OASIS that impacted how HH clinicians screen for and are prompted to care for depressed patients. HH agencies might consider implementing depression care programming if they were more aware of various options for depression care programming that could be adapted to their unique set of resources and operations. This resource list should be expanded to include various options for home-based depression care that can be found in the literature and through the Agency for Healthcare Research and Quality (AHRQ).

In addition it would be helpful for CMS to create a web-based open forum for HH agencies to discuss barriers as well as successful implementation of evidence-based depression care programming. Encouraging leaders to discuss goals, failed attempts, as well as successes could promote realistic implementation of depression care.

Recommendation 2: CMS can link implementation of evidence-based depression care to conditions of participation. As previously discussed, CMS is proposing significant changes to HH agencies' conditions of participation. It is recommended that HH agencies improve the way they assess and address patients' psychosocial status, which could increase the

likelihood that HH agencies will make important changes to regulations and policies. Moreover, an evidence-based approach to implementation could improve these odds.

Recommendation 3: Local HH agency policies should reflect the importance of depression care as part of chronic illness management. On a local level, HH agencies can acknowledge the importance of identifying and addressing depressive symptoms by making depression care management a priority. HH leaders should be seeking out innovative ways to adapt and implement depression care in their own agencies. Although not every program is well suited for every HH agency, clinicians can be trained and protocols adapted to improve agencies' ability to intervene. At the very least agencies need to have a suicide assessment and intervention protocol for their clinicians' awareness and their patients' protection.

Home healthcare agencies have successfully designed and implemented chronic care management programs for diabetes, CHF, and COPD, and similar programs can be developed for depression. Organizations can train nurses to effectively screen for depression, monitor antidepressant medications, and collaborate with prescribers (Bruce et al., 2015). Goal setting and problem solving are useful skills for nurses to use with all patients, regardless of a diagnosis of depression. While the OASIS only prompts for depression screening at admission, HH agencies can choose to reassess symptoms of depression to measure patient progress and intervention effectiveness. Guidelines are available for assessment and reassessment using the PHQ-2 and PHQ-9 (Bruce et al., 2011a; Bruce et al., 2011b).

Impact

Untreated and undertreated depression in the HH population contributes to numerous poor health outcomes (Sheeran, et al., 2010, Byers et al., 2008, Raue et al., 2006). Traditionally, CMS and HH agency policies have not been adequately aligned with the provision of evidence-

based depression care. Depression care in home health will not improve without making important policy changes.

On the other hand, implementing policies that encourage HH agencies to make depression care a priority can alleviate patients' symptoms, especially patients with more moderate to severe, debilitating depression (Bruce et al., 2015). Adapting the collaborative care model for depression and chronic illness has improved patients' engagement in treatment, their overall physical functioning, and their quality of life (Hunkeler et al., 2006). These improvements are key in assisting chronically ill older adults to better manage their illnesses to prevent costly re-hospitalizations and lethal exacerbations.

The National Council on Aging (2014) reports that our current method of providing care for chronically ill people accounts for approximately 75% of our nation's spending on health care, while only one percent of funds are budgeted to improve patients' ability to manage their illnesses. Depressed patients are 1.75 times more likely to be non-adherent to prescribed treatment regimens compared to their non-depressed peers (Grenard et al., 2011), and can care can cost twice that of non-depressed patients (INFOMC, 2013). Chronic illnesses are expensive, especially if we do not support efforts to tackle key problems, such as depression.

As the US healthcare system undergoes significant transformations, the importance of addressing mental illness will garner significant attention. HH agencies that have considered options for incorporating depression care and have started to do so will be at a significant advantage. Hospital systems and outpatient care providers are beginning to see the importance of targeting mental health efforts to improve chronic illness management. Agencies that adopt smart, innovative options for doing so will remain competitive and be able to provide true holistic care to chronically ill older adults.

