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The Design of an Evidence-Based Protocol for Primary Care of Patients with Dementia

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The Design of an Evidence-Based Protocol for Primary Care of Patients with Dementia

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Abstract

Improvement in the effectiveness and optimization of care outcomes for patients with dementia in primary care is a national priority (American Medical Association-convened Physician Consortium for Performance Improvement [PCPI], 2014). Alzheimer's disease affects more than 5 million Americans. Patients with dementia cost the nation \$236 billion in 2016 (Alzheimer's Association, 2016). In 2014, the PCPI developed ten evidence-based recommendations to address the gaps in outpatient dementia care called the Dementia Performance Measure Set (DPMS). An independently owned, non-system affiliated primary care practice identified the need to improve the quality of care they provide to their patients with dementia and their caregivers through the development of a standardized protocol for primary care office visits based on the ten DPMS recommendations. A retrospective gap analysis was completed to assess the current care delivered to patients with dementia. The gap analysis showed there are gaps in care for patients with dementia, and patients do not receive care based on the DPMS recommendations. This scholarly project has many implications for the delivery of primary care for patients with dementia in the practice. Prior to this scholarly project, the primary care practice did not have a standardized, evidenced-based protocol to meet the health and social needs of their patients with dementia. Upon completion of this project, a standard recommendation for the delivery of high quality, evidenced-based primary care to patients with dementia in the practice exists. There is opportunity to use and evaluate the protocol for future tracking of quality measures and outcomes. The business case showed the protocol is sustainable, and the practice may realize financial benefit from the utilization of the protocol due to more effective and efficient documentation and due to the unique utilization of the Nurse Practitioner who can have longer office visits with time-consuming or complex patients.

Executive Summary

Improvement in the effectiveness and optimization of care outcomes for patients with dementia in primary care is a national priority (American Medical Association-convened Physician Consortium for Performance Improvement [PCPI], 2014). Alzheimer's disease affects more than 5 million Americans. Patients with dementia cost the nation \$236 billion in 2016 (Alzheimer's Association, 2016). Despite the incidence and prevalence of this disease, serious gaps in care for this patient population exist. To address these gaps in care, the PCPI (2014) developed specific clinical performance measures for the outpatient setting called the Dementia Performance Measure Set (DPMS) (PCPI, 2014).

Providers at an independently owned, non-system affiliated primary care practice expressed a need to develop an innovative way to improve their primary care delivery to patients with dementia using the recommended strategies from the PCPI (2014). Based on the organizational assessment, a gap in care was identified that there was a panel of patients with dementia at the practice who could benefit from the DPMS recommendations from the PCPI (2014). In addition, Medicare beneficiaries make up almost a quarter of the payer mix in the practice and are at risk for developing dementia. To address the problem, a clinical question was created: Can a sustainable, evidence-based protocol be designed for improving primary care delivery to patients with dementia in an independently owned non-system affiliating primary care practice?

This scholarly project was a quality improvement project incorporating evidence-based recommendations to improve primary care to patients with dementia in an independently owned, non-system affiliated primary care practice. This scholarly project aligned with the organization's desire to deliver timely, high quality, safe, and coordinated primary care to their patients. The practice is a member of an Accountable Care Organization (ACO). With this

foundation, the organization continuously seeks to improve the quality of the care they provide to their community to meet their patients' physical, emotional, and social health care needs.

This scholarly project was implemented in several steps. First, an organizational assessment was performed and an extensive literature review was completed. The project was determined to be quality improvement by project chairs and deemed not research by the graduate institution's review board. Third, the objectives for the project were developed.

The objectives of this project were to design an evidence-based protocol for primary care for patients with dementia; to complete a business case for the sustainability of the protocol; to create an evaluation plan for the protocol; and to disseminate the project work to the organization and graduate institution. The protocol was designed based on information gathered from the extensive literature review and from a retrospective gap analysis. The retrospective gap analysis provided baseline data on the ten DPMS recommendations that can be used later to evaluate quality improvement efforts related to dementia care in the practice. The analysis showed there were gaps the care delivered to patients with dementia. The protocol designed was customized for the organization's electronic health record and included detailed instruction on how to deliver, document, and monitor dementia care based on the DPMS recommendations. The business case was in the Situation, Background, Assessment, and Recommendation (SBAR) format. The final recommendation was to accept the dementia visit protocol and utilize the templates to improve documentation and facilitate accurate evaluation and management coding. Enhanced documentation may improve reimbursement from Medicare and provide additional revenue for the primary care practice. Adding the DPMS care recommendations adds time and complexity to office visits. However, providing DPMS recommended care may qualify visits for

a higher billing code, which could result in an additional \$11,268 of revenue per year for the existing Medicare population in the practice.

The sustainability of the protocol is contingent on several factors. While visits with the providers are reimbursable, the traditional fee-for-service payment structure does not fully capture the costs of providing holistic care to community dwelling older adults with dementia and their caregivers. However, the protocol was designed with considerations as to how the clinicians can document quality improvement initiatives based on the ten DPMS recommendations. Therefore, there is opportunity to utilize this protocol to capture value based reimbursement opportunities in the future. The Nurse Practitioner is utilized in an innovative way in the practice. The NP is allotted additional visit time for more time consuming or complex visits. The current structure allows the physician to see a higher quantity of patients during the day and bills for more visits accordingly. With this innovative structure to patient visits and her nursing background, the NP is in an opportune position to provide holistic primary care for patients with dementia in the practice.

This scholarly project has many implications for the delivery of primary care for patients with dementia in the practice. Prior to this scholarly project, the organization did not have a standardized, evidenced-based protocol to meet the health and social needs of their patients with dementia. Upon completion of this project, a standard recommendation for the delivery of high quality, evidenced-based primary care to patients with dementia in the organization exists. In addition, there is opportunity to use and evaluate the protocol for future tracking of quality measures and outcomes. Last, the organization may realize financial benefit from the utilization of the protocol due to more effective and efficient documentation.

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The Design of an Evidence-Based Protocol for Primary Care Patients with Dementia

Improvement in the effectiveness and optimization of care outcomes for patients with dementia in primary care is a national priority (American Medical Association-convened Physician Consortium for Performance Improvement [PCPI], 2014). Alzheimer's disease is the most common cause of dementia, and it affects more than 5 million Americans. Patients with dementia cost the nation \$236 billion in 2016 (Alzheimer's Association, 2016). Despite the incidence and prevalence of this disease, serious gaps in care for this patient population exist. To address these gaps in care, the PCPI (2014) developed specific clinical performance measures for the outpatient setting called the Dementia Performance Measure Set (DPMS) (PCPI, 2014).

Both now and in the future, the provision of primary care to older adults with dementia is crucial. According to the U.S. Census Bureau, the population of adults 65 years and older will increase from 40.3 million to 72 million between the years of 2010 and 2030 (Rose & Palan Lopez, 2012). One out of eight adults 65 years and older have Alzheimer's disease, which is the most common type of dementia (Rose & Palan Lopez, 2012). Findings in the literature support there are indeed gaps in outpatient care for patients with dementia, and the traditional structure in outpatient care has failed to meet the complex health and social needs of these patients and their caregivers in the community (PCPI, 2014).

The symptoms of dementia present differently among individuals. The Advisory Council for Alzheimer's Research, Care and Services developed quality measure recommendations to improve the quality of care for this patient population (US Department of Health and Human Services, 2016). These recommendations are the Dementia Performance Measure Set (DPMS), which are designed to address ten clinical quality improvement performance measures that include: staging of dementia, cognitive assessment, functional status assessment,

neuropsychiatric symptom assessment, management of neuropsychiatric symptoms, screening for depressive symptoms, counseling regarding safety concerns, counseling regarding risk of driving, palliative care counseling and advance care planning, and caregiver education and support (PCPI, 2014). The aims of these patient-centered care strategies are to improve the quality of care for patients with dementia and to lower health care costs. Since goals and outcomes are individualized in dementia care due to the variability in the progression of the condition, the assessment of care quality should be focused on the measurement of evidenced-based care processes that have been associated with positive outcomes in the literature (Odenheimer et al., 2013). Evidence-based treatment measures, coupled with support for patients and their caregivers, can result in successful role transitions, decreased economic costs of dementia care, and improved quality of life for patients and their caregivers (Ducharme et al., 2011). The primary care setting is an optimal setting to deliver the Dementia Performance Measure Set (DPMS) recommendations (PCPI, 2014).

Problem Statement

An independently owned, non-system affiliated primary care practice expressed a need to develop an innovative way to improve their primary care delivery to patients with dementia using the recommended strategies from the PCPI (2014). A single physician owns the primary care practice. The staff mix includes: one physician, one PhD prepared nurse practitioner (NP), two medical assistants (MA), and one office support staff. The practice participates with several insurance health plans and has a distinct payer mix. The payer mix includes: Blue Cross Blue Shield (29%), Medicare (23%), Priority Health (21%), Commercial (12%), Blue Care Network (9%), Medicaid (5%), and Workers Compensation (1%). The practice is a Blue Cross Blue Shield certified Patient Centered Medical Home (PCMH). A PCMH is a place, as well as a

model that exists to deliver high quality health care to individuals and communities.

Comprehensive, patient-centered, coordinated care, accessible services, and quality and safety are the core functions and attributes of the PCMH (Agency for Healthcare Research and Quality, n.d.). The practice is a member of an Accountable Care Organization (ACO). ACOs are systems of health organizations and providers who provide coordinated care to their Medicare patients (Centers for Medicare & Medicaid Services [CMS], 2015). With this focus, ACOs strive to provide appropriate care to patients, at the correct time, and avoid duplicative services (CMS, 2015). Because of the organization's identified need and desire to deliver high quality, coordinated care, a problem statement was created.

Based on the organizational assessment, a gap in care was identified that there was a panel of patients with dementia at the independently owned, non-system affiliated primary care practice who could benefit from the DPMS recommendations from the PCPI (2014). In addition, Medicare beneficiaries make up almost a quarter of the payer mix in the practice and are at risk for developing dementia, and to address the problem, a clinical question was created: Can a sustainable, evidence-based protocol be designed for improving primary care delivery to patients with dementia in an independently owned, non-system affiliated primary care practice?

The scholarly project work included the completion of four deliverables that addressed the design of an evidence-based protocol for primary care of patients with dementia. First, a retroactive gap analysis was completed. Second, a protocol was developed using data from the gap analysis and the information gathered from informal interviews with staff guided by questions in Appendix A. After the protocol was designed, the staff were educated about the protocol and informal interviews using the post protocol design interview questions in Appendix

A were used to gather feedback about the protocol. Third, the sustainability of the protocol was assessed in a business case that described the financial implications of utilizing the protocol.

Evidence-Based Initiative

Phenomenon of Interest

The phenomenon of interest, the provision of primary care for older adults with dementia, was explored. To inform the design of an evidenced-based protocol for primary care patients with dementia, a literature review was completed about the phenomenon of interest and the ten DPMS recommendations. The literature review was informed with searches using PubMed, CINAHL, and Google Scholar using the search terms dementia, primary care, and keywords from each of the ten DPMS. Findings from the literature reviewed highlighted the importance of the phenomenon of interest and the evidence for the ten DPMS recommendations. Findings in the literature related to the ten DPMS recommendations support these recommendations can have statistically significant, or a potentially positive impact, on primary care for patients with dementia. Many of the barriers identified in the literature can be overcome through earlier screening and intervention, enhanced patient and provider education, and improved care coordination. The evidenced based interventions were used to design a protocol for primary care visits for patients with dementia.

Shifts in external environment healthcare reimbursement supported the need to design of an evidenced-based protocol for patients with dementia in this primary care practice. The shift from fee-for-service reimbursement to value-based payments is underway. This paradigm shift is evident through the implementation of programs such as Meaningful Use, and future programs such as the Medicare Access and CHIP Reauthorization Act (MACRA) (CMS, n.d.). Meaningful Use is an electronic health record (EHR) incentive and certification program where

certified EHR technology is used to improve patient and population health outcomes, decrease health care costs, and increase the transparency and efficiency of health systems (HealthIT.gov, 2015). Like Meaningful Use, MACRA is designed to assist health professionals and organizations transition to value based care (The Network for Regional Healthcare Improvement, n.d.). Within MACRA, organizations can select from two quality payment program tracks: the Merit-based Incentive Payment System (MIPS) and Advanced Alternative Payment Models (APMs). The MIPS program allows eligible practitioners to select the activities and quality measures valuable in their practice and demonstrate performance based on those selected measures (CMS, n.d.). Eligible clinicians include physicians, physician assistants, nurse practitioners, clinical nurse specialists, and certified registered nurse anesthetists (American Academy of Family Physicians, n.d.). To qualify for the APM payment model, the clinicians must be a part of an Advanced Alternative Payment Model under CMS rules (Practice Fusion, n.d.). The organization may participate in the MIPS quality payment program if the ACO they are a member of does not meet the CMS standards for a qualifying APM. The external environment of healthcare's shift to value-based reimbursement was important to consider as the practice strives to improve the quality of care for community dwelling older adults with dementia, and seeks to develop ways to capture these quality indicators in their documentation for future evaluation and tracking.

The protocol was designed to incorporate the ability for the clinicians to query data related to the quality of care delivered to the primary care to patients with dementia in the practice. In addition, existing Medicare reimbursement structures, including billing and procedure codes and ICD-10 codes were taken into effect. This type of protocol design allowed patient data to be retrievable based on existing coding structures.

Evidence from the literature (PCPI, 2014) supported the importance of the ten DPMS measures, and the importance of the provision of preventative services to older adults in primary care (US Department of Health and Human Services, 2016). The primary care setting is an optimal setting to deliver the ten DPMS recommendations. The lack of evidence about the results of the implementation of the DPMS recommendations as a single quality improvement tool demonstrated an opportunity and necessity for further studies. Preventative services are important in the health care management of older adults, and failure to provide these services and screenings can be costly to health care systems (PCPI, 2014; US Department of Health and Human Services, 2016). The designed protocol to deliver evidenced-based care recommendations for patients with dementia was the first step towards improving the quality of care delivered to patients with dementia in primary care.

Overall, the evidence-based DPMS recommendations from the PCPI are underutilized, and the provision of preventative health services and care coordination is lacking for older adults. The development of an evidence-based protocol for dementia care in the independently owned, non-system affiliated primary care practice was the first step towards providing high quality standardized care based on the special needs of this population. Due to the lack of evidence in the literature on the use DPMS in its entirety, the future implementation will provide opportunity to assess the outcomes of the DPMS recommendations, and disseminate findings. Currently, there are no outcomes of the collective use of the DPMS recommendations as a single quality improvement tool. However, the PCPI states that the measures may affect the following outcomes for patients with dementia in primary care:

1. Delay cognitive decline.
2. Attain and maintain the highest practicable level of personal functioning.

3. Decrease the severity and frequency of neuropsychiatric symptoms.
4. Delay institutionalization of the patient.
5. Promote caregiver and patient-centered decision-making.
6. Reduce caregiver stress and burden.
7. Enhance caregiver involvement and comfort with dementia care (PCPI, 2014).

Without further action, suboptimal care for older adults will continue. The improvement of primary care delivery to patients with dementia will support the physical and social needs for patients with dementia and their caregivers. To sustain these evidence-based interventions, primary care practitioners will need to design innovative ways to deliver and monitor care delivery to patients with dementia.

Evidence for Dementia Performance Measure Set Applied to the Primary Care Setting

The Dementia Performance Measure Set (DPMS) are guidelines designed to address ten clinical quality improvement performance measures to improve the quality of care delivered to patients with dementia in the outpatient setting (PCPI, 2014). The ten recommendations are guidelines to standardize the care delivery to patients with dementia, and to improve the continuity of care across various outpatient settings (PCPI, 2014). The measures are separated into three categories: measures addressing underuse of effective services, measures addressing safety, and measures addressing underuse of patient-centered care strategies (PCPI, 2014). The DPMS recommendations include:

1. Staging of dementia.
2. Cognitive assessment.
3. Functional status assessment.
4. Neuropsychiatric symptom assessment.

5. Management of neuropsychiatric symptoms.
6. Screening for depressive symptoms.
7. Counseling regarding safety concerns.
8. Counseling regarding risks of driving.
9. Palliative care counseling and advance care planning.
10. Caregiver education and support (PCPI, 2014).

The significance of the utilization of the ten Dementia Performance Measure Set (DPMS) in the outpatient setting has been established in the literature. A succinct summary of the literature can be found in Appendix B. The PCPI (2014) defines the inclusion criteria for patients who may benefit from receiving care based on the DPMS recommendations as patients with diagnosed dementia (ICD-10) (Appendix C). In addition, the PCPI (2014) recommends assessment tools for determining if a measure has been met (Appendix D). Unfortunately, there was no literature found on the implementation or outcomes of the DPMS recommendations used as a collective, or single quality improvement tool. However, there is evidence in support of the DPMS individually. Evidence in support of the individual DPMS (PCPI, 2014) recommendations exists, and will be summarized below.