References

- Acee, A. (2014). Diabetes, Depression, and OASIS-C. *Home Healthcare Nurse*, 32(6), 362-369.
- Bao, Y., Eggman, A., Richardson, J., & Bruce, M. (2014). Misalignment between medicare policies and depression care in home health care: Home health provider perspectives. *Psychiatric Services*, 65(7), 905-910.
- Beck, R., Arizmendi, A., Purnell, C., Fultz, B., & Callahan, C. (2009). House calls for Seniors: Building and sustaining a model of care for homebound seniors. *The American Geriatrics Society*, 57, 1103-1109.
- Bruce, M., Raue, P., Reilly, C., Greenberg, R., Meyers, B., Banerjee, S. . . . Leon, A., (2015). Clinical effectiveness of integrating depression care management into Medicare home health. *The Journal of the American Medical Association*, doi:10.1001/jamainternmed.2014.5835.
- Bruce, M., Raue, P., Sheeran, T., Reilly, C., Pomerantz, J., Meyers, B., . . . Zukowski, D. (2011a). Depression care for patients at home: Depression CAREPATH: Home care depression care management protocol, part 2. *Home Healthcare Nurse*, 29(8), 480-489.
- Bruce, M., Sheeran, T., Raue, P., Reilly, C., Greenberg, R., Pomerantz, J., . . . Johnston, C. (2011b). Depression care for patients at home: Depression CAREPATH: Intervention development and implementation, part 1. *Home Healthcare Nurse*, 29(7), 417-426.
- Byers, A., Sheeran, T., Mlodzianowski, A., Meyers, B., Nassisi, P., & Bruce, M. (2008).

- Depression and risk for adverse falls in older home health care patients. *Research in Gerontological Nursing*, 1(4), 245-251.
- Cabin, W. (2010). Lifting the veil from depression: OASIS-C and evidence-based practice. *Home Health Care Management & Practice*, 22(3), 171-177.
doi:10.1177/1084822309348693
- Centers for Disease Control [CDC]. (2014). Cost of falls among older adults. Retrieved December 4, 2014 from
<http://www.cdc.gov/HomeandRecreationalSafety/Falls/fallcost.html>.
- Ell, K., Unutzer, J., Aranda, M., Gibbs, N., Lee, P., & Xie, B. (2007). Managing depression in home health care: A randomized clinical trial. *Home Health Care Services Quarterly*, 26(3), 81-103.
- Grenard, J., Munjas, B., Adams, J., Suttorp, M., Maglion, M....Gellad, W. (2011). Depression and medication adherence in the treatment of chronic disease in the United States: A meta-analysis. *Journal of General Internal Medicine*, 26(10), 1175-1182.
- Hunkeler, E., Katon, W., Tang, L., Williams, J., Kroenke, K., Lin, E....Unutzer, J. (2006). Long term outcomes from the IMPACT randomized trial for depressed elderly care patients in primary care. *BJM*. doi:10.1136/bmj.38683.710255.BE.
- Improving Mood, Promoting Access to Collaborative Care [IMPACT]. (2012). Aims Center. IMPACT Evidence-based depression care. Retrieved from
<http://impact-uw.org/>.
- INFOMC. (2013). Retrieved from http://www.healthintegrated.com/Portals/0/ELS%20Presentations/Susan_Norris_March%202013.pdf