Staging of dementia. Staging of dementia is important in the delivery of primary care to patients with dementia, yet it is not frequently addressed. Validated staging tools can predict the incidence and severity of the stage of dementia (Santabarbara, 2016). Specifically, the Mini-Mental Status Exam (MMSE) is a cognitive impairment staging tool, and the association of higher incidence of dementia cases and lower MMSE scores is statistically significant ($p < 0.001$) (Santabarbara, 2016). Therefore, an individual's risk of dementia is relative to the severity of his

or her cognitive impairment. The MMSE can be used to stage Alzheimer's disease, but it has not been validated as a staging tool for non-Alzheimer's dementias (PCPI, 2014).

Dementia is known as a progressive disease in which symptoms may evolve over time (Rabins, Rovner, Rummans, Schneider & Tariot, 2014). Because of the progressive nature of the disease, treatment recommendations may differ in earlier versus later stages of the disease (California Workgroup on Guidelines for Alzheimer's Disease Management, 2008). In a community-based pilot study, researchers evaluated the effect of an educational, therapeutic, and psychosocial support program for patients with dementia and their caregivers in the early stages of the disease (Beuttner, 2006). Patients and their caregivers benefited from the holistic approach to early disease care management and intervention. Because of the intervention, Mini-Mental State Examination (MMSE), Geriatric Depression Scale, instrumental activities of daily living, and quality of life scores significantly improved, ($p < 0.05$) (Beuttner, 2006). However, the MMSE is best suited as a screening tool for dementia. There are other instruments available that can be used for staging dementia. Appendix D contains a list of recommended staging instruments for dementia. In conclusion, staging in dementia is an important step in the treatment plan for patients and their caregivers. The primary care setting is an optimal location to stage the disease, and staging can easily be performed using several instruments.

Cognitive assessment. The PCPI recommends regular cognitive assessments in patients with dementia. Clinicians can use the information gathered in cognitive assessments to individualize interventions and support for patients with dementia and their caregivers (Ducharme et al., 2011). Delayed diagnosis or interventions deprive patients and caregivers of available resources to support independence and maintain quality of life (Ducharme et al., 2011). The U. S. Preventive Services Task Force (USPSTF) outlines the most recent evidence for

cognitive impairment screening in older adults (Moyer, 2014). The USPSTF is a national panel of experts who review health literature to create evidence-based guidelines for clinical prevention services (Moyer, 2014). Cognitive impairment screening in older adults is one of the clinical prevention screenings explored by the panel. The recommendation for this screening is a Grade I recommendation. Grade I recommendations conclude there is insufficient evidence to make a recommendation based on the benefits or harms of the screening (Moyer, 2014). Specifically, there was no direct evidence of patient outcomes based on cognitive impairment screening (Moyer, 2014). This recommendation is for the primary care setting where community dwelling adults would potentially be screened for cognitive impairment. The USPSTF did find evidence that caregiver targeted interventions can have a clinically relevant benefit on caregiver burden and depression; however, the magnitude of the benefit is uncertain (Moyer, 2014). Since between 29-76% of dementia cases are undiagnosed in the primary care setting, there are potential benefits for early screening for both patients and their caregivers (Moyer, 2014). Early diagnosis of dementia provides opportunities for future planning and treatment options.

Cognitive screening and assessment was added as a free service to eligible Medicare beneficiaries through the Annual Wellness Visit, and providers are reimbursed through Medicare for the service (Moyer, 2014). The Annual Wellness Visit is performed in the primary care setting, can be performed by a physician, physician assistant, nurse practitioner, clinical nurse specialist, or medical professional who is under the supervision of a physician (Centers for Medicare & Medicaid Services, 2012). Several screening and assessment tools for cognitive impairment exist (Cordell et al., 2013). Specifically, the Mini-Cog, Memory Impairment Screen (MIS), and General Practitioner Assessment of Cognition (GPCOG) are more suitable options for the primary care setting, because they take less than 5 minutes to administer, are validated for

use in the primary care setting, are easy to administer by medical staff, have good to excellent psychometric properties, are relatively free from bias, and do not require copyright payments for use (Cordell et al., 2013).

Pharmacological interventions can be appropriately initiated if patients' dementia is regularly assessed in primary care. Clinicians can utilize the information gathered from regular assessments to monitor progression of the condition. Cholinesterase Inhibitors (ChEIs) drugs, such as Memantine, can stabilize or slow declines in cognition, function, behavior, and global change in patients with dementia (Tan et al., 2014). In the mild to moderate stages of the disease, ChEIs, including Donepezil, Rivastigmine, and Galantamine, can help increase acetylcholine levels in the brain. Memantine can be used alone or in combination with ChEIs in moderate to severe Alzheimer's disease (Farooq & Siddiqui, 2015).

The use of ChEIs can affect nursing home placements among patients with dementia. Becker, Ansel, Rohrer, and Banks (2006) studied the effect of ChEIs on the risk of nursing home placements. The study included 378 patients with Alzheimer's disease, and 50% of the patients received ChEI therapy and 50% were the control group. The risk of nursing home placement decreased by 28% in the patients receiving ChEI therapy after 12 months (Becker et al., 2006). The researchers' findings support the use of ChEIs to temporarily reduce the risk of nursing home placement among patients with dementia (Becker et al., 2006). Evidence to support use of medications to stabilize cognitive function and decrease time to nursing home placement exists (Becker et al., 2006; PCPI, 2014). However, these medications are most effective when started early in the disease progression. Therefore, there is a need for regular cognitive assessments in primary care.

Functional status assessment. The PCPI (2014) recommends regular functional impairment screenings and assessments in primary care. When functional status challenges are identified through screenings and assessments, health care providers can provide education and offer treatments or resources to patients and their caregivers. Functional decline is associated with a high risk of health decline (Colón-Emeric, Whitson, Pavon, and Hoenig, 2013). Declines in functional status are associated with the development of depression and apathy in patients with dementia, and declines in quality of life (Andersen, Wittrup-Jensen, Lolk, Andersen, & Kragh-Sorensen, 2004; Boyle et al., 2003; Starkstein, Jorge, Mizrahi & Robinson, 2005). The Barthel Index of Activities of Daily Living and the Lawton Instrumental Activities of Daily Living (IADL) are valid tools to assess functional status, but the Barthel Index of Activities of Daily Living is advantageous to the primary care setting due to the limited amount of time needed to complete the assessment (Graf, 2007; Sinoff & Ore, 1997). Primary care practices must weigh these factors when designing the best screening tool to use in their setting.

Neuropsychiatric symptom assessment. The PCPI (2014) recommends that neuropsychiatric symptoms should be regularly assessed in patients with dementia in primary care, because negative symptoms can pose potentially dangerous threats to patients and their caregivers (PCPI, 2014). In addition, neuropsychiatric symptoms have been associated with the following: accelerated cognitive decline, increased functional impairment, decreased mean survival time, increased co-morbid conditions, increased danger to self, increased danger to others, increased health care service utilization, higher risk for institutionalization, and greater caregiver stress and burden (PCPI, 2014). Therefore, a thorough assessment of neuropsychiatric symptoms is an important measure to address in the care for patients with dementia throughout the trajectory of the condition.

Management of neuropsychiatric symptoms. The symptom assessment data gathered from the neuropsychiatric symptom assessment measure can guide symptom management recommendations. Neuropsychiatric symptoms can be treated with non-pharmacological and pharmacological interventions. Non-pharmacologic interventions should be considered first, because they are less invasive for patients and their caregivers (California Workgroup on Guidelines for Alzheimer's Disease Management, 2008). Non-pharmacologic interventions can include, but are not limited to, behavioral management, education for caregivers regarding behaviors, music therapy, stress reductions for caregivers, enrollment in daycare programs, and controlled multisensory stimulation (PCPI, 2014). Pharmacologic interventions include, psychiatric symptoms such as the initiation of medications to treat psychosis or depression (Rabins et al., 2014). There are multiple non-pharmacologic and pharmacologic interventions for patients with dementia and their caregivers (California Workgroup on Guidelines for Alzheimer's Disease Management, 2008; PCPI, 2014; Rabins et al., 2014). Symptom management recommendations should be individualized and tailored to each patient's health care needs.

Non-pharmacological interventions. Several studies have been conducted to evaluate the efficacy of non-pharmacological, behavioral, caregiver focused interventions to treat neuropsychiatric symptoms. In a meta-analysis represented by 3,279 caregiver and patient dyads, Brodaty and Arasaratnam (2012) found that caregiver skills training, activity planning, home modification, and patient participation in activities had a significantly positive effect on the reduction of neuropsychiatric symptoms, ($p < 0.01$). Additionally, the intervention significantly improved the caregivers' reaction to the neuropsychiatric behaviors, ($p = 0.006$). In a randomized-controlled trial, Gitlin et al. (2008) assessed the effect of in-home activity

programming for caregiver and patient dyads on problematic patient behaviors. As a result of the intervention, problematic patient behaviors significantly decreased, ($p= 0.010$). Caregivers reported significantly lower amount of time spent having to do things for their patients, ($p=0.005$). They concluded that individualized occupational therapy activity planning can improve care recipients' engagement in activities and improve caregiver self-efficacy and caregiver skills (Gitlin et al., 2008). In addition, another study has shown that activity planning can decrease care recipients' problematic behaviors (Rabins et al., 2014). In a third study, Deudon et al. (2009) studied the effect of a staff education intervention to reduce problematic behaviors of patients with dementia in a nursing home setting. The study included 16 nursing homes and 306 patients with dementia. The Cohen-Mansfield Agitation Inventory (CMAI) was used to assess cognition at baseline, eight weeks post intervention, and 20 weeks post intervention (Deudon et al., 2009). As a result of the intervention, which include individualized staff training, feedback, and key cards with specific instructions for commonly encountered behavioral challenges with patients with dementia, there was a significant reduction in CMAI global scores from baseline to week eight ($p<0.001$) and baseline to week 20 ($p<0.001$).

The findings of these studies support the positive effect of outpatient interventions to treat neuropsychiatric symptoms of patients with dementia. Additionally, the findings of these studies support the importance of neuropsychiatric symptom management for patients with dementia in the primary care setting.

Pharmacological interventions. The effect of pharmacological treatments on neuropsychiatric symptoms experienced by patients with dementia is documented in the literature. While there is a lack of evidence to support a significant effect of pharmacologic interventions on the delay of progression of cognitive symptoms, there is emerging evidence to

support pharmacologic interventions to assist with behavioral symptoms (Rabins et al., 2014). Sultzer et al. (2008) examined the effects of antipsychotic medications on psychosis and agitated behavior in 421 patients with Alzheimer's disease. Patients were randomly assigned to receive placebo, Olanzapine, Quetiapine, or Risperidone. The patients' psychiatric symptoms, functional abilities, quality of life and care needs were assessed at baseline and 12 weeks post intervention. The results of the study showed improvement in Neuropsychiatric Inventory (NPI) score when patients were treated with Olanzapine ($p < 0.007$) or Risperidone ($p < 0.001$). Patients treated with Risperidone showed significant improvement in Clinical Global Impression of Change (CGIC) score ($p < 0.001$), which assesses clinically meaningful change in a patient's neuropsychiatric symptoms (Alzheimer Disease Research Center, n.d.) Patients treated with Olanzapine or Risperidone showed significant improvement on the Brief Psychiatric Rating Scale (BPRS) hostile suspiciousness factor ($p < 0.006$ and $p < 0.003$). Additionally, patients treated with Risperidone showed significant improvement in BPRS psychosis factor ($p < 0.010$). Unfortunately, these medications caused undesirable adverse effects for patients, and the adverse effects outweighed the small benefit of the medications for some patients (Sultzer et al., 2008). Although the results of the study are an example of pharmacological treatment effectiveness in the outpatient setting, the researcher's findings demonstrate the need for individualized care in the management of neuropsychiatric symptoms in the outpatient care setting. While some medication may offer benefit, it may be more advantageous to initially consider non-pharmacological interventions (Rabins et al., 2014).

Screening for depressive symptoms. The PCPI recommends regular depression screening for patients with dementia in primary care. Depression has been found to affect up to 50% of community dwelling patients with Alzheimer's disease (Lyketsos & Lee, 2004).

Depression in patients with dementia is a complex problem, because depression can be closely intertwined with other mood disorders experienced by patients with dementia, including delirium, apathy, psychosis, irritability, and anxiety (Lyketsos & Lee, 2004). Proper management of depressive symptoms should be individualized and monitored regularly throughout the progression of the disease (PCPI, 2014).

Evidence based screening tools for depression include the Geriatric Depression Scale (GDS) (Yesavage et al., 1983) and The Cornell Scale for Depression in Dementia (CSDD) (Alexopoulos, Abrams, Young, & Shamoian, 1988). In a validation study performed by Korner et al. (2006), the GDS and the CSDD were compared for validity, specificity, and sensitivity in adults 65 years or older. The study included 145 patients, and three groups of patients were compared: depressed patients only, depression and demented patients, and control patients. Although both tools were found to be valid screening tools for depression screening in the elderly, the CSDD had more validity in older adults with dementia, and had a sensitivity 93% and specificity of 97%; the GDS only had a sensitivity of 82% to 90% and a specificity of 75% to 94% (Korner et al., 2006). Screening for depression can help primary care providers identify patients with dementia who also have depression, and can assist in the design of early interventions to treat these patients.

Treatment for depression in patients with dementia continues to evolve, and treatment plans should be individualized and reassessed regularly throughout the progression of the disease (PCPI, 2014). There is no evidence regarding the efficacy of pharmacological treatment of depression with antidepressants in patients with dementia (California Workgroup on Guidelines for Alzheimer's Disease Management, 2008). Nelson and Devanand (2011) conducted a systematic review and meta-analysis of seven studies meeting their criteria of placebo-controlled

antidepressant studies in patients with depression and dementia. The analysis did not confirm efficacy of antidepressant treatment in this patient population; overall, the authors reported the studies included were underpowered and had confounding variables that made it difficult to determine the exact efficacy of the medications. In other studies, there was no benefit of Sertraline or Mirtazapine when compared to placebo (Banerjee et al., 2011; Rosenberg et al., 2010). In conclusion, evidenced-based screening tools for patients with dementia and depression exist, but there is not strong evidence regarding the efficacy of pharmacologic interventions for depression in this patient population.

Counseling regarding safety concerns. The provision of safety counseling for patients with dementia and their caregivers is evidenced-based and supported in the literature (PCPI, 2014). Counseling regarding safety concerns may include education or referral to services including, but limited to, fall risk, gait, balance, medication management, financial management, home safety, physical aggression to caregivers, wandering, access to firearms or weapon or dangerous materials, being left alone, inability to respond during an emergency at home, driving, suicidal thoughts or actions, abuse and neglect (Rabins et al., 2014). Safety counseling is important for patients with dementia, because many patients with dementia live at home. As the disease progresses, patients are at a greater risk for harm if these safety measures are not addressed. Proper counseling regarding safety risks and referral to resources may help patients with dementia live in their homes longer, keep patients and caregivers safe, and help maintain quality of life (PCPI, 2014).

Counseling regarding risk of driving. Driving counseling is important for patients with dementia and their caregivers. Unfortunately, there is not a single screening tool available to assess driving safety in patients with dementia (Allan, Behrman, Baruch, & Ebmeier, 2016).

Driving recommendations should be individualized as the trajectory of the condition presents at varying rates for patients. Patients and families should understand a diagnosis of dementia does not qualify as a legal reason to take driving privileges away (PCPI, 2014). Even early in the condition, dementia can increase risks of motor vehicle accidents (PCPI, 2014). Several characteristics can assist clinicians, patients, and families in the identification of driving risks. These characteristics include, but are not limited to, history of driving accidents, reported caregiver concerns about patient's driving, MMSE score of 24 or less, and impulsive personality (Iverson et al., 2010). Driving risk counseling is important, because the leading cause of injury deaths in adults 65 years and older are motor vehicle related (Joseph, 2013). In a systematic review, Iverson et al. (2010) evaluated the current evidence regarding driving safety in patients with dementia. The researchers concluded two Level A recommendations based on the results: the Clinical Dementia Rating scale is a valid screening tool to assess driving safety risk, and the patient's self-rating of safe driving is a reliable indicator for driving safety (Iverson et al., 2010). Level A recommendations are established recommendations based on at least two Class I studies, which are described in detail in Appendix E (Gronseth, Woodroffe, & Getchius, 2011). In conclusion, counseling about the risks of driving is an important topic to discuss with patients and their caregivers, regardless of the patient's stage of dementia. The primary care setting is an optimal place to discuss driving concerns.