- Katon, W. (2011). Epidemiology and treatment of depression in patients with chronic medical illness. *Dialogues in Clinical Neuroscience*, 13(1), 7-23.
- Liebel, D. & Powers, B. (2013). Home health care nurse perceptions of geriatric depression and disability care management. *The Gerontologist*.
doi: 10.1093/geront/gnt125.
- Madden-Baer, R., McConnell, E., Rosati, R., Ronsenfeld, P., & Edison, I. (2013). Implementation and evaluation of a depression care model for homebound elderly. *Journal of Nursing Care Quality*, 28(1), 33-42.
- Medicare and Medicaid Program: Conditions of Participation for Home Health Agencies, 42 CFR Parts 409, 410, 418, 440, 484, 485 & 488 (2014).
- National Council on Aging (2014). Chronic Disease Self-Management. Retrived from <http://www.ncoa.org/assets/files/pdf/NCOA-Chronic-Desease.pdf>.
- Ngo, V., Rubinstein, A., Ganju, V., Kanellis, P., Loza, N., Rabaden-Diehl, C., & Daar, A. (2013). Grand challenges: Integrating mental health care into the non-communicable disease agenda. *PLoS Med* 10(5): e1001443.
doi:10.1371/journal.pmed.1001443
- OASIS-C Guidance Manual. (2012). Chapter 5: Resources/Links. Retrieved from <http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HomeHealthQualityInits/HHQIOASISUserManual.html>.
- Qiu, W., Dean, M., Liu, T., George, L., Gann, M., Cohen, J., & Bruce, M. (2010). Physical and mental health of homebound older adults: An overlooked population. *The American Geriatrics Society*, 58, 2423-2428.
- Raue, P., Meyers, B., Rowe, J., Heo, M., & Bruce, M. (2006). Suicidal ideation among

- elderly homecare patients. *International Journal of Geriatric Psychiatry*, 22, 32- 37.
- Raue, P., Weinberger, M., Sirey, J., Meyers, B., & Bruce, M. (2011). Preferences for depression treatment among elderly home health care patients. *Psychiatric Services*, 62(5), 532-537.
- Reese, R., Freedland, K., Steinmeyer, B., Rich, M., Rackley, J., & Carney, R. (2011). Depression and rehospitalization following acute myocardial infarction. *Circulation: Cardiovascular Quality and Outcomes*, 4(6), 626-633.
- Robbins, B., Rye, R., German, P. S., Tlasek-Wolfson, M., Penrod, J., Rabis, P.V., Black, B.S. (2000). The psychogeriatric assessment and treatment in city housing (PATCH) program for elders with mental illness in public housing: getting through the crack in the door. *Archives of Psychiatric Nursing*, 14(4), 163-172.
- Sheeran, T., Byers, A., & Bruce, M. (2010). Depression and increased short-term hospitalization risk among geriatric patients receiving home health care services. *Psychiatric Services*, 61(1), 78-80.
- Sheeran, T., Reilly, C., Weinberger, M., Bruce, M., & Pomerantz, J. (2010). The PHQ-2 on OASIS-C: A new resource for identifying geriatric depression among home health patients. *Home Health Care Nurse*, 28(2), 92-102.
- Thomas, S., Chapa, D., Friedmann, E., Durden, C., Ross, A., Lee, M., & Lee, H. (2008) Depression in patients with heart failure: Prevalence, pathophysiological, mechanisms, and treatment. *Critical Care Nurse*, 28(2), 40-55.
- Unutzer, J., Harbin, H., & Schoenbaum, M. (2013). The collaborative care model: an approach for integrating physical and mental health care in Medicaid health homes. Retrieved from

<http://www.medicaid.gov/State-Resource-Center/Medicaid-State-Technical-Assistance/Health-Homes-Technical-Assistance/Downloads/HH-IRC-Collaborative-5-13.pdf>.

Capstone Report Conclusion

Sarah Royse Schirmer, M. Ed., BSN, LPCC, RN

University of Kentucky

Conclusion

As described in the first manuscript depression is associated with multiple negative health outcomes and should be a part of chronic disease management programs implemented in home healthcare (HH). Unfortunately, patient, clinician, agency, and policy barriers impede effective depression care delivery in the HH population. Even so, research has shown that depression care programming can improve nurses' ability to effectively screen for depressed patients (Brown et al., 2010; Bruce et al., 2007) and reduce depression scores, especially in patients with moderate to severe levels of depression (Bruce et al., 2015).

While HH clinicians in this report were trained to screen patients for depression and refer patients who scored high during admission, results of the process evaluation indicated that additional steps must be taken by the HH agency so that future evaluation efforts more accurately reflect clinician practice. Interpreted cautiously, the process evaluation indicated that while training did improve clinician use of the PHQ-9, practice did not drastically change after protocol implementation. Not all patients who met criteria for further evaluation and treatment based on initial screening using the PHQ-2 received depression care. The researcher suggested this could be due to protocol reliance on inadequate numbers of specialized mental health clinicians. Additionally, it is suspected that Medicare policies that are not clearly supportive of depression care contribute to this finding. However, there are several ways in which the DNP can initiate practice change to increase access to depression care and improve depression outcomes for elderly HH patients.

The final manuscript investigated ways in which local and national level policies can be changed to encourage the use of evidence-based, in-home depression care programming. Like all areas of healthcare, home health resources are limited and budgets must be carefully considered.

Depression care models that understand the realities of HH have been developed and suggest that *all* nurses should be trained to screen and provide interventions within their scope of practice (Bruce et al., 2015). This increases the number of adequately trained professionals available to manage the mental health condition and improves the likelihood that all depressed patients will have access to depression care. Medicare policies should reward agencies and clinicians who chose to improve chronic care management by using evidence-based depression care.

Appendix A

The Patient Health Questionnaire-2 (PHQ-2)

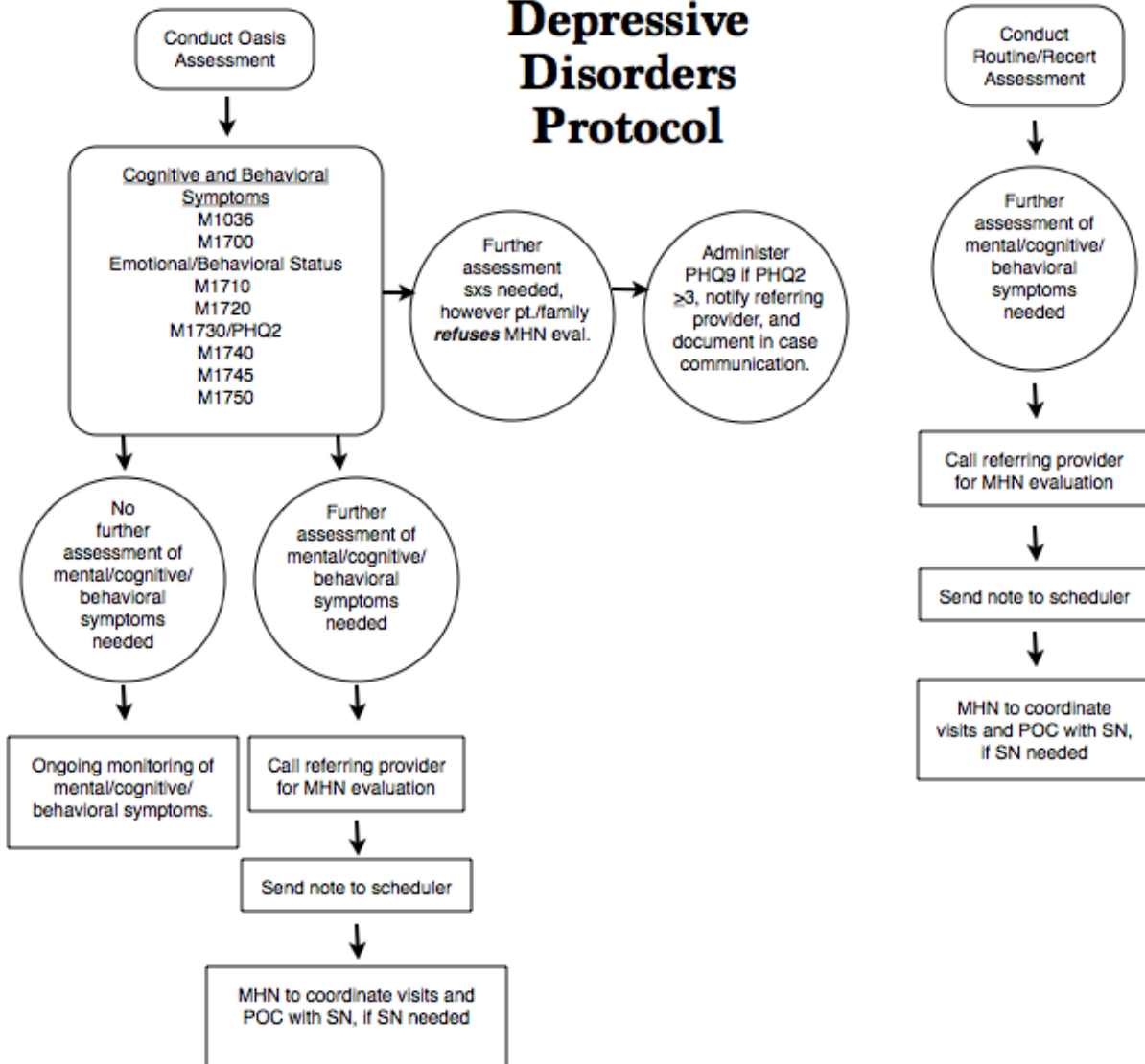
Over the past 2 weeks, how often have you been bothered by any of the following problems?