Palliative care counseling and advance care planning. Palliative care counseling and advance care planning are inadequately addressed in the primary care (PCPI, 2014). In primary care, palliative and advance care planning should be addressed sooner, rather than later, so that the patient's wishes can be respected and not explored in crisis situations (Rabins et al., 2014). Early discussion and planning for end of life care can decrease burden on caregiver or family

decision makers at the end of the patient's life, if the patient is no longer to express his or her wishes. Survival, function maintenance, and comfort are three examples of care goals available to assist end of life discussion making (PCPI, 2014). Although it can be difficult to determine when palliative or end-of-life care is appropriate in patients with dementia, it is recommended primary care providers regularly assess patients for pain, dyspnea, and depression (California Workgroup on Guidelines for Alzheimer's Disease Management, 2008). In addition, certain diseases or factors may indicate a hospice referral is appropriate. These factors include, but are not limited to, help dependent for activities of daily living, cardiovascular disease, weight loss, diabetes mellitus, recurrent infections, oxygen therapy, decreased mobility, excessive sleep, pressure ulcers, and recent hip fracture (California Workgroup on Guidelines for Alzheimer's Disease Management, 2008). With these risk factors in mind, patients and families can establish goals to ensure the patient's wishes and autonomy are respected in the later stages of dementia.

Caregiver education and support. The importance of caregiver education and support is well documented in the literature, and is a crucial component to holistic, patient-centered health care for patients with dementia. Proactive interventions to support caregivers can result in successful role transitions, decreased economic costs of dementia care, and improved quality of life for patients and their caregivers (Ducharme et al., 2011). Throughout the dementia trajectory, patients and caregivers need education and counseling about the condition process, available treatment options, and the resources available to them (PCPI, 2014). Failure to address these factors and support caregivers can result in caregiver burden, and decreased adherence to treatment plans; however, caregiver interventions and support can reduce behavioral symptoms and decrease caregiver stress (Gitlin, 2012). Clinicians should encourage caregivers to connect with local resources that may offer respite care, day care, support groups, and educational

opportunities (Gitlin, 2012). Caregivers who are more equipped with both knowledge and resources may be able to provide or direct care that meets treatment goals and promotes quality of life for both patients and caregivers.

In an experimental study performed by Ducharme et al. (2011), the efficacy of a psychoeducational program for primary caregivers for those with dementia was evaluated. The caregiver participants were recruited from memory clinics, randomized into the intervention or no intervention group, and evaluated prior to the intervention program and three months post intervention. The caregivers reported significant improvement, ($p < 0.05$), in their confidence in dealing with caregiving situations, preparedness for caregiving, self-efficacy, planning for a relative's future care needs, knowledge of formal services, problem solving, and reframing (Ducharme et al., 2011). A limitation to the study is that the caregiver participants had baseline knowledge the care recipient had a confirmed diagnosis of dementia prior to agreeing to participate in the study. The sustainability of these types of programs in communities where financial or personal resources may be scarce is another limitation to the study. A strength of this randomized controlled study is that the findings support evidence for caregiver focused interventions to improve their ability to perform a new role and maintain positive health care transitions throughout the trajectory of the dementia disease process (Ducharme et al., 2011). By connecting patients and their caregivers with tools and resources shortly after diagnosis, caregiver wellbeing can be positively affected.

In summary, evidence to support the intervention to design of an evidenced-based protocol for primary care patients with dementia exists. There was evidence to support the use of the DPMS recommendations in primary care, and there was evidence to support the need for these interventions in the current and future climate of reimbursement. The intervention of a

designed evidence-based protocol for primary care for patients with dementia will impact reimbursement opportunities for the independently owned, non-system affiliated primary care practice through improved documentation and billing and in future value-based reimbursement programs.

Conceptual Models

Conceptual models can frame exploration of the phenomenon of interest and guide the intervention for the proposed practice change (Moran, Conrad, & Burson, 2017). The goal of this project was to develop an evidenced-based protocol to improve primary care for patients with dementia in an independently owned, non-system affiliated primary care practice.

Conceptual models or theories were used to frame and define key concepts related to primary care delivery practices to patients with dementia. Additionally, a conceptual model guided the implementation of the proposed practice change, and guided the scholarly project methodology to inform an evidence-based clinical practice change. The Transition Theory (TT) was used to frame and design key concepts in primary care for patients with dementia. The Promoting Action on Research Implementation in Health Services (PARIHS) framework was used as the implementation framework to develop an evidence-based protocol for primary care of patients with dementia.

Transitions Theory

The Transitions Theory (TT) is a middle range nursing theory developed by Meleis (2010). The TT was used to explore the phenomenon of interest, and to frame and define key concepts related to primary care delivery practices to patients with dementia. This clarified the theory regarding the phenomenon. The purpose of the TT is to advance knowledge in order to facilitate healthier transitions for patients with dementia and their caregivers. Due to the

progressive nature of dementia, transitions may include physical and mental changes, social changes, and environmental transitions. Meleis (2010) believed nurses were in the most opportune position to help people through transitions.

Major concepts of the theory include, types of patterns of transitions, properties of transition experiences, transition conditions, process indicators, outcome indicators, and nursing therapeutics. There are five propositions in the TT (Meleis, 1975). The TT model (Appendix F) illustrates relationships between the concepts with arrows, which demonstrate the propositional statements.

The TT has been used as a theoretical framework in scholarly research and practice for those with dementia. Rose and Palan Lopez (2012) utilized the TT to design preventative interventions to guide patient and caregiver needs along the trajectory of dementia. They found several predictable and common transitions occur during dementia (Rose & Palan Lopez, 2012). The application of the TT includes the identification of these common events in order to facilitate healthy change processes for those who have dementia and their caregivers. In a second study, Ducharme et al. (2011) utilized the TT as a framework for the design of a proactive program to learn how to become a family caregiver. The results of these studies support the use of TT in older adults with dementia. Therefore, the TT was used to guide the development of an evidence-based protocol for primary care delivery to patients with dementia in this project.

Assumptions. The theory's assumptions were applied to patients with dementia in primary care. Nurses, including Nurse Practitioners (NPs), in primary care have an opportunity to facilitate smooth and successful transitions for patients with dementia and their

caregivers. Transitions along the dementia trajectory can be supported through the implementation of the DPMS quality improvement recommendations (PCPI, 2014).

Concepts. The concepts of the TT were applied within the context of the phenomenon of interest and included: types of transitions, properties, transition conditions, and process and outcome indicators.

Type of transition. In TT, the four types of transitions include: developmental, situational, health and illness, and organizational (Meleis et al., 2000). During the provision of primary care for patients with dementia, the transitions may often be related to health and illness transitions due to the nature of the condition. The type of transition may be situational due to changes in patient environment or psychosocial challenges.

Properties. The properties of TT can influence transition conditions and patterns of response. The DPMS recommendations (PCPI, 2014) to regularly assess cognition and properly stage the dementia can assist in patient and caregiver awareness. For successful transitions, patients and caregivers must be engaged in the care plan. The DPMS recommendations to manage neuropsychiatric symptoms, counsel regarding safety and driving risks, counsel regarding palliative care and end of life decisions, and the provision of caregiver education and support can help facilitate engagement. Due to the condition, patients and their caregivers may experience changes in their relationships and daily routines. As the condition progresses over time, or transition time span, interventions to address the various needs along the dementia trajectory are crucial. The fifth transition property, critical points and events, are associated with an identifiable marker event (Meleis et al., 2000). Several of the DPMS (PCPI, 2014) recommendations parallel this property, as the recommendations involve screening for, planning for, or addressing specific care or social need points along the dementia trajectory.

Transition conditions. Personal, community, or society-based conditions can facilitate or inhibit transitions in dementia care. Personal meanings, cultural beliefs and attitudes, socioeconomic status, and preparation and knowledge can facilitate or inhibit transitions along the dementia trajectory (Meleis et al., 2000). Transition conditions were applied to the DPMS recommendations (PCPI, 2014), because the measures addressed the underuse of effective services and safety measures, or the underuse of patient-centered care strategies (PCPI, 2014). The use of the ten DPMS (PCPI, 2014) recommendations in the protocol may facilitate healthy transitions for patients with dementia and their caregivers.

Process and outcome indicators. An evaluation of process and outcome indicators can assist in determining if transitions are healthy (Meleis et al., 2000). Process indicators include feeling connected, interacting, location and being situated, developing confidence, and coping. Two outcome indicators characterize a healthy transition: mastery and fluid integrative identities (Meleis et al., 2000). Improving the quality of primary care for patients with dementia and their caregivers will provide patients with their health care needs and resources. The delivery of high quality primary care to patients with dementia will also support role transitions and help patients and their caregivers maintain their identities amidst the challenges of dementia. Nursing therapeutics can positively influence the nature of transitions, transition conditions, and patterns of response (Meleis et al., 2000). Nursing therapeutics were applied within the context of the phenomenon of interest to design a protocol to improve primary care delivery to patients with dementia.

Implications for nursing practice. The TT guided the care recommendations that were incorporated into protocol for the Nurse Practitioner (NP) (Ducharme et al., 2011; Rose & Palan Lopez, 2012). Proactive, early nursing interventions can facilitate healthier transitions in those

with dementia. In order to intervene appropriately, the designed protocol recommends the NP assess for specific transitional markers in older adults with dementia. The NP can serve in several roles throughout the commonly encountered transitions in dementia (Rose & Palan Lopez, 2012). The commonly encountered transitions are associated with transitional markers. The transitional markers include: initial diagnosis, financial concerns, advanced care planning in health care considerations, driving, managing behavioral symptoms, changes in care setting, and end of life. After the initial diagnosis, the NP can plan, coordinate, educate and create awareness for the patients and their families or caregivers. The NP can educate patients with dementia and their caregivers about financial and legal situations they may encounter, and the NP can refer them to resources. The NP can establish trust in the caregiver relationship. In advanced planning health care considerations, the NP can help the patient and their families organize care documents and discuss advance directive options. The NP can educate and coach families when driving is no longer appropriate for the patient. Patients with dementia may exhibit challenging behaviors. The NP can develop the best course of treatment using non-pharmacological and pharmacological agents to decrease problematic behaviors. The NP can coordinate, plan, and prepare patients during care setting changes. In the patient's transition to the end of life, the NP can serve as a knowledgeable resource for best practice and end of life decision-making. The NP can help patients and their families or caregivers decide whether to pursue comfort or prolong life. Anticipatory guidance by the NP in these transitions and through the application of the DPMS recommendations may facilitate smooth and successful transitions along the dementia trajectory in primary care (Rose & Palan Lopez, 2012).

Promoting Action on Research Implementation in Health Services (PARIHS) Framework

The PARIHS framework is a conceptual model that was used to guide the implementation of the proposed evidenced-based practice change and to guide the scholarly project methodology to improve primary care for patients with dementia in the organization. The PARIHS framework consists of three concepts: perceptions of evidence, organizational culture and climate, and facilitation (Kitson, Harvey, and McCormack, 1998). The model is depicted in Appendix G. Each of these concepts were described and applied to development of an evidenced-based protocol for primary care for patients with dementia in an independently owned, non-system affiliated primary care practice.

Evidence. Evidence can affect the success of the implementation of evidence-based practice change (Kitson et al., 1998). Research, clinical expertise, and patient choice further define the perceptions of evidence and how each relates to the phenomenon of interest (Kitson et al., 1998). In order for the proposed practice change to be successful, the evidence needed to be strong. The ten DPMS recommendations (PCPI, 2014) are based on evidence that strongly support a holistic and standardized approach to primary care for patients with dementia.

Preventative services are important in the health care management of older adults, and failure to provide these services and screenings can be costly to health care systems. In addition, dementia care is costly, and patients with the diagnosis of dementia will cost the nation \$236 billion in 2016 (Alzheimer's Association, 2016). Improved care based on the ten DPMS evidence-based recommendations and preventative services may result in decreased health care costs due to an upstream approach to care versus a reactive approach to care in crisis situations among patients with dementia (PCPI, 2014; US Department of Health and Human Services, 2016). The dementia visit protocol will serve as a vehicle to provide preventative care, and serve

as a platform to coordinate the delivery of evidence-based primary care to patients with dementia in the independently owned, non-system affiliated primary care practice. The designed evidence-based protocol, coupled with a devoted leadership team, will facilitate successful delivery of primary care for patients with dementia in the organization.

Context. Context in the PARIHS framework is the environment or organizational culture and climate where the implementation takes place (Kitson et al., 1998). The culture, leadership, and measurement further influence the context of the practice change. Through the lens of the PARIHS framework, higher levels of context will facilitate a more successful implementation of evidence based into practice (Kitson et al., 1998). Upon completion of the organizational assessment, it was evident the organization was in need and motivated to improve primary care delivery to patients with dementia through the development of an evidence-based protocol. The organization has a panel of patients who could benefit from the DPMS (PCPI, 2014) recommendations, and the NP in the practice has flexibility within her daily schedule to accommodate for more time-consuming visits with patients with dementia and their caregivers.

Culture. A learning organization that is patient centered, values people, and values continuing education is considered a higher culture in context. The organizational culture guides the behaviors of the individuals within the organization (Burke & Litwin, 1992). The culture may affect the organization's ability to change the delivery of primary care to patients with dementia. Due to the limited employees in this independently owned, non-system affiliated primary care practice, there are few overt rules. The overall behavior of the organization is largely influenced by the collective desire of the employees to provide patient-centered care to their patients. The employees highly value respect. Their value for respect is evident in how they communicate with one another and to patients. The culture is very "team-focused." With

very few members to the team, every employee understands their importance and role within the culture of the organization.

Leadership. High levels of leadership include organizational characteristics of clear roles, effective team work, effective organizational structure, and clear leadership (Kitson et al., 1998). The leadership of the independently owned, non-system affiliated primary care practice may affect the organization's performance and ability to change. There is not a specific organizational chain of command, but the physician is considered the leader of the organization. Although the physician provides the overall direction for the organization, he is open to the insight and perspectives of the other employees. For example, the office also employs a PhD prepared NP. The physician and the NP work together on many of the organization's initiatives. According to the physician, the NP is a valued partner in the leadership of the practice. The leadership style of the physician is servant leadership. He is a supportive leader, who does not strive to micromanage the staff. The leadership of the organization will be explored in the proposed project in order to develop the protocol, business, and evaluation plan.

Measurement. High levels of measurement influencing a higher culture include: routine use of internal measures, routine feedback, peer review, and external measures (Kitson et al., 1998). In general, the independently owned, non-system affiliated primary care practice is a highly productive practice as evidenced by their ability to sustain business privately and provide safe care to individuals within their community apart from the larger health systems in the area. However, the practice does not currently measure or evaluate its effectiveness in their delivery of the ten DPMS recommendations. Therefore, the protocol was designed to enhance the clinician's ability to measure dementia care delivery based on the DPMS recommendations. Structured data and data that can be queried were customized in the protocol. The organization

values a strong, collaborative relationship between the physician and the NP. The physician and the NP believe the creation of a primary care delivery system that maximizes the talents of each profession will result in improved productivity, patient outcomes, and team moral (Schumacher & Williamson, 2016). This innovative focus and structure exemplifies the organization's shift and evolution to a value-based reimbursement health care delivery climate.

Facilitation. Facilitation includes the characteristics, roles, and styles required to successfully implement evidence into practice (Kitson et al., 1998). Within the context of the PARIHS framework, higher levels of characteristics, roles, and styles will positively affect the organization's ability to implement change (Kitson et al., 1998). High levels of respect, empathy, authenticity, and credibility are characteristics that can assist in the facilitation of the proposed practice change. The leadership of the organization is highly accessible, and they are credible and trusted health care providers. Factors that influence high role facilitation include access, authority, and successfully negotiated change agenda. The staff at the organization work as a team each day, and successful changes have been facilitated through high levels of communication and education in the past. Higher levels of flexibility, consistency and support are styles that facilitate organizational change (Kitson et al., 1998). The leadership of the organization is passionate about providing high quality health care to their patient panel. Their passion is evident in their desire to be innovative and implement the evidence-based DPMS recommendations in the practice. Upon completion of the protocol, the staff were educated about the protocol. This was an important aspect of the project work, because the successful implementation of evidence-based care is contingent on facilitation and equipping the staff with the necessary knowledge and resources to implement the protocol in the future. Consideration of

the evidence, culture, and climate assisted in the design of an evidence-based model for primary care of patients with dementia.