	Not At All	Several Days	More Than Half the Days	Nearly Every Day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed or hopeless	0	1	2	3

(Kroenke, Spitzer, & Williams, 2003)

Appendix B

Depressive Disorders Protocol



Appendix C

Tips for Administering the PHQ-2

1. Aim to ask the questions in a straightforward and empathetic manner. For example you may want to say, “Now I’m going to ask you some questions about how you’ve been feeling.”
The more comfortable you are asking the questions, the more comfortable your patient will be answering these questions honestly and thoroughly.
2. It is important to screen for depression even if the patient is already taking an antidepressant medication at admission. There are several reasons why a patient who is taking an antidepressant may still be depressed and need additional intervention.
3. Consider the following suggestions for asking the PHQ-2 questions:
 - a. Split the question into “bite sized” pieces. For example, “Have you had little interest or pleasure in doing things?” If yes...”How long have you been feeling this way?” or “Have you been feeling this way for at least two weeks?” How often have you been feeling this way? Several days, more than half the days, or nearly every day?”
 - b. You may want to use the large print response card so that your patients can read the options and chose what best fits their experience. This can reduce confusion and work better for visually and hearing impaired patients.
4. If a patient has severe cognitive impairment, the PHQ-2 may not be a reliable screening tool. You can try to answer the questions using caregiver response; however, this is also not the most reliable way to use this screening instrument. If you think that the PHQ-2 is not a reliable screener for your patient and you suspect your patient may have depressive symptoms consider a MHN evaluation to further screen for depression.
5. Cutoff scores for the PHQ-2 are as follows:
 - a. < 3 : correctly identifies 78% of patients who are not depressed
 - b. ≥ 3 : correctly identifies 87% of patients who are depressed
7. If your patient scores ≥ 3 on the PHQ2, talk to them and/or the caregiver about the MHN service. Here are some ways you might initiate that conversation with your patient and/or their caregiver:
 - a. “Based on your responses to this screening tool, it seems like you may be struggling with some feelings of depression. Would you agree to talk to one of our nurses who specializes in helping people cope with those feelings?”
 - b. “I’m concerned that you may need more intensive help with your feelings of depression. I’d like to ask for one of our mental health nurses to see you. Would that be ok with you?”
 - c. If there is already a prescription, “Your MD/NP would like for one of our MHNs to see you about your feelings of depression. They will be by within the week to visit with you and