Need and Feasibility Assessment of the Organization/Population

Need

An independently owned, non-system affiliated primary care practice expressed a need to develop an innovative way to improve the primary care they deliver to their patients with dementia using the recommended strategies from the PCPI (2014). The problem was that there was a panel of patients with dementia at the practice that could benefit from a protocol for primary care based on the DPMS recommendations. In addition, Medicare beneficiaries make up almost a quarter of the payer mix in the practice. The goals of PCMH and ACO are to provide comprehensive, high quality, evidenced-based care to patients. The organization expressed a desire to provide this type of care to their patients with dementia by developing a protocol for dementia care using the DPMS recommendations (PCPI, 2014).

Feasibility

The feasibility of the protocol was assessed throughout the project. There was evidence to support the use of the ten DPMS recommendations in primary care, and there was evidence to support the need for these interventions in the current and future climate of reimbursement (PCPI, 2014). Prior to beginning the protocol development, the feasibility of the protocol development was assessed. The assessment of the current state of dementia care in the independently owned, non-system affiliated primary care practice informed the development of a feasible protocol to implement in the office. The protocol was designed with consideration of the current number of employees and their current use of the electronic health record. Since there are only two providers in the office, educating necessary staff about how to utilize the

protocol was feasible. In addition, it was likely the NP will be providing a majority of the dementia protocol visits. To guide the development of the dementia visit protocol the following considerations were addressed: frequency of the visits, content of visits, comprehensiveness of visits, electronic documentation, and quality measure reporting.

This scholarly project also included a business case to assess the sustainability of the protocol in the independently owned, non-system affiliated primary care practice. The business case included the estimated cost of the delivery of dementia care through the protocol in the context of provider time and visit complexity. The information gathered from the business case established the rationale for the implementation and continuation of the protocol in the practice in the future. The organizational leadership recognized the importance a protocol to assist in the optimization of quality measurement and the evaluation of value-based care for future reimbursement opportunities.

Project Plan

Purpose of Project

The purpose of the scholarly project work was to design an evidence-based protocol for primary care of patients with dementia in an independently owned, non-system affiliated primary care practice.

Objectives

Efforts to design a protocol to provide evidence-based care to primary care patients with dementia in an independently owned, non-system affiliated primary care practice were evaluated by developing a quality improvement process to meet the following objectives:

- Design a sustainable evidenced-based protocol for the delivery of primary care to patients with dementia by March 1, 2017.

- Develop a business plan to assess the sustainability of the protocol by March 1, 2017.
- Disseminate work to key stakeholders for acceptance for implementation of the protocol by the NP by April 29, 2017.

Type of Project

This project was a quality improvement project incorporating evidence-based recommendations to improve primary care to patients with dementia. The protocol development was informed by assessing the current state of primary care delivered to patients with dementia at the organization based on the ten DPMS recommendations. The current state of care was evaluated by performing a gap analysis of office visits for eligible patients with a dementia diagnosis (Appendix C) from October 1, 2015 to October 1, 2016. This baseline data highlighted gaps in care, and will be used as baseline information for future protocol analysis after the protocol is implemented by the NP in the future. The scholarly project work incorporated the needs identified by key stakeholders. This project explored the sustainability of the protocol through the development of a business case. The information gathered from the gap analysis, pre/post protocol interviews, protocol design, and business case development outlined the feasibility for the organization to provide comprehensive dementia primary care to their patients.

Setting and Needed Resources

The setting for the DNP scholarly project was an independently owned, non-system affiliated primary care practice. A physician privately owns the practice. The physician and the Nurse Practitioner (NP) deliver primary care to patients. The NP will provide a majority of the dementia care outlined in the protocol in the future, if the key stakeholders in the practice accept the protocol. The project did not include the implementation of the proposed protocol, because the first step in the implementation of evidence-based practice was to gather baseline data and

develop evidence-based guidelines to assure successful implementation of safe and high quality care. The needed resources for the project included access to the organization's electronic health record, a computer to record baseline data, and an encrypted jump drive to store patient data, staff educational assessment information and staff characteristics. Additionally, time from the clinicians and support staff was needed throughout the scholarly project work. Approximately one hour of the provider's time was used for education and evaluation of protocol. Additional provider time needed included consultation regarding use of the electronic health record and the organization's use of quality reporting, because the providers are experts in care delivery in the practice and are very familiar the electronic health record and how the practice reports quality data to insurance payers.

The independently owned, non-system affiliated primary care practice utilizes the Nurse Practitioner (NP) in an innovative way. The NP negotiates for additional time with patients, rather than being solely reimbursed for the services she provides. In general, the physician performs more patient visits than the NP. This structure works well in the organization, because the physician can bill more for his services in the current fee for service model, and the NP can spend additional time with complex patients in the practice. The practice describes their innovative provider structure as a recipe for success (Schumacher & Williamson, 2016). This benefit has never formally been evaluated, but it continues to be sustainable within the practice. With an innovative care team focus and enhanced patient visit time allotted, the NP in the organization will be the clinician implementing the protocol in the future. The NP specializes in gerontology, and has an additional certification as a Geriatric Nurse Practitioner (GNP). The NP is the champion of the primary care dementia protocol development. Additionally, the physician is supportive of these efforts but is also concerned about how the clinicians deliver primary care

to this vulnerable population. While the focus of the scholarly project work was to design the protocol, the NP hopes to implement the protocol later, and utilize the baseline patient data gathered during the implementation of the scholarly project for future gap analyses completion.

The organization believes the creation of a primary care delivery system that maximizes the talents of each profession will result in improved productivity, patient outcomes, and team moral (Schumacher & Williamson, 2016). This innovative focus and structure exemplifies the organization's shift and evolution to a value-based reimbursement health care delivery climate, and the protocol will assist in organization's ability to optimize quality of care measurement and provide a vehicle to become a sustainable, value-based primary care practice.

Design for the Evidence-Based Initiative

The PARIHS framework was used to guide the design for an evidence-based protocol for primary care patients with dementia in the independently owned non-system affiliating primary care practice.

Evidence. For the practice change to be successful, the evidence needed to be strong. A review of the literature was completed for the ten DPMS recommendations, and the information gathered guided the protocol development to support a holistic and standardized approach to the delivery of primary care for patients with dementia. In addition, the gaps in current dementia care were highlighted in the retrospective gap analysis. The themes identified were used to inform the design of the dementia visit protocol.

Context. The culture, leadership, and measurement were considered as the context for the practice change. The culture of the organization is supportive and "team focused." Overall, the staff members are passionate health providers who value the patients they serve. The physician owner, and organizational leader of organization, is supportive of the change, and the

staff characterizes his leadership as servant leadership. The PhD prepared NP is also supportive of the protocol development. In addition, the measurement and evaluation of the gaps in care, staff education, and quality improvement efforts of the protocol were important contextual factors for the successful implementation of this project.

Facilitation. In the protocol design process, the characteristics, roles, and styles were considered for the successful implementation of the evidence-based guidelines into practice (Kitson et al., 1998). The leadership of the independently owned, non-system affiliated primary care practice was highly accessible, and they are credible and trusted health care providers. The staff at the organization work as a team each day, and successful changes have been facilitated through high levels of communication and education in the past. The leadership of the organization is passionate about providing high quality health care to their patient panel. Their passion was evident in their desire to be innovative and implement the evidence-based DPMS recommendations in the practice.

Participants

The participants of the scholarly project work were the staff at the independently owned, non-system affiliated primary care practice. This included the physician, NP, MAs, and office support staff. The business case was presented to the physician and the NP. The protocol education and pre/post protocol design interviews were completed with the physician and the NP. As the owner of the practice, the physician makes all final decisions on care delivery and financial implications for new care models for the practice. The NP is a key leader in the protocol development, because she will be providing majority of the dementia visits in the future.

Measurement: Sources of Data and Tools

To answer the clinical question, several sources of data and tools were needed. A retrospective chart review, protocol template design, and business plan influenced the design of the protocol. In addition, the protocol design took into consideration the feedback from the pre- and post-interview questions (Appendix A).

A retrospective chart review and gap analysis provided baseline data that could be used later to evaluate quality improvement efforts related to dementia care. The retrospective chart review and gap analysis were completed based on the ten DPMS recommendations. The patients' charts were selected based on eligible ICD-10 diagnoses displayed in Appendix C. These diagnoses are recommended for inclusion from the PCPI (2014). To evaluate if a DPMS measure was addressed, the assessment tools in Appendix D were utilized. The PCPI (2014) recommends the ten DPMS be addressed at least once over a 12-month period. Therefore, the retrospective chart review and gap analysis included patients with an eligible dementia diagnosis (Appendix C) who had office visits in the independently owned non-system affiliating primary care practice from October 1, 2016, to October 1, 2016. The patient information was deidentified. The evaluation tools used to document the gap analysis data are displayed in Appendix D.

Patient demographic data was also gathered in the gap analysis step of the project. The tools used to document the data are displayed in Appendix H. The patient demographics included the patient's age and gender. In addition, the number of office visits in past 12 months was assessed. However, this data was not analyzed as there were many confounding variables related to office visits and DPMS documentation. The reasons for the office visits were not necessarily for dementia care, so the project did not include a further analysis of this. The

protocol design included a customized office visit reason that could be used. A standardized office visit reason is one way the clinicians can identify dementia care visits in the future.

After the gap analysis was completed, the protocol for the delivery of primary care to patients with dementia in an independently owned, non-system affiliated primary care practice was designed. Part of the protocol was to design templates for patient visits. The protocol design was influenced by feedback received from the pre/post interview questions (Appendix A). The customized templates were based on existing Medicare reimbursement structures including existing ICD-10, billing, and procedure codes. Eleven templates were built. Ten of the templates were customized for the ten DPMS recommendations. These templates included CPT II codes associated with the corresponding DPMS measure. This was significant, because CPT II codes can be queried in the electronic health record's registry. Therefore, this customization will improve the documentation, monitoring, and evaluation of the evidence-based care provided to patients with dementia based on the DPMS recommendations. The single visit template was customized for the organization's electronic health record. It contains detailed information that will support the complexity of dementia focused visits. The protocol was designed based on existing structures with consideration for future changes in reimbursement structure.

Upon completion of the protocol design, the physician and NP were educated on protocol utilization. The educational session took approximately one hour. In addition, the business case for financial sustainability for the current and future reimbursement climate was presented to the physician and NP. The business case included information related to reimbursement opportunities for effective and proper billing and coding using the customized templates specifically designed for the dementia visit protocol.

Steps for Implementation of Project, including Timeline

The implementation of this DNP scholarly project included the completion of the following (Appendix I):

Design: Gap analysis

- Selected patient panel for retroactive chart review and gap analysis completed for baseline data. The retrospective chart review included patients with an eligible dementia diagnosis (Appendix C) seen in the independently owned, non-system affiliated primary care practice from October 1, 2015, to October 1, 2016.
- Created a key for baseline data that de-identified patients selected for retrospective chart review by February 1, 2017; locked up key at site, and destroyed key by April 29, 2017.
- Gathered baseline data by February 1, 2017. The tool for gathering data can be found in Appendix H.
- To ensure the security of the baseline patient data, the patient data was stored on an encrypted jump drive.
- Analyzed baseline data through Excel by February 1, 2017. Data was analyzed by computing the percentage of patients who received care based on the ten DPMS in its entirety and the percentage of patients who received care based on the ten DPMS separately.
- After the project was completed by April 29, 2017, the patient and staff data on the encrypted jump drive were stored in a locked file at the graduate institution.

Design: Protocol

- A protocol was designed that would be used in the electronic health record by March 1, 2017.

- Conducted an interview of the physician and NP using the pre-protocol design interview questions (Appendix A) by February 1, 2017.

Sustainability

- Educated staff in one-hour session about the protocol, and conducted an interview with the physician and NP using the post protocol design interview questions (Appendix A) by March 1, 2017.
- Interview feedback was kept on the encrypted jump drive.
- Developed a business case to share with key stakeholders at the organization by March 10, 2017.
- Reported results to key stakeholders by April 29, 2017. The project results, including protocol and business case were delivered to key stakeholders in the organization.

Ethics and Human Subject Protection

Prior to the implementation of the project, an application was submitted to the graduate university's Human Research Review Committee's (HRCC) for Institutional Review Board (IRB) determination. After the review, the scholarly project work was found to be a quality improvement initiative (Appendix J). The organization approved and accepted the human research determination conclusion from IRB. Documentation of this approval can be found in Appendix K.

This project work did not include the implementation of the protocol, and there was no contact of human subjects during the project. The organization wishes to implement the protocol in the future. The proposed scholarly project included the collection of patient data to establish baseline data for future assessments of protocol effectiveness. To ensure the protection and safety of the patient data gathered and the staff feedback from the pre/post protocol design

questionnaire, the information was stored on an encrypted jump drive. The key for the baseline data was stored in a locked place at the organization. The key was destroyed by April 29, 2017. Upon completion of the scholarly project the encrypted jump drive was placed in a secure room monitored by graduate institution staff, and it will remain there for five years.

Budget

To assess the sustainability of the protocol, the project included the formation of a business case. The protocol was developed with no direct cost to the organization. However, indirect costs of provider and support staff time were needed for this project. The educational session and survey completion took approximately one hour. Using national salary averages, this accounted for approximately \$46 in loss productivity time for the NP (Nurse Journal, n.d.), and approximately \$85 in loss productivity time for the physician (Glassdoor, 2015).

Project Outcomes

Project implementation included the evaluation of outcomes of the gap analysis, protocol design, informal interview feedback, and the sustainability of the protocol reflected in the business plan. The data from the gap analysis, proposed protocol, and business plan was disseminated to the organization's staff members on March 14, 2017. The following project outcomes were realized upon the completion of this quality improvement work.

Gap Analysis

The retrospective chart analysis and gap analysis were completed and the results were analyzed. A summary of the results can be found in Appendix K. Several themes were identified in the gap analysis:

- Theme 1: While the average of the total number of DPMS recommendations addressed was 6.27 out of 10, standardized tools specific to each measure were not utilized. Criteria

for DPMS recommendations were met for several DPMS recommendations based on subjective or qualitative data only.

- Theme 2: In patients who had more DPMS recommendations documented, the visit note contained information from pre-populated dementia focused templates. Prior to the implementation of this quality improvement work, the practice had two pre-populated dementia templates; however, the templates were not specifically designed to incorporate the DPMS recommendations, and the only standardized screening tool used in the templates was the Mini-Mental Status Exam.
- Theme 3: The staging of dementia and discussions about palliative care counseling and advanced care planning were documented the least frequently (less than 50% of the patients). The neuropsychiatric symptom assessment and management were documented most frequently (greater than 80% of the patients). However, a standardized assessment or management tool was not used for these DPMS recommendations.
- Theme 4: At the organization's request, subjective or qualitative information documented in patient encounters was used to assess if DPMS criteria was met. This type of documentation could not be tracked electronically for reporting. The criteria used to assess the documentation can be found in Appendix D.

Patient demographics and visits. Thirty patients met the criteria for the gap analysis. The criteria included, patients with an eligible dementia diagnosis (Appendix C) who had office encounters from October 1, 2015 to October 1, 2016. Fourteen of the patients were females, and 16 were males. The average age of the patients was 78.77 years old. The youngest patient was 15 years old, and the oldest patient was 96 years old. The average number of office visits was

3.97 visits. The minimum number of office visits was one, and the maximum number of office visits was 14.

Gap analysis of dementia performance measure set recommendations. After the patient visits and demographic data were collected, a gap analysis was completed based on the DPMS recommendations from the PCPI (2014). The office visit encounters and patient documents were evaluated from October 1, 2015 to October 1, 2016. The recommended criteria from the PCPI (Appendix D) was used to determine if a DPMS measure was addressed. Of the 30 patients analyzed, the average number of DPMS recommendations addressed was 6.27 out of 10. The minimum number of DPMS recommendations addressed was 2, and the maximum number of DPMS recommendations addressed was 10. See Appendix L for a summary of the gap analysis results.

Measure #1: Staging of dementia. Four of the 30 patients (13.33%) with a diagnosis of dementia were staged. All of these were classified as mild. A specific tool to assist in the staging of the dementia was not identified in the patients' charts.

Measure #2: Cognitive assessment. Cognition was assessed on 22 of 30 patients (73.33%) with dementia, using the MMSE for 17 of the 22. Other cognitive assessment tools included, the GPCOG, SAGE, MIS, MOCHA, and the Mini-Cog. No formal tool was used to assess cognition in 2 of the 30 patients. Some patients were assessed using multiple cognitive assessments in the 12-month period. For a depiction of the cognitive assessment tools used, see Appendix L.

Measure #3: Functional status assessment. Functional status was assessed or reviewed on 17 of the 30 patients (56.67%). A specific functional assessment tool was not used. In

addition, 5 of the 17 patients' functional status were assessed using a pre-templated assessment called the "Medicare Specific Prevention Items."

Measure #4: Neuropsychiatric symptom assessment. Twenty-eight of the 30 patients' (93.33%) neuropsychiatric symptoms were assessed. A standard assessment tool was not used. The documentation included qualitative information that the patient did not have neuropsychiatric symptoms.

Measure #5: Management of neuropsychiatric symptoms. The number of patients who received or were recommended neuropsychiatric symptom management was 26 of the 30 patients (86.67%). The interventions received or recommended included: Trazadone, Prozac, Aricept, Namenda, Exelon, Ativan, Melatonin, Remeron, Intuniv, Concerta, Imipramine, Vyvanse, Adderall, Risperdal, Lamictal, Celexa, Galantamine, Mirtazapine, Donepezil, Cymbalta, Quetiapine, Keppra, Seroquil, Effexor XR, Escitalopram, Zoloft, and Haldol. Some of the treatments were received or recommended in the office, and some were received or recommended by clinicians outside of the practice. The documentation of the treatments received or recommended outside of the office were found in the patient document section, and may include a visit to a neurologist, for example.

Measure #6: Screening for depressive symptoms. Depression screening was completed for 21 of the 30 patients (70%). However, 15 of the 21 patients were assessed without a formal tool. In the patient chart, the documentation included, "no particular depression" in the objective exam, or "negative for depression" in the subjective exam. These are descriptive options in the template selections built within the electronic health record, but they do not include an assessment tool. The PH-Q2 was used to screen for depression in five of the patients, and the PH-Q9 was used to screen one patient.

Measure #7: Counseling regarding safety concerns. Twenty-four of the 30 patients (80%) were counseled or referred regarding safety concerns. Driving was considered a safety topic, but was also its own DPMS recommendation. In addition, much of the counseling discussion topics were documented from a pre-templated form. The templated discussion stated, “discussed resources for commission on aging, handicap stickers, driving implications and caregiver resources.” Documentation for this recommendation included services from outside resources including, physical therapy, home health services, in-home nursing, or a counseling referral.

Measure #8: Counseling regarding risks of driving. Counseling regarding risks of driving was addressed with 16 of the 30 patients (53.33%). Of the patients who were counseled, 100% of the patients were counseled on the risks of driving. None of the patients were counseled on alternatives to driving.

Measure #9: Palliative care counseling and advanced care planning. To meet the criteria for this DPMS recommendation, at least one of the following had to be addressed: counseled about palliative care, counseled about symptom management, counseled regarding end of life care, or copy of advanced care plan or surrogate decision maker was in the patient’s medical record. These four recommendations were addressed for 10 of the 30 patients (33.33%). One patient was counseled about palliative care. One patient was counseled about symptom management. Two patients were counseled regarding end of life care, and nine patients had a copy of their advanced care plan or surrogate decision maker in their medical record. Some patients were counseled about more than one of the four recommendations (Appendix L).

Measure #10: Caregiver education and support. Twenty-three of the 30 patients (76.67%) had documentation of caregiver education or support or documentation of referral to

additional resources. Caregiver education or support was addressed in 22 of these 23 patients. Fifteen of the 23 patients and caregivers were referred to additional resources. Some of the patients and caregivers received both education or support and a referral to additional resources. In addition, some of the documentation included a templated discussion stating, “discussed resources for commission on aging, handicap stickers, driving implications, and caregiver resources.”

The information gathered in the gap analysis was used to inform the design of the protocol. Based on the themes identified, structured data that can be queried and standardized assessment tools were included in the protocol. To improve the effectiveness and efficiency of documentation, ten pre-populated templates for the ten DPMS recommendations were also included in the protocol design. Each DPMS recommendation is associated with a specific CPT II code, and these codes were customized in each DPMS template. CPT II codes can be queried in the organizations electronic health record. This will provide an option to ease future ability to query DPMS documentation and evaluation.

Protocol Design

The second objective for this scholarly project was met by the completion of an evidence-based protocol for the delivery of primary care to patients with dementia in the independently owned, non-system affiliated primary care practice. The majority of the scholarly project involved creating a foundation to efficiently document, monitor, and evaluate the care provided to patients with dementia in the practice. This objective was met by completing the design of 11 customized templates, the creation of structured data to query the DPMS recommendations, and further customization in the EHR to standardized and structure screening tools to address the DPMS recommendations. The protocol can be found in Appendix M. For each of the sections

below, a background is provided and, if applicable, a step by step guide on how to utilize and customize the EHR to enhance the documentation and monitoring of the DPMS

recommendations. The protocol contains the following:

- Background: Dementia in primary care
- Identification of eligible patients
- Patient explanation of comprehensive dementia care
- Scheduling a patient for a comprehensive visit
- The delivery of comprehensive dementia care
- Utilization of standardized screening tools
- Quality improvement
- Monitoring and evaluation of the quality improvement initiative
- Billing

Pre/post protocol design interviews. Information gathered from the pre/post interviews with key stakeholders in the practice were used to guide the development of the dementia care protocol. The questions used to guide the informal interviews can be found in Appendix A. Feedback from the key stakeholders included discussions about the topics below.

Pre-protocol design. Strategies to integrate a new protocol into the delivery of care provided to patients included, support from all staff members and key stakeholders, and education to staff members on how to incorporate the visit into the practice. One of the strategies considered in the protocol design was the design of a detailed document for staff reference after the project is complete. The second strategy included the delivery of information about the protocol through an educational lunch in the office. In addition, the consideration of

the option to incorporate visit components into any office visit was important, because some patients may not desire to schedule an additional visit to the office.

The organization's electronic health record has the option to design and modify templates for patient visits. To the clinician's knowledge, there was not a limit to the number of templates that could be built or added to a patient encounter. Therefore, numerous templates were created for the DPMS recommendations. Templates were customized for each of the ten DPMS recommendations, and one template was customized for a comprehensive dementia office visit. These templates came at no additional cost, and they can be modified in the future. Detailed instructions about how to add, remove, or modify template information was included in the protocol for staff reference.

The clinicians in the practice were open to suggestions as to how to document and monitor the dementia care initiatives included in the protocol. During the implementation of the project, options for monitoring the DPMS were identified. CPT II codes associated with each individual DPMS measure were customized into each DPMS template. In the EHR's registry, CPT II codes can be queried. In addition, any item can be customized to be structured data. Structured data can be queried in the registry.

During and after the implementation phase of the project, the clinicians identified a preference on how additional visits would be scheduled. The practice is closed to new patients, and the provider's schedules have limited availability. However, the PhD prepared Nurse Practitioner is already allotted additional time with patients. Conclusions from this discussion included that the NP could provide this comprehensive dementia care, and it may be a sustainable option to continue the protocol in the future.

Post-protocol design. Overall, the key stakeholders believed the protocol could be incorporated into daily practice at the organization. However, the conclusion for this topic was that if the visits were more time consuming, comprehensive visits would be best provided by the NP, because she is already allotted additional time with patients.

Potential barriers and facilitators were identified by the key stakeholders. While the NP is currently allotted additional time with patients as compared to the physician appointments, the NP's employment and continued allotment of additional time will affect the dementia visit sustainability. Additional expense for the patient was identified as a potential barrier. If the NP codes office visits appropriately for comprehensive visits or codes that reflect time spending counseling, the patients may be responsible for a co-pay or higher co-pay, depending on their insurance. Utilization of the new templates and screening tools could be a barrier and/or a facilitator. The new features built within the EHR may decrease the amount of time needed for documentation of complex care, because the templates contain pre-populated information. However, it is also possible the templates will increase the amount of time needed to document office encounters, and the clinicians will need to learn how to use the templates efficiently. A facilitator of the protocol is that the data captured in the templates and structured data created can be queried in the future. The ability to query patient data in the future will allow the organization to monitor quality initiatives and document quality of care for insurance payers.

Key stakeholders identified it would be beneficial to have a detailed instruction manual for protocol use. In addition, the instruction manual would include, how to add, modify, or remove customized items in the EHR, and it would be helpful to have instruction on how to create and query structured data.

Business Case

The sustainability of the protocol design was assessed in the business case outlined in Appendix N, and demonstrated the completion of this project objective. The business case was described in the Situation, Background, Assessment, and Recommendation (SBAR) format.

In the business case, the situation was presented first. The situation is that the Dementia Performance Measure Set (DPMS) are ten evidence-based recommendations to improve outpatient care to patients with dementia (PCPI, 2014). An independently owned, non-system affiliated primary care practice has identified a need to improve the quality of care provided to patients with dementia through the development of a standardized protocol based on the ten DPMS recommendations. The situation was that to effectively incorporate the recommendations, the protocol must be designed to be sustainable within the practice. To assess the sustainability of the protocol, a business case was presented based on billing data from the practice.

Second, a background was provided. Prior to the protocol design, there was no standardized way to efficiently document the complex physical and social needs addressed during office encounters with patients with dementia. To assist in the documentation, monitoring, and evaluation of dementia care, 11 customized templates were created. The templates contain pre-populated information to enhance documentation regarding care provided to patients with dementia. The templates can be used individually or collectively during a dementia focused visit or incorporated into any office encounter with patients with dementia.

Third, an assessment was presented based on office visit and reimbursement data from 2016. To evaluate the sustainability of the protocol, billing and reimbursement practices were assessed. The result of under coding just one level 4 visit per day could result in \$11,268 in lost

revenue for the practice. In addition, the office had 2043 encounters with Medicare patients in 2016. Medicare beneficiaries account for 23% of the payer mix. This information highlighted the significant number of Medicare patient office encounters that occurred in one year, and with almost a quarter of the payer mix, Medicare beneficiaries represent a significant patient population who are at risk for dementia and may need additional care.

Last, a recommendation was made to the organization. The recommendation was to accept the dementia visit protocol and utilize the templates to improve documentation and facilitate accurate evaluation and management coding. Enhanced documentation may improve reimbursement from Medicare and provide additional revenue for the primary care practice.

The pre-templated evaluation and management (E&M) code for visit is a 99214. This billing code was selected for the customized “PCPI Dementia Visit” template. A level 4 code was selected, because use of the protocol may take additional provider time and/or may include a higher complexity of care. A level 4 billing code can be used for complexity or for time (Hermansen & Jackson, 2014). If more than 50% of the visit time is spent in counseling and coordinating care, the provider can code on the basis of time (Hermansen & Jackson, 2014). Since the PhD prepared Nurse Practitioner in the practice is allotted additional time with patients due to the unique structure of the practice, there is opportunity for the NP to bill a level 4 code when appropriate. If the “PCPI Dementia Visit” template is used, but the level 4 billing code is not appropriate, the provider can modify the E&M code. Adding the DPMS care recommendations adds time and complexity to the office visit. Therefore, providing DPMS recommended care qualifies this visit for a higher level, resulting in an additional \$11,268 of revenue per year for the existing Medicare population in the independently owned, non-system affiliated primary care practice.

Implications for Practice

Prior to this scholarly project, the organization did not have a standardized, evidenced-based protocol to meet the health and social needs of their patients with dementia. The organization identified a need to improve the quality of care they provide to this patient population. The focus of the proposed scholarly project work was to design an innovative evidence-based protocol. Because there is a lack of evidence for implementation of the DPMS recommendations in primary care, the outcomes of this project can be disseminated to enhance knowledge about this phenomenon of interest. However, if other organizations wish to initiate this protocol, they must assess their resources and adapt the protocol to their setting. The evidence-based protocol designed is relevant to the changing climate of primary care reimbursement, and will provide a foundation for the independently owned, non-system affiliated practice to monitor, evaluate, and report quality information in future reimbursement programs.

This scholarly project work has implications for the use of Advance Practice Registered Nurses (APRNs) to deliver high quality primary care for patients with dementia. As highlighted in the Transitions Theory (TT), nurses are in an opportune position to positively impact health transitions along the trajectory of dementia (Meleis, 1975). High quality, coordinated, and holistic care for patients with dementia and their families may result in an improved patient experience, delayed cognitive decline, improved symptom management, delayed institutionalization of patients, decreased caregiver burden, and enhanced caregiver involvement and comfort with dementia care (PCPI, 2014). APRNs are highly qualified to provide this type of holistic care in the primary care setting.

The protocol was designed to facilitate enhanced documentation and evaluation of the quality of care delivered to patients with dementia based on the DPMS recommendations. The pre-populated CPT II codes can be used to query these quality measures, and the results can be compared to the baseline data gathered from the retrospective gap analysis. The customized electronic documentation will allow the practice to capture value-based reimbursement opportunities in the future. In addition, the use of the DPMS recommendations may add complexity and time to patient encounters. Thus, the clinicians may be able to bill for a higher evaluation and management (E&M) code. A higher E&M code may result in additional reimbursement and additional revenue for the practice.

Strengths of Project

The strengths of this project were the opportunities to collaborate with a small primary care practice and design a customized protocol to improve the care delivery to patients with dementia. The key stakeholders at the organization were supportive of the quality improvement initiative. A strength of the project was the small size of the organization, because there were limited administrative barriers to complete the gap analysis and implement the project. Also, the protocol included detailed instructions for protocol utilization, template use, modification of the templates, how to query data, and how to create data that can be queried within the EHR. This was not something all the clinicians understood in detail prior to the implementation of the project. In the future, the hard copy of the protocol can be referenced by staff as needed.

Many successes were realized during this scholarly project. The successes of the project have been evaluated objectively by the completion of the project objectives. The completion of the gap analysis was a success of the project. Valuable baseline data was gathered and the results highlighted areas of strength and opportunities for improvement in the delivery of

primary care to patients with dementia in the practice. The design of the protocol was a strength of the project. The protocol was informed by evidence in the literature and was based on best practice for dementia care in the outpatient setting. In addition, the completion of the business plan was a success of the project. The business plan was disseminated to key stakeholders at the organization and described a sustainable way for the practice to incorporate the protocol into the innovative care structure that already exists in the organization.

Weaknesses of Project

Weaknesses were highlighted during the implementation and evaluation of this project. One weakness of this project was the project work did not include the implementation of the protocol. Therefore, in order for the care to be provided to the patients with dementia in practice, the clinicians must accept and implement the protocol in their daily practice. Another weakness of the project was the limited options for sustainability of the protocol. The protocol design and implementation was heavily dependent on the continued provision of additional encounter time allotted to the NP and the NP's employment in the practice. In addition, much of the data gathered in the gap analysis and deemed to meet criteria by the organization's stakeholders was subjective or qualitative data. This may create challenges for future evaluation of the DPMS recommendations, because future queries will be evaluated using objective data associated with the structured data customized with CPT II codes; the baseline data was gathered with primarily subjective and qualitative data. However, implementing the proposed protocol allows for future data to be queried for reporting and outcome evaluation.

There were difficulties to overcome throughout the implementation of this scholarly project. The small size of the organization and limitation of resources were key factors that contributed to the difficulties with the project implementation. As an independently owned, non-

system affiliated primary care practice, the organization has limited access to health information technology EHR support. Challenges were encountered in identifying resources on how to customize the electronic health record. However, these difficulties were overcome throughout the project. The small number of total staff and number of providers were a barrier to designing the protocol. To be sustainable, the protocol had to be easily incorporated into the office flow had utilize the systems in place at the organization. Customization of the EHR was a difficulty throughout the project. It was not financially feasible to select screening tools and add them to the protocol, because there was a significant cost to acquiring additional tools for the EHR. However, this challenge was overcome by developing structured screening tools and data that could be documented and queried in the history of present illness section of a visit.

Limitations of Project

Limitations to this project included the type of data gathered in the gap analysis, and the limitations of the sustainability of the protocol. Much of the data gathered in the gap analysis was evaluated using subjective or qualitative data. This baseline data will not be a valid comparison to future data gathered, as improved customization for quality improvement monitoring through structured data was included in the newly designed protocol. Also, the sustainability options for the protocol are limited, and are largely dependent on the role of the NP in the practice. The current structure allows the physician to see a higher quantity of patients during the day and bill for more visits accordingly. This creates flexibility in the time allotted to the NP for longer patient encounters with complex patients. Without additional staff or clinicians, the ability to deliver comprehensive dementia care that requires additional time with patients and caregivers may be a limitation.

Sustainability

Sustainability is an important aspect of scholarly project work. The best practices explored in scholarly project work will be sustainable if they are accepted by key stakeholders, and a plan to lock in and continue the quality improvement initiative exists (Moran, Conrad, & Burson, 2017). The sustainability of this project will be contingent on several factors.