References

- Acee, A. (2014). Diabetes, depression, and OASIS-C. *Home Healthcare Nurse, 32*(6), 362-369.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Bao, Y., Eggman, A., Richardson, J., & Bruce, M. (2014). Misalignment between medicare policies and depression care in home health care: Home health provider perspectives. *Psychiatric Services, 65*(7), 905-910.
- Beck, R., Arizmendi, A., Purnell, C., Fultz, B., & Callahan, C. (2009). House calls for Seniors: Building and sustaining a model of care for homebound seniors. *The American Geriatrics Society, 57*, 1103-1109.
- Brown, E., Kaiser, R., & Gellis, Z. (2007). Screening and assessment of late-life depression in home healthcare: Issues and challenges. *Annals of Long-Term Care, 15*(10), 2-7.
- Brown, E., Raue, P., Roos, B., Sheeran, T., & Bruce, M. (2010). Training nursing staff to recognize depression in home healthcare. *Journal of the American Geriatrics Society, 58*, 122-128. doi: 10.1111/j1532-5415.2009.02626.x.
- Bruce, M., Brown, E., Raue, P., Mlodzianowski, A., Meyers, B., Leon, A., . . . Nassisi, P. (2007). A randomized trial of depression assessment intervention in home health care. *Journal of the American Geriatrics Society, 55*, 1793-1800. doi: 10.1111/j.1532-5415.2007.01419.x.
- Bruce, M., McAvay, G., Raue, P., Brown, E., Meyers, B., Keohane, D., . . . Weber, C. (2002). Major depression in elderly home health care patients. *American Journal of Psychiatry, 159*(8), 1367-1374.
- Bruce, M., Raue, P., Reilly, C., Greenberg, R., Meyers, B., Banerjee, S. . . . Leon, A., (2014). Clinical effectiveness of integrating depression care management into

- Medicare home health. *The Journal of the American Medical Association*,
doi:10.1001/jamainternmed.2014.5835.
- Bruce, M., Raue, P., Sheeran, T., Reilly, C., Pomerantz, J., Meyers, B., . . . Zukowski, D.
(2011a). Depression care for patients at home: Depression CAREPATH: Home care
depression care management protocol, part 2. *Home Healthcare Nurse*, 29(8), 480-489.
- Bruce, M., Sheeran, T., Raue, P., Reilly, C., Greenberg, R., Pomerantz, J., . . . Johnston, C.
(2011b). Depression care for patients at home: Depression CAREPATH: Intervention
development and implementation, part 1. *Home Healthcare Nurse*, 29(7), 417-426.
- Byers, A., Sheeran, T., Mlodzianowski, A., Meyers, B., Nassisi, P., & Bruce, M. (2008).
Depression and risk for adverse falls in older home health care patients. *Research in
Gerontological Nursing*, 1(4), 245-251.
- Cabin, W. (2010). Lifting the veil from depression: OASIS-C and evidence-based practice.
Home Health Care Management & Practice, 22(3), 171-177.
doi:10.1177/1084822309348693
- Caffrey, C., Sengupta, M., Moss, A., Harris-Kojetin, L., & Valverde, R. (2011). Home health
care and discharged hospice care patients: United States, 2000 and 2007. *National Health
Statistics Reports*, 38, 1-28.
- Centers for Disease Control and Prevention. (2012). Depression is not a normal part of
growing older. *Healthy Aging*. Retrieved from
<http://www.cdc.gov/aging/mentalhealth/depression.htm>.
- Centers for Disease Control [CDC]. (2014). Cost of falls among older adults. Retrieved
December 4, 2014 from
<http://www.cdc.gov/HomeandRecreationalSafety/Falls/fallcost.html>.