In order for the evidence-based DPMS recommendations to be delivered to the patients with dementia in practice, the clinicians must accept and implement the protocol in their daily practice. The protocol was designed with consideration of the organization's innovative visit structure for the NP in the practice. The NP is allotted additional encounter time with complex and more time-consuming patients and families. The current structure allows the physician to see a higher quantity of patients during the day and bill for more visits accordingly. This creates flexibility in the time allotted to the NP for longer patient encounters with complex patients. Without additional staff or clinicians, the ability to deliver comprehensive dementia care that requires additional time with patients and caregivers may be a limitation. Therefore, the NP's employment and continued allotment of time may affect the sustainability of the protocol.

The current reimbursement payment structure does not fully capture the costs of providing holistic care to community dwelling older adults with dementia and their caregivers. To address this challenge, the protocol was designed with considerations for improved documentation of the quality initiatives based on the ten DPMS recommendations. The protocol was designed to capture current reimbursement, but revision may be needed with future quality based reimbursement structure, including MACRA (CMS, n.d.). Eleven customized templates are included in the protocol. They contain pre-populated information the clinicians can use to more efficiently and effectively document the quality of care provided to patients with dementia.

Through enhanced documentation, the organization may be able to use the quality improvement documentation to capture value based reimbursement opportunities in the future. In addition, if more complex or time consuming care is provided, the documentation will support a higher billing code. If the clinicians can bill appropriately for the delivery of complex and time consuming dementia care, they can potentially receive higher reimbursements from payers. Additional reimbursement creates additional revenue for the organization, and will influence the financial sustainability of the protocol.

Essentials of DNP Education

The DNP student enacted the Doctor of Nursing (DNP) Essentials to complete this scholarly project (American Association of Colleges of Nursing [AACN], 2006). The DNP student utilized many of the DNP Essentials to underpin the design, implementation, and evaluation of the project. Furthermore, the DNP Essentials enhanced the quality improvement recommendations completed in the project and guided the leadership and teamwork principles needed to implement organizational change.

Essential I: Scientific underpinning for practice. The use of scientific underpinnings for practice assisted in an evidence-based approach to a practice change. The gap in care was realized through the completion of an in-depth organizational assessment and literature review. The project work included time embedded in the organization, and partnering with key stakeholders to develop advanced strategies to design an evidence-based protocol for primary care for patients with dementia.

Essential II: Organizational and systems leadership for quality improvement and systems thinking. DNP Essential II describes the role of the DNP student as a leader

who can utilize systems thinking to improve patient and healthcare outcomes (AACN, 2006).

This essential competency was met by the facilitation of an organizational change aimed to eliminate gaps in care for a vulnerable patient population. This was demonstrated through organizational and system's leadership for quality improvement and systems thinking by developing a business case to assess the sustainability of the practice change based on principles of business, finance, economics, and health policy. In addition, the protocol was designed so that quality measures could be reported and monitored, and through education provided to staff on how to implement the protocol.

Essential III: Clinical scholarship and analytical methods for evidence-based practice. Essential III describes the competence in the DNP student's ability to translate evidence-based research into practice and evaluate outcomes to improve health systems and patient outcomes (AACN, 2006). The Essential competency was met by the completion of a systematic literature review and with the design of an evidence-based protocol for primary care patients with dementia. Conceptual frameworks were utilized to design, direct, and evaluate quality improvement methodologies to promote safe, timely, effective, efficient, equitable, and patient-centered dementia care.

Essential IV: Information systems/technology and patient care technology for the improvement and transformation of health care. The Essential competency was met through the utilization of health information systems and technology to design, evaluate, and monitor health care outcomes (AACN, 2006). The project required enhanced skills in the utilization of the organization's electronic health record. This Essential was met by the completion of the gap analysis and protocol design within the organization's electronic health

record. Through gained expertise, the DNP student became a leader and educator for the use of technology to improve patient care delivery within the organization's health system.

Essential VI: Interprofessional collaboration for improving patient and population health outcomes. DNP Essential VI describes the collaboration between different professionals to improve patient and population health outcomes (AACN, 2006). This Essential was met by the effective collaboration and communication skills used to develop an evidence-based approach to improve care for patients with dementia. This Essential was enacted in meetings with key stakeholders in the organization, including the physician, support staff, and biller. Feedback from staff through informal interviews was collected before and after the protocol was designed. This project required intraprofessional collaboration between the DNP and the PhD prepared APRN in the practice. Evidence-based guidelines for primary care of patients with dementia were translated into practice in this project. The PhD prepared APRN in the practice plans to continue research in this area after the project is completed.

Essential VIII: Advanced nursing practice. Competency in this Essential involves the ability of the DNP student to exemplify advanced nursing practice through enhanced knowledge and expertise in complex health systems and care delivery (AACN, 2006). The scholarly project work was disseminated to the organization, university, and at a university research event. The DNP was a valued team member within the organization and served as a leader to design, implement, and evaluate an innovative and evidence-based model to delivery primary care to patients with dementia.

Dissemination of Outcomes

The outcomes of the scholarly project work were disseminated to key stakeholders in the organization. In addition to the outcomes, education about the proposed protocol was provided

to staff within the organization. In April 2017, the outcomes were disseminated in the academic setting through a presentation to the scholarly project team, poster presentation to classmates and faculty at the academic institution, and at a research event held at the academic institution. Finally, the DNP student will collaborate with the NP at the practice to disseminate outcomes through the publication of an article on the development of an evidence-based protocol for the delivery of primary care to patients with dementia.

Conclusion

Gaps in primary care for patients with dementia exist (PCPI, 2014). Patients with dementia and their caregivers have complex health care and social needs that are not always provided consistently in the primary care setting. These gaps in care have been recognized as a national priority, and the Dementia Performance Measure Set (DPMS) was designed to address ten specific quality improvement recommendations for primary care for patients with dementia (PCPI, 2014). An independently owned, non-system affiliated primary care practice expressed a desire to improve the quality of care they provide to their patients with dementia and their families by standardizing the care and services provided based on the DPMS recommendations (PCPI, 2014). The quality improvement project completed included a gap analysis of the current status of dementia care, the development an evidenced-based protocol for primary care for patients with dementia, and the completion of a business case that addresses the sustainability of the protocol. With careful consideration of the electronic health record's quality assessment capabilities, there is opportunity to utilize these measures and quality improvement efforts to demonstrate quality care for future reimbursement opportunities. Adding the DPMS care recommendations adds time and complexity to office visits. Therefore, providing DPMS recommended care may qualify visits for a higher biller code, which could result in additional

revenue each year for the existing Medicare population in the practice. The Nurse Practitioner has an opportune position to deliver evidence-based care from the DPMS recommendations and improve care transitions for patients and their caregivers along the trajectory of dementia. This innovative approach to care for primary care for patients with dementia is sustainable in this organization, and could have a profound effect on this patient population.

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Appendix A

**Evidenced-Based Protocol for Primary Care for Patients with Dementia
Pre Protocol Design Interview**

1. What strategies do you have for integrating a new protocol into the delivery of care you provide to patient with dementia?
2. Does the organization's electronic health record have the option to design and/or modify a visit protocol and/or visit templates?
3. How do hope to document and monitor the dementia care initiatives that will be included in the protocol?
4. How would you like to schedule the dementia care visits, and do you have a preference for how the visits are billed?
5. Do you have any additional comments or concerns for the protocol design?

**Evidenced-Based Protocol for Primary Care for Patients with Dementia
Post Protocol Design Interview**

1. Do you believe you will be able to incorporate this protocol into your daily practice?
2. What barriers and/or facilitators do you foresee for the implementation to the protocol?
3. How do you think this protocol will better serve your patients with dementia?
4. Are there any modifications you would like to make prior to implementing the protocol?
5. Do you believe the protocol is a sustainable option for the delivery of care to your patients with dementia?
6. Do you have any additional comments or concerns for the protocol design?

Appendix B

Synthesis of Literature for an Evidenced Based Initiative

DPMS Measure	
<p>Staging of Dementia</p>	<ul style="list-style-type: none"> • The PCPI (2014) recommends regular assessments for the staging of dementia. • Validated staging tools can predict the incidence and severity of the stage of dementia (Santabarbara, 2016). <ul style="list-style-type: none"> ○ Mini-Mental Status Exam (MMSE) ○ Higher incidence of dementia cases and lower MMSE scores (p<0.001). ○ An individual’s risk of dementia is relative to the severity of his or her cognitive impairment. • Dementia is known as a progressive disease in which symptoms may evolve over time (Rabins, Rovner, Rummans, Schneider & Tariot, 2014). <ul style="list-style-type: none"> ○ Treatment recommendations may vary (California Workgroup on Guidelines for Alzheimer’s Disease Management, 2008). ○ Benefit from holistic approach in early disease management and intervention (Beuttner, 2006). <ul style="list-style-type: none"> ▪ As a result of the intervention, Mini-Mental State Examination, Geriatric Depression Scale, instrumental activities of daily living, and quality of life scores significantly improved, (p< 0.05) (Beuttner, 2006). • Staging in dementia is an important step in the treatment plan for patients and their caregivers. The primary care setting is an optimal location to stage the disease, and staging can easily be performed using screening tools like the MMSE.
<p>Cognitive Assessment</p>	<ul style="list-style-type: none"> • The PCPI (2014) recommends regular cognitive assessments, because earlier interventions and support for patients with dementia and their caregivers (Ducharme et al., 2011). • Recommendations from the U. S. Preventive Services Task Force (USPSTF) (Moyer, 2014). <ul style="list-style-type: none"> ○ Grade I recommendation ○ Benefit on caregiver burden and depression. ○ 29-76% of dementia cases are undiagnosed in primary care setting. • Cognitive screening was added as a free service to eligible Medicare beneficiaries through the Annual Wellness Visit, but providers are reimbursed through Medicare for the service (Moyer, 2014). <ul style="list-style-type: none"> ○ Screening is performed in primary care ○ Suitable screening tools for primary care setting exist (Mini-Cog, MIS, and GPCOG) (Cordell et al., 2013). • Cognitive assessment and the role of pharmacological interventions (Tan et al., 2014). <ul style="list-style-type: none"> ○ ChEIs

	<ul style="list-style-type: none"> ○ Memantine ● Effect of pharmacological interventions (ChEIs) on Nursing Home placement (Becker, Andel, Rohrer, & Banks, 2006). <ul style="list-style-type: none"> ○ Risk of nursing home placement decreased by 28%. ○ Medications most effective when initiated early in the disease progression.
<p>Functional Status Assessment</p>	<ul style="list-style-type: none"> ● The PCPI (2014) recommends regular functional status assessments). When function status challenges are identified through screenings or assessments, health care providers can provide education and offer treatments or resources to patients and their caregivers. ● Functional decline is associated with a high risk of health decline (Colón-Emeric, Whitson, Pavon, & Hoenig, 2013). ● Declines in functional status are associated with the development of depression and apathy in patients with dementia, and declines in quality of life (Andersen, Wittrup-Jensen, Lolk, Andersen, & Kragh-Sorensen, 2004; Boyle et al., 2003; Starkstein, Jorge, Mizrahi & Robinson, 2005). ● The Barthel Index of Activities of Daily Living and the Lawton Instrumental Activities of Daily Living (IADL) are valid tools to assess functional status, but the Barthel Index of Activities of Daily Living is advantageous to the primary care setting due to the limited amount of time needed to complete the assessment (Graf, 2007; Sinoff & Ore, 1997). ● Primary care practices must weigh these factors when designing the best screening tool to use in their setting.
<p>Neuropsychiatric Symptom Assessment</p>	<ul style="list-style-type: none"> ● The PCPI recommends regular assessments of neuropsychiatric symptoms, because negative symptoms can pose potentially dangerous threats to patients and their caregivers (PCPI, 2014). ● In addition, neuropsychiatric symptoms have been associated with the following: <ul style="list-style-type: none"> ○ Accelerated cognitive decline, ○ Increased functional impairment, ○ Decreased mean survival time, ○ Increased co-morbid conditions, ○ Increased danger to self, ○ Increased danger to others, ○ Increased health care service utilization, ○ Higher risk for institutionalization, ○ Greater caregiver stress and burden (PCPI, 2014). ● Important measure to address in the care for patients with dementia throughout the trajectory of the disease.
<p>Management of Neuropsychiatric Symptoms</p>	<ul style="list-style-type: none"> ● The symptom assessment data gathered from the neuropsychiatric symptom assessment measure can guide symptom management recommendations. ● Non-pharmacological interventions <ul style="list-style-type: none"> ○ Brodaty and Arasaratnam (2012):

	<ul style="list-style-type: none"> ▪ Caregiver skills training, activity planning and patient participation in activities, and home modification had a significantly positive effect on the reduction of neuropsychiatric symptoms, ($p < 0.01$) and improvement in the caregivers' reaction to the neuropsychiatric behaviors, ($p = 0.006$). ○ Gitlin et al. (2008): <ul style="list-style-type: none"> ▪ In-home activity programming for caregiver and patient dyads on problematic patient behaviors significantly decreased problematic patient behaviors ($p = 0.010$) and amount of time spent by caregivers having to do things for patients ($p = 0.005$). ○ Deudon et al. (2009): <ul style="list-style-type: none"> ▪ Significant reduction in CMAI global scores from baseline to week eight ($p < 0.001$) and baseline to week 20 ($p < 0.001$) as a result of the intervention, which involved individualized staff training, feedback, and key cards with specific instructions for commonly encountered behavioral challenges with patients with dementia. • Pharmacological interventions <ul style="list-style-type: none"> ○ Sultzer et al. (2008) found significant improvement in the following: <ul style="list-style-type: none"> ▪ Neuropsychiatric Inventory (NPI) score when treated with Olanzapine ($p < 0.007$) or risperidone ($p < 0.001$). ▪ Clinical Global Impression of Change (CGIC) score when treated with Risperidone ($p < 0.001$). ▪ Brief Psychiatric Rating Scale (BPRS) hostile suspiciousness factor ($p < 0.006$ and $p < 0.003$) when treated with olanzapine or risperidone ▪ BPRS psychosis factor ($p < 0.010$) when treated with risperidone.
<p>Screening for Depressive Symptoms</p>	<ul style="list-style-type: none"> • The PCPI (2014) recommends regular assessment for depression in patients with dementia. Care must be individualized and closely monitored. • Screening tools: <ul style="list-style-type: none"> ○ Valid: The Geriatric Depression Scale (GDS) and The Cornell Scale for Depression in Dementia (CSDD) (Korner et al., 2006). ○ The CSDD has more validity in older adults with dementia (Korner et al., 2006) ○ CSDD: Sensitivity 93% and specificity 97% ○ GDS: Sensitivity 82% to 90% and specificity 75% to 94% ○ Screening can help PCP's identify patients with dementia who also have depression, and can assist in the design of early interventions to treat these patients. • Treatment: <ul style="list-style-type: none"> ○ Mixed evidence regarding the efficacy of pharmacological treatment of depression with antidepressants in patients with dementia

	<p>(California Workgroup on Guidelines for Alzheimer’s Disease Management, 2008).</p> <ul style="list-style-type: none"> ○ Nelson and Devanand (2011), Banerjee et al. (2011), and Rosenberg et al. (2010) examined the effect of different pharmacological antidepressant treatment in patients with dementia. <ul style="list-style-type: none"> ▪ Results underpowered and had confounding variables ▪ No benefit of sertraline or mirtazapine when compared to placebo (Banerjee et al., 2011), and there was no benefit of sertraline when compared to placebo (Rosenberg et al., 2010).
<p>Counseling Regarding Safety Concerns</p>	<ul style="list-style-type: none"> • The provision of safety counseling for patients with dementia and their caregivers is evidenced-based and supported in the literature (PCPI, 2014). • May include: fall risk, gait, balance, medication management, financial management, home safety, physical aggression to caregivers, wandering, access to firearms or weapon or dangerous materials, being left alone, inability to respond during an emergency at home, driving, suicidal thoughts or actions, abuse and neglect (Rabins et al., 2014). • Important measure to consider as many patients live at home, and patients are at a greater risk for harm if these safety measure are not addressed. • Proper counseling regarding safety risks and referral to resources may help patients with dementia live in their homes longer, keep patients and caregivers safe, and help maintain quality of life (PCPI, 2014).
<p>Counseling Regarding Risk of Driving</p>	<ul style="list-style-type: none"> • Driving counseling is important for patients with dementia and their caregivers. • Not a single screening tool available to assess driving safety in patients with dementia (Allan, Behrman, Baruch, & Ebmeier, 2016). • Education for patients and family members related to driving privileges (PCPI, 2014). • Driving risk in early stages of disease (Iverson et al., 2010) • Motor vehicle related incidents are the leading cause of injury deaths in adults 65 years and older (Joseph, 2013). • Iverson et al. (2010) two Level A recommendations (Appendix E): <ul style="list-style-type: none"> ○ Clinical Dementia Rating scale is a valid screening tool to assess driving safety risk ○ Patient’s self-rating of safe driving is a reliable indicator for driving safety • Primary care is an optimal setting to discuss driving concerns.
<p>Palliative Care Counseling and Advance Care Planning</p>	<ul style="list-style-type: none"> • Palliative care counseling and advance care planning are inadequately addressed in primary care (PCPI, 2014). • Advantages to addressing these measures sooner: <ul style="list-style-type: none"> ○ To respect patient wishes ○ To avoid these discussions in crisis situations (Rabins et al., 2014)

	<ul style="list-style-type: none"> • May include discussion of: <ul style="list-style-type: none"> ○ Survival ○ Function maintenance ○ Comfort • Primary care providers should regularly assess: <ul style="list-style-type: none"> ○ Pain ○ Dyspnea ○ Depression (California Workgroup on Guidelines for Alzheimer’s Disease Management, 2008). ○ Consideration of Hospice referral • Proper counseling can assist patients and families in establishing goals in order to ensure the patient’s wishes and autonomy are respected in the later stages of the dementia disease process.
<p>Caregiver Education and Support</p>	<ul style="list-style-type: none"> • Caregiver education and support is an important component of primary care delivery to patients with dementia, and it is well documented in the literature (PCPI, 2014). • Proactive Interventions <ul style="list-style-type: none"> ○ Successful role transitions ○ Decreased economic costs of dementia care ○ Improved quality of life for patients and caregivers (Ducharme et al., 2011) • Ducharme et al. (2011) <ul style="list-style-type: none"> ○ Efficacy of a psychoeducational program for primary caregivers ○ Significant improvement (p<0.05) in caregiver confidence in dealing with caregiver situations, preparedness for caregiving, self-efficacy, planning for relatives’ future care needs, knowledge of formal services, problem solving, and reframing.

Appendix C

ICD-10 Diagnoses Inclusion Criteria (PCPI, 2014)

Denominator (Eligible Population) Continued	ICD-10-CM Diagnosis Codes:	
	Code	Descriptor
	Late Syphilis	
	A52.17	Symptomatic neurosyphilis, General paresis
	Vascular Dementia	
	F01.50	Vascular dementia without behavioral disturbance
	F01.51	Vascular dementia with behavioral disturbance
	Dementia in Other Diseases Classified Elsewhere	
	F02.80	Dementia in other diseases classified elsewhere, without behavioral disturbance
	F02.81	Dementia in other diseases classified elsewhere, with behavioral disturbance
	Unspecified Dementia	
	F03	Unspecified dementia
	Delirium due to Known Physiological Condition	
	F05	Delirium due to unknown physiological condition
	Other Mental Disorders Due to Known Physiological Condition	
	F06.0	Psychotic disorder with hallucinations due to known physiological condition
	F06.8	Other specified mental disorders due to known physiological condition
	Alzheimer’s Disease	
	G30.0	Alzheimer’s disease with early onset
	G30.1	Alzheimer’s disease with late onset
	G30.8	Other Alzheimer’s disease
	G30.9	Alzheimer’s disease, unspecified
	Other Degenerative Diseases of Nervous System, Not Elsewhere Classified	
	G31.01	Pick’s disease
	G31.09	Other frontotemporal dementia
	G31.83	Dementia with Lewy bodies

Appendix D

Recommendations for Dementia Performance Measure Set Assessment Tools adapted from the PCPI (2014)

The primary care practice reserves the right to modify assessment criteria based on their experience and wishes. Per the organization’s wishes, a criterion is met if a single component is met in measures containing multiple components.

Measure	Description	Recommended Assessment Tools
#1: Staging of Dementia	Patient with a diagnosis of dementia who severity was classified as mild, moderate or severe in a 12-month period (PCPI, 2014)	<ul style="list-style-type: none"> ● Global Deterioration Scale (GDS) <ul style="list-style-type: none"> ○ Mild: Stage 4 ○ Moderate: Stage 5 and 6 ○ Severe: 6 and 7 ● Functional Assessment Staging Tool (FAST) <ul style="list-style-type: none"> ○ Mild: Stage 4 ○ Moderate: Stage 5 and 6 ○ Severe: Stage 6 and 7 ● Clinical Dementia Rating (CDR) <ul style="list-style-type: none"> ○ Mild: 1 ○ Moderate: 2 ○ Severe: 3 ● Dementia Severity Rating Scale ● Mini-Mental State Examination (MMSE) <ul style="list-style-type: none"> ○ Mild: Score >18 ○ Moderate: Score 10-18 ○ Severe: Score <10 ● Formal Neuropsychological Evaluation ● Qualitative Assessment Options <ul style="list-style-type: none"> ○ Mild: <ul style="list-style-type: none"> ▪ Difficult to balance checkbook ▪ Difficult to prepare complex meal ▪ Difficult to manage complicated medication schedule ○ Moderate: <ul style="list-style-type: none"> ▪ Difficult with simple food preparation ▪ Difficult to clean house ▪ Difficult to do yard work ▪ Assistance needed for some self-care ○ Severe:

		<ul style="list-style-type: none"> ▪ Require considerable or total assistance with personal care
Measure #2: Cognitive Assessment	Patient with a diagnosis of dementia for whom an assessment of cognition and the results reviewed in a 12 month period (PCPI, 2014)	<ul style="list-style-type: none"> • Blessed Orientation-Memory-Concentration Test (BOMC) • Mini-Cog • Montreal Cognitive Assessment (MoCA) • Cognitive Abilities Screening Instrument (CASI) • St. Louis University Mental Status Examination (SLUMS) • Mini-Mental State Examination (MMSE) • Short Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE) • Ascertain Dementia 8 (AD8) Questionnaire • Minimum Data Set (MDS) Brief Interview of Mental Status (BIMS) • Formal neuropsychological evaluation
Measure #3: Functional Status Assessment	Patient with a diagnosis of dementia for whom an assessment of functional status is performed and the results reviewed in a 12 month period (PCPI, 2014)	<ul style="list-style-type: none"> • Lawton instrumental activities of daily living (IADL) Scale • Barthel activities of daily living (ADL) Index • Katz Index of Independence in ADL • Qualitative Assessment Options: <ul style="list-style-type: none"> ○ Direct examination of the patient by the provider ○ Information gathered from knowledgeable informant
Measure #4: Neuropsychiatric Symptom Assessment	Patient with a diagnosis of dementia for whom an assessment of neuropsychiatric symptoms is performed and results reviewed in 12 month period (PCPI, 2014)	<ul style="list-style-type: none"> • Dementia Signs and Symptoms (DSS) Scale • Neuropsychiatric Inventory (NPI) • Behavioral and Psychological Symptoms of Dementia (BPSD) • Minimum Data Set (MDS) • Qualitative Assessment Options: <ul style="list-style-type: none"> ○ Direct examination of the patient by the provider ○ Information gathered from knowledgeable informant ○ May include information about activity, mood, thought or perceptual disturbances <ul style="list-style-type: none"> ▪ Activity: agitation, wandering, purposeless hyperactivity, verbal or physical aggressiveness, resistiveness with care,

		<p>apathy, impulsiveness, socially inappropriate behaviors, appetite change, eating disturbances, sleep problems, diurnal/sleep-wake cycle disturbances, or repetitive behavior.</p> <ul style="list-style-type: none"> ▪ Mood: anxiety, dysphoria, euphoria, irritability, mood lability or fluctuations. ▪ Thought or perceptual: delusions, hallucinations, or paranoia
<p>Measure #5: Management of Neuropsychiatric Symptoms</p>	<p>Patient with a diagnosis dementia who have one or more neuropsychiatric symptoms who received or were recommended to receive an intervention for the symptom (s) in a 12 month period (PCPI, 2014)</p>	<ul style="list-style-type: none"> • Mild to moderate Alzheimer’s disease <ul style="list-style-type: none"> ○ Includes documentation of behaviors and identification of target symptoms ○ Assessment of triggers for symptoms ○ Ruling out other potentially treatable causes for symptoms • Severe Alzheimer’s disease <ul style="list-style-type: none"> ○ Begins with assessment, diagnosis, and identification of target symptoms ○ Consider safety of patient, caregiver, and environment ○ Non-pharmacologic interventions: behavioral management, caregiver education programs, music therapy, or controlled multisensory stimulation ○ Pharmacologic interventions: may be initiated in severe depression, psychosis or aggression
<p>Measure #6: Screening for Depressive Symptoms</p>	<p>Patients with a diagnosis of dementia who were screened for depression in a 12 month period (PCPI, 2014)</p>	<ul style="list-style-type: none"> • Cornell Scale for Depression in Dementia • Geriatric Depression Scale • PHQ-9 • Other symptoms may include: caregiver report of patient’s depressive symptoms, anxiety, sadness, lack of reactivity to pleasant event, irritability, agitation, retardation, multiple physical complaints, acute loss of interest, appetite loss, lack of

		energy, diurnal variation of mood, difficulty falling asleep, multiple awakenings during sleep, early morning awakenings, suicide, self-depreciation, pessimism, or mood congruent delusions.
Measure #7: Counseling Regarding Safety Concerns	Patients with a diagnosis of dementia or their caregivers who were counseled or referred for counseling regarding safety concerns in a 12 month period (PCPI, 2014)	<ul style="list-style-type: none"> • Use of educational materials from the Alzheimer’s Association • Counseling regarding the following safety concerns: fall risk, gait, balance, medication management, financial management, home safety risks, physical aggression, wandering, access to firearms or other weapons, access to dangerous materials, being left alone or locked in room, inability to respond to crisis or household emergency, driving, operation of hazardous equipment, suicidality, abuse, or neglect.
Measure #8: Counseling Regarding Risks of Driving	Patients with a diagnosis of dementia or their caregivers who were counseled regarding risks of driving or driving alternatives in a 12 month period (PCPI, 2014)	<ul style="list-style-type: none"> • The Physician’s Guide to Assessing and Counseling Older Drivers • Patient self-rating of safe driving ability • Clinical Dementia Rating scale
Measure #9: Palliative Care Counseling and Advance Care Planning	Patients with a diagnosis of dementia or their caregivers who received 1) palliative care and end of life decisions counseling and/or 2) have advance care plan or decision maker documented in medical record. If patients do not wish to have either of those, there must be documentation of their wish in the medical record within the last 2 years (PCPI, 2014)	<ul style="list-style-type: none"> • Counseling may include discussion on the following: <ul style="list-style-type: none"> ○ Hospitalization wishes ○ Treatment for infection ○ Surgery ○ Artificial nutrition and hydration ○ Cardiopulmonary resuscitation ○ Mechanical ventilation ○ Comfort care ○ Timing of a natural death ○ Hospice referral
Measure #10: Caregiver education and support	Patients with a diagnosis of dementia or their caregivers who were provided education on dementia disease management, health behavior changes, or were referred to additional support in a 12 month period (PCPI, 2014)	<ul style="list-style-type: none"> • Education may include discussion on the following topics: <ul style="list-style-type: none"> ○ Support groups ○ Respite care ○ Nursing homes ○ Long-term care facilities ○ Financial or legal counseling ○ Caregiver education • May also include assessment of caregiver wellbeing

		○ Caregiver Health Self-Assessment Questionnaire
--	--	--

Appendix E

American Academy of Neurology Evidence Classification System (Gronseth, Woodroffe, & Getchius, 2011)

Classification of recommendations

- A = Established as effective, ineffective or harmful (or established as useful/predictive or not useful/predictive) for the given condition in the specified population. (Level A rating requires at least two consistent Class I studies).
- B = Probably effective, ineffective or harmful (or probably useful/predictive or not useful/predictive) for the given condition in the specified population. (Level B rating require at least one Class I study or two consistent Class III studies).
- C = Possibly effective, ineffective or harmful (or possibly useful/predictive or not useful/predictive) for the given condition in the specified population. (Level C rating requires at least one Class II study or two consistent Class III studies).
- U = Data inadequate or conflicting; given current knowledge, treatment (test, predictor) is unproven.

Classification of evidence for the rating of a diagnostic article

- *Class I:* A cohort study with prospective data collection of a broad spectrum of persons with the suspected conditions, using an acceptable reference standard for case definition. The diagnostic test is objective or performed and interpreted without knowledge of the patient's clinical status. Study results allow calculation of measures of diagnostic accuracy.
- *Class II:* A case control study of a broad spectrum of persons with the condition established by an acceptable reference standard compared to a broad spectrum of controls

or cohort study where a broad spectrum of persons with the suspected condition where the data was collected retrospectively. The diagnostic test is objective or performed and interpreted without knowledge of disease status. Study results allow calculation of measures of diagnostic accuracy.

- *Class III:* A case control study or cohort study where either persons with the condition or controls are of a narrow spectrum. The condition is established by an acceptable reference standard. The reference standard and diagnostic test are objective or performed and interpreted by different observers. Study results allow calculation of measures of diagnostic accuracy.
- *Class IV:* Studies not meeting Class, I, II or III criteria including consensus, expert opinion or a case report.

Appendix F

Transitions Theory Model (Meleis et al., 2000, p. 17)

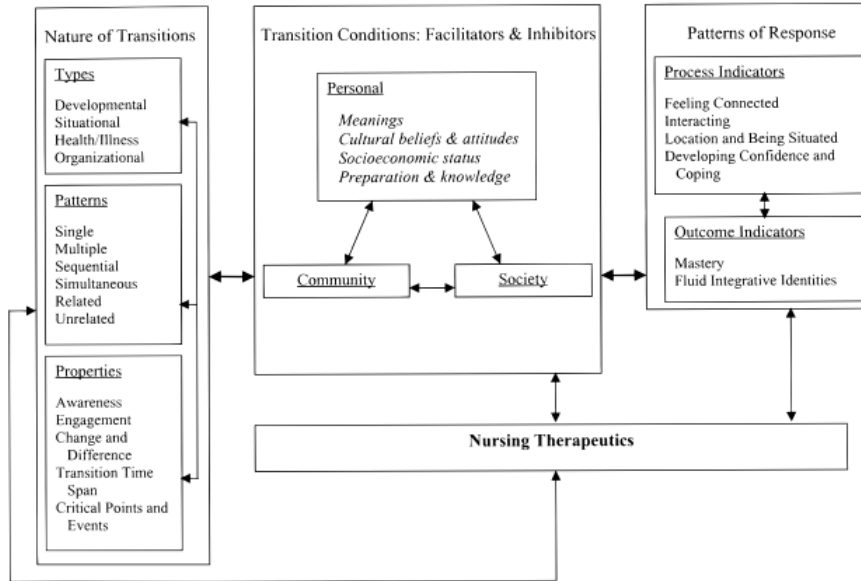


Figure 1. Transitions Theory Model. Adapted from “Experiencing transitions: An emerging middle range theory,” by Meleis, A. I., Sawyer, L. M., Im, E.O, Hilfinger Messias, D. K., & Schumacher, K., 2000, *Advances in Nursing Science*, 23, 17. Copyright 2000 by Aspen Publishers, Inc. Adapted with permission.

Appendix G

Promoting Action on Research Implementation in Health Services (PARIHS) Framework

Douglas et al. (2014)

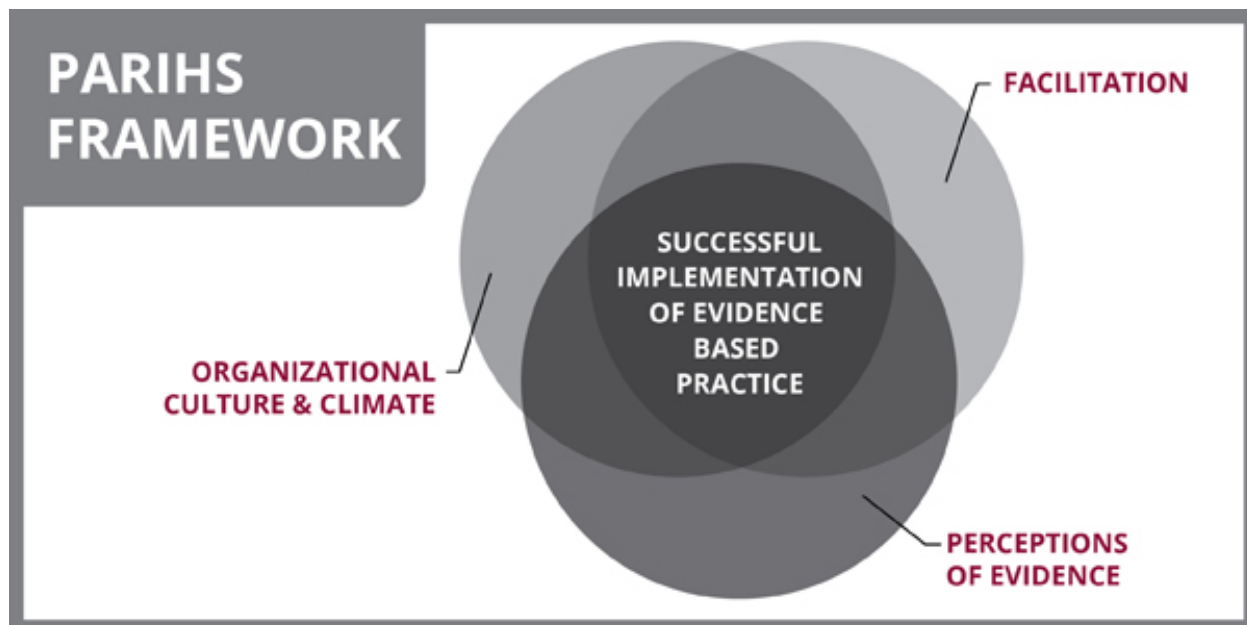


Figure 1. Visual depiction of the Promoting Action on Research Implementation in Health Services (PARIHS) framework. Adapted from “Perception of speech-language pathologists linked to evidenced-based practice use in skilled nursing facilities,” by Douglas, N. F., Hinckley, J. J., Haley, W. E., Andel, R., Chisolm, T. G., & Eddins, A. C., 2014, *American Journal of Speech-Language Pathology/American Speech-Language-Hearing Association*, 23, 613. Copyright 2014 by the American Speech-Language-Hearing Association. Adapted with permission.