- Chism, L. A. (2010). *The Doctor of Nursing Practice: A Guidebook for Role Development and Professional Issues*. Sudbury, MA: Jones and Bartlett.
- Chunyu, L., Friedman, B., Conwell, Y., & Fiscella, K. (2007). Validity of the Patient Health Questionnaire 2 (PHQ-2) in identifying major depression in older people. *Journal of American Geriatrics Society*, 55(4), 596-602.
- Diefenbach, G., Tolin, D., & Gilliam, C. (2011). Impairments in life quality among clients in geriatric home care: Associations with depressive and anxiety symptoms. *Geriatric Psychiatry*, 27, 828-835.
- Egede, L. E. (2007). Major depression in individuals with chronic medical disorders: prevalence, correlates, and association with health resource utilization, lost productivity, and functional disability. *General Hospital Psychiatry*, 29(5), 409- 416.
- Ell, K., Unutzer, J., Aranda, M., Gibbs, N., Lee, P., & Xie, B. (2007). Managing depression in home health care: A randomized clinical trial. *Home Health Care Services Quarterly*, 26(3), 81-103.
- Ell, K., Unutzer, J., Aranda, M., Sanchez, K., & Lee, P. (2005). Routine PHQ-9 depression screening in home health care: Depression prevalence, clinical and treatment characteristics, and screening implementation. *Home Health Care Services Quarterly*, 24(4), 1-19.
- Fulop, G., Strain, J. J., & Stettin, G. (2003). Congestive heart failure and depression in older adults: clinical course and health services use 6 months after hospitalization. *Psychosomatics*, 44(5), 367-373.
- Gellis, Z. (2010). Depression screening in medically ill homecare elderly. *Best Practices in Mental Health*, 6(1), 1-16.

Grembowski, D., (2001). *The Practice of Health Program Evaluation*. Thousand Oaks, CA: Sage Publications.

Grenard, J., Munjas, B., Adams, J., Suttorp. M., Maglion, M.....Gellad, W. (2011). Depression and medication adherence in the treatment of chronic disease in the United States: A meta-analysis. *Journal of General Internal Medicine*, 26(10), 1175-1182.

Guide to Community Preventative Services. (2014). Interventions to reduce depression among older adults: Home-based depression care management. Retrieved from <http://www.thecommunityguide.org/mentalhealth/depression-home.html>.

Hodges, B. C., & Videto, D. M. (2011). *Assessment and Planning in Health Programs*. Sudbury, MA: Jones & Bartlett Learning.

Hunkeler, E., Katon, W., Tang, L., Williams, J., Kroenke, K., Lin, E....Unutzer, J. (2006). Long term outcomes from the IMPACT randomized trial for depressed elderly care patients in primary care. *BJM*. doi:10.1136/bmj.38683.710255.BE.

Improving Mood, Promoting Access to Collaborative Care [IMPACT]. (2012). Aims Center. IMPACT Evidence-based depression care. Retrieved from <http://impact-uw.org/>.

INFOMC. (2013). Retrieved from http://www.healthintegrated.com/Portals/0/ELS%20Presentations/Susan_Norris_March%202013.pdf

Katon, W. J. (2011). Epidemiology and treatment of depression in patients with chronic medical illness. *Dialogues in Clinical Neuroscience*, 13(1), 7-23.

- Kroenke, K., Spitzer, R., & Williams, J. (2003). The Patient Health Questionnaire-2: Validity of a two-item depression screener. *Medical Care*, 41(11), 1284-1292.
- Liebel, D., & Powers, B. (2013). Home health care nurse perceptions of geriatric depression and disability care. *The Gerontologist*. 1-15. doi: 10.1093/geront/gnt125.
- Linden, A., Adams, J. L., Roberts, N. (2004). Evaluating disease management program effectiveness adjusting for enrollment (tenure) and seasonality. *Research in Healthcare Financial Management*, 9(1), 57-68.
- Madden-Baer, R., McConnell, E., Rosati, R., Ronsenfeld, P., & Edison, I. (2013). Implementaion and evaluation of a depression care model for homebound elderly. *Journal of Nursing Care Quality*, 28(1), 33-42.
- Mantyselka, P., Korniloff, K., Saaristo, T., Koponen, H., Eriksson, J., Puolijoki, H., . . . Vanhala, M. (2011). Association of depressive symptoms with impaired glucose regulation, screen-detected, and previously known type 2 diabetes. *Diabetes Care*, 34(1), 71-76.
- Medicare and Medicaid Program: Conditions of Participation for Home Health Agencies, 42 CFR Parts 409, 410, 418, 440, 484, 485 & 488 (2014).
- National Association for Home Care & Hospice. (2010). *Basic Statistics About Home Care*. Retrieved from http://www.nahc.org/assets/1/7/10HC_Stats.pdf.
- National Council on Aging (2014). Chronic Disease Self-Management. Retrived from <http://www.ncoa.org/assets/files/pdf/NCOA-Chronic-Desease.pdf>.
- Ngo, V., Rubinstein, A., Ganju, V., Kanellis, P., Loza, N., Rabaden-Diehl, C., & Daar, A. (2013). Grand challenges: Integrating mental health care into the non-communicable disease agenda. *PLoS Med* 10(5): e1001443. doi:10.1371/journal.pmed.1001443

- Park, M., Katon, W. J., & Wolf, F. M. (2013). Depression and risk of mortality in individuals with diabetes: a meta-analysis and systematic review. *General Hospital Psychiatry, 35*(3), 217-225.
- Pickett, Y., Raue, P., & Bruce, M. (2012). Late-life depression in home healthcare. *Aging Health, 8*(3), 273-284. doi: 10.2217/ahe.12.28.
- Qiu, W., Dean, M., Liu, T., George, L., Gann, M., Cohen, J., & Bruce, M. (2010). Physical and mental health of homebound older adults: An overlooked population. *The American Geriatrics Society, 58*, 2423-2428.
- Raue, P., Meyers, B., Rowe, J., Heo, M., & Bruce, M. (2006). Suicidal ideation among elderly homecare patients. *International Journal of Geriatric Psychiatry, 22*, 32-37.
- Raue, P., Weinberger, M., Sirey, J., Meyers, B., & Bruce, M. (2011). Preferences for depression treatment among elderly home health care patients. *Psychiatric Services, 62*(5), 532-537.
- Reese, R. L., Freedland, K. E., Steinmeyer, B. C., Rich, M. W., Rackley, J. W., & Carney, R. M. (2012). Depression and rehospitalization following acute myocardial infarction. *Circulation: Cardiovascular Quality and Outcomes, 4*(6), 626-633.
- Robbins, B., Rye, R., German, P. S., Tlasek-Wolfson, M., Penrod, J., Rabis, P.V., Black, B.S. (2000). The psychogeriatric assessment and treatment in city housing (PATCH) program for elders with mental illness in public housing: getting through the crack in the door. *Archives of Psychiatric Nursing, 14*(4), 163-172.

- Shao, H., Peng, T., Bruce, M., & Bao, Y. (2011). Diagnosed depression among medicare home health patients: National prevalence estimates and key characteristics. *Psychiatric Services, 62*(5), 538-540.
- Sheeran, T., Byers, A., & Bruce, M. (2010). Depression and increased short-term hospitalization risk among geriatric patients receiving home health care services.
- Sheeran, T., Reilly, C., Weinberger, M., Bruce, M., & Pomerantz, J. (2010). The PHQ-2 on OASIS-C: A new resource for identifying geriatric depression among home health patients. *Home Health Care Nurse, 28*(2), 92-102.
- Thobaben, M. (2013). Psychiatric home health care skilled nursing services. *Home Health Care Management & Practice, 25*(1), 32-34.
- Thomas, S., Chapa, D., Friedmann, E., Durden, C., Ross, A., Lee, M., & Lee, H. (2008). Depression in patients with heart failure: Prevalence, pathophysiological mechanisms, and treatment. *Critical Care Nurse, 28*(2), 40-55.
- Unutzer, J., Harbin, H., & Schoenbaum, M. (2013). The collaborative care model: an approach for integrating physical and mental health care in Medicaid health homes. Retrieved from <http://www.medicare.gov/State-Resource-Center/Medicare-State-Technical-Assistance/Health-Homes-Technical-Assistance/Downloads/HH-IRC-Collaborative-5-13.pdf>.
- U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services. (2014). Home health services. In *Your Medicare Services*. Retrieved from <http://www.medicare.gov/coverage/home-health-services.html>.
- Valente, S. (2005). Detecting and evaluating depression among elderly patients in home health. *Home Health Care Management & Practice, 17*(2), 101-108.