Appendix H

Evaluation Tools for Gap Analysis

Patient Demographics

Patient Demographics		
Patient	Age	Gender (Male/Female)
1		
2		
3		
4		

Patient Encounters

Patient Encounters	
Patient	Number of Visits in past 12 months
1	
2	
3	
4	

Measure #1: Staging of dementia

MEASURE #1: Staging of Dementia	
Patient	Mild/Moderate/Severe/Non-Classified
1	
2	
3	
4	

Measure #2: Cognitive assessment

MEASURE #2: Cognitive Assessment		
Patient	Assessed? (Yes/No)	Assessment Tool
1		
2		
3		
4		

Measure #3: Functional status assessment

MEASURE #3: Functional Status Assessment			
Patient	Assessed? (Yes/No)	Reviewed (Yes/No)	Assessment Tool
1			
2			
3			
4			

Measure #4: Neuropsychiatric symptom assessment

MEASURE #4: Neuropsychiatric Symptom Assessment			
Patient	Assessed? (Yes/No)	Reviewed (Yes/No)	Symptoms
1			
2			
3			
4			

Measure #5: Management of neuropsychiatric symptoms

MEASURE #5: Management of Neuropsychiatric Symptoms			
Patient	Received (Yes/No)	Recommended (Yes/No)	Specific Intervention Received/Reviewed
1			
2			
3			
4			

Measure #6: Screening for depressive symptoms

MEASURE #6: Screening for Depressive Symptoms		
Patient	Screened (Yes/No)	Assessment Tool
1		
2		
3		
4		

Measure #7: Counseling regarding safety concerns

MEASURE #7: Counseling Regarding Safety Concerns			
Patient	Counseled (Yes/No)	Referred for Counseling (Yes/No)	Safety Concerns Addressed
1			
2			
3			
4			

Measure #8: Counseling regarding risks of driving

MEASURE #8: Counseling Regarding Risks of Driving			
Patient	Counseled Regarding Risks (Yes/No)	Counseled Regarding Alternatives (Yes/No)	With Whom Counseling Occurred
1			
2			
3			
4			

Measure #9: Palliative care counseling and advance care planning

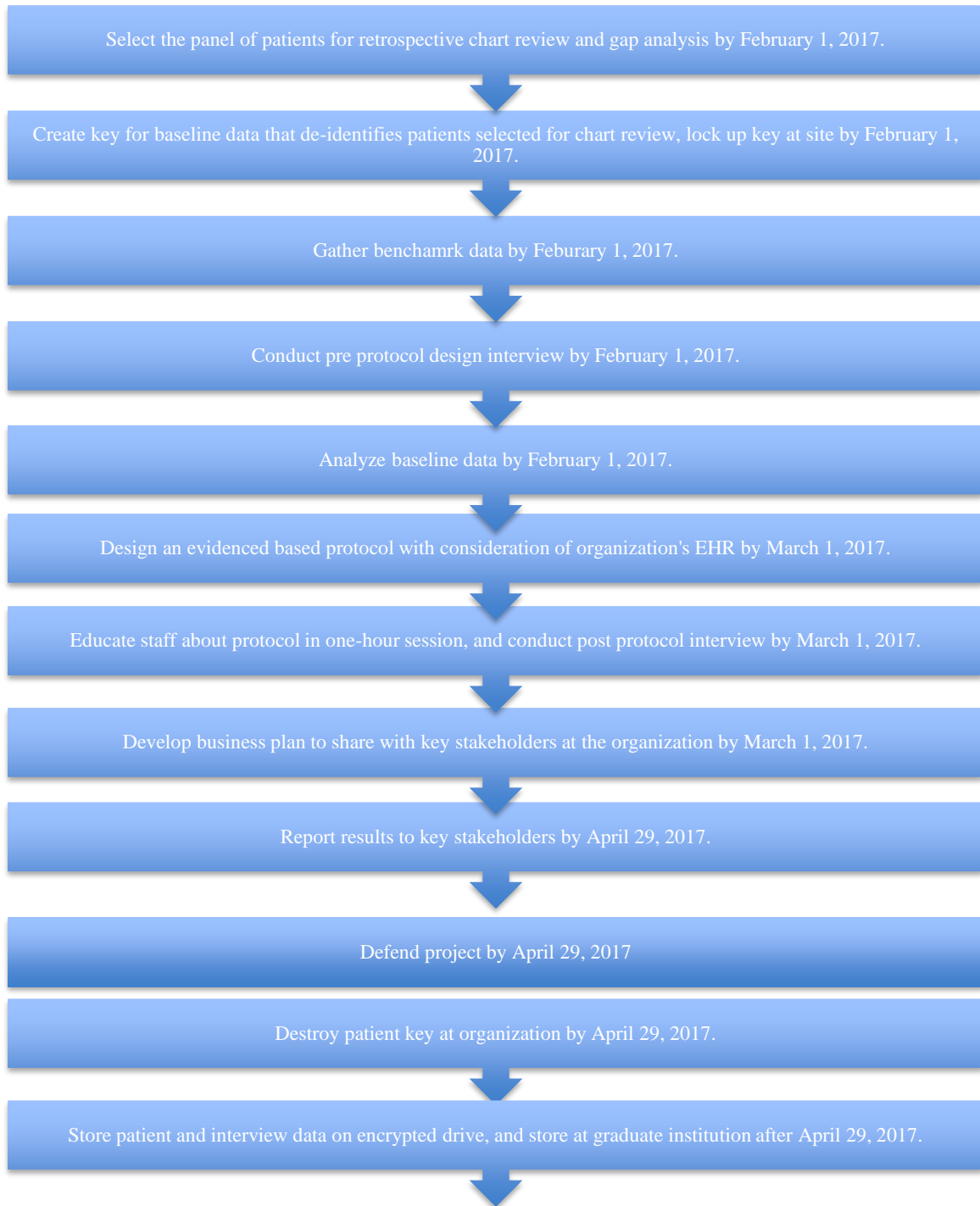
MEASURE #9: Palliative Care Counseling and Advanced Care Planning				
Patient	Counseled Regarding Palliative Care (Yes/No)	Counseled Regarding Symptom Management (Yes/No)	Counseled Regarding End of Life Care (Yes/No)	Advance Care Plan or Surrogate Decision Maker in Medical Record (Yes/No)
1				
2				
3				
4				

Measure #10: Caregiver education and support

MEASURE #10: Caregiver Education and Support		
Patient	Caregiver (s) Provided Education (Yes/No)	Referred to Additional Resources for Support (Yes/No)
1		
2		
3		
4		

Appendix I

Timeline for Steps of Protocol Development



Appendix J
IRB Letter

DATE: January 27, 2017

TO: Kaitlin DeMaagd
FROM: Grand Valley State University Human Research Review Committee
STUDY TITLE: [1020267-1] The Design of an Evidenced-Based Protocol for Primary Care of Patients with Dementia
REFERENCE #: 17-131-H
SUBMISSION TYPE: New Project

ACTION: NOT RESEARCH
EFFECTIVE DATE: January 27, 2017
REVIEW TYPE: Administrative Review

Thank you for your submission of materials for your planned research study. It has been determined that this project:

Does not meet the definition of covered human subjects research* according to current federal regulations. The project, therefore, *does not* require further review and approval by the HRRC.

Any research-related problem or event resulting in a fatality or hospitalization requires immediate notification to the Human Research Review Committee Chair, Dr. Steve Glass, (616)331-8563 **AND** Human Research Protections Administrator, Dr. Jeffrey Potteiger, Office of Graduate Studies (616)331-7207. See *HRRC policy 1020, Unanticipated problems and adverse events*.

Exempt research studies are eligible for audits.

If you have any questions, please contact the Office of Research Integrity and Compliance at (616) 331-3197 or rci@gvsu.edu. The office observes all university holidays, and does not process applications during exam week or between academic terms. Please include your study title and reference number in all correspondence with our office.

*Research is a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge (45 CFR 46.102 (d)).

Human subject means a living individual about whom an investigator (whether professional or student) conducting research obtains: data through intervention or interaction with the individual, or identifiable private information (45 CFR 46.102 (f)).

Scholarly activities that are not covered under the Code of Federal Regulations should not be described or referred to as *research* in materials to participants, sponsors or in dissemination of findings.

Appendix K



1/31/2017

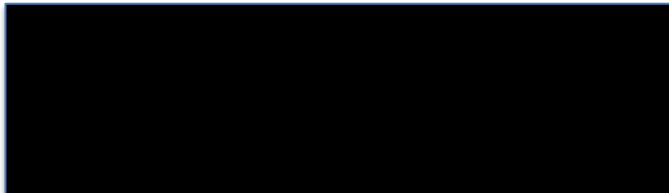
To Whom It May Concern,

We are willing to accept and honor the IRB review and recommendations as articulated by Grand Valley State University for the project entitled *The Design of an Evidence Based Protocol for Primary Care Patients with Dementia*.

In addition, Kaitlin DeMaagd has permission to access the patient database to complete the project.

If you have any questions, please do not hesitate to contact us.

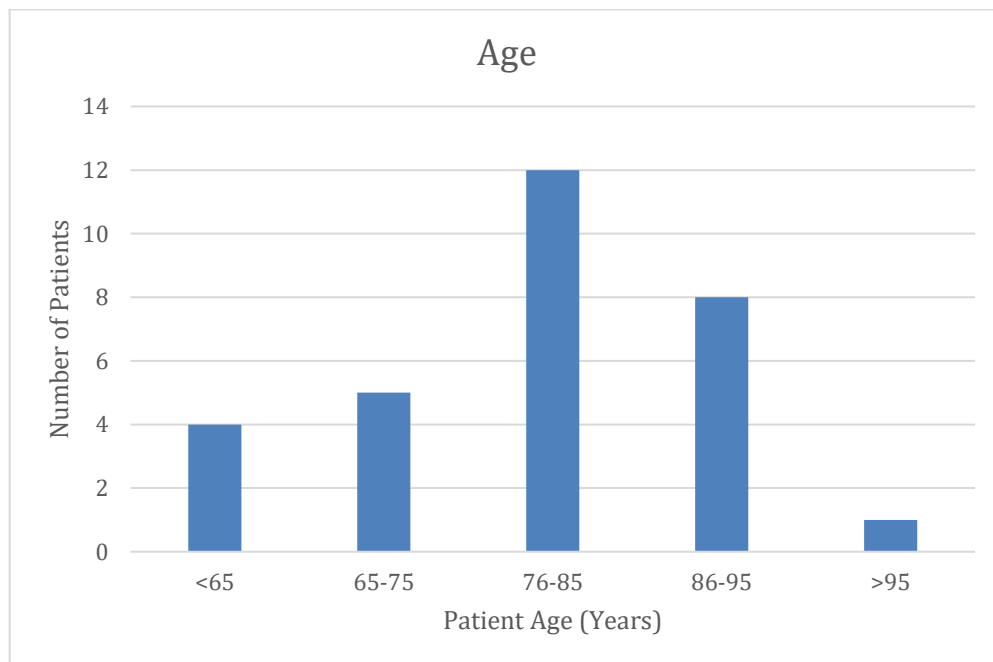
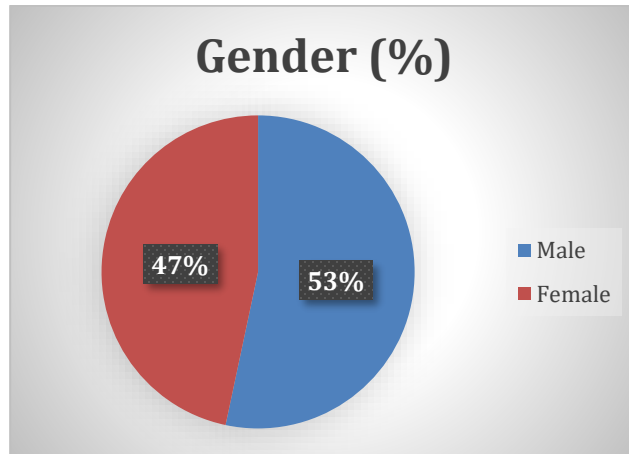
Sincerely,



Appendix L

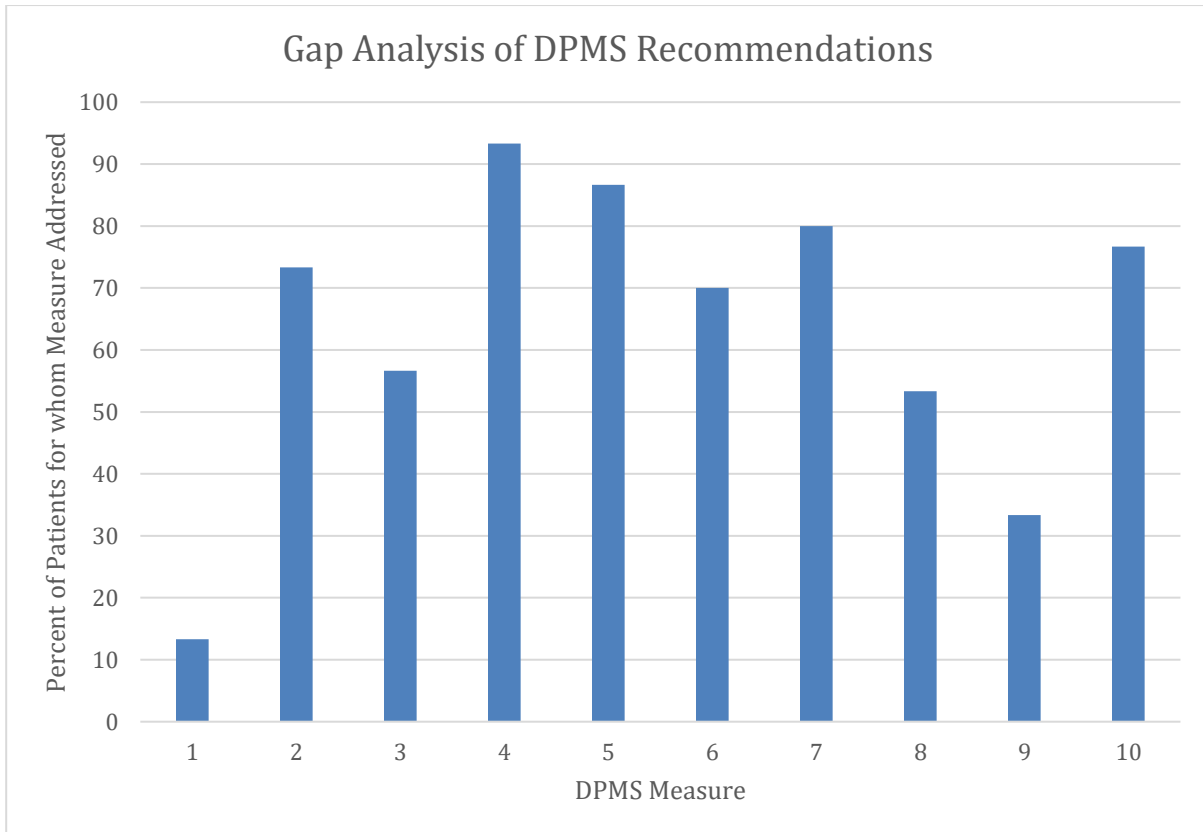
Gap Analysis Results

Patient Demographics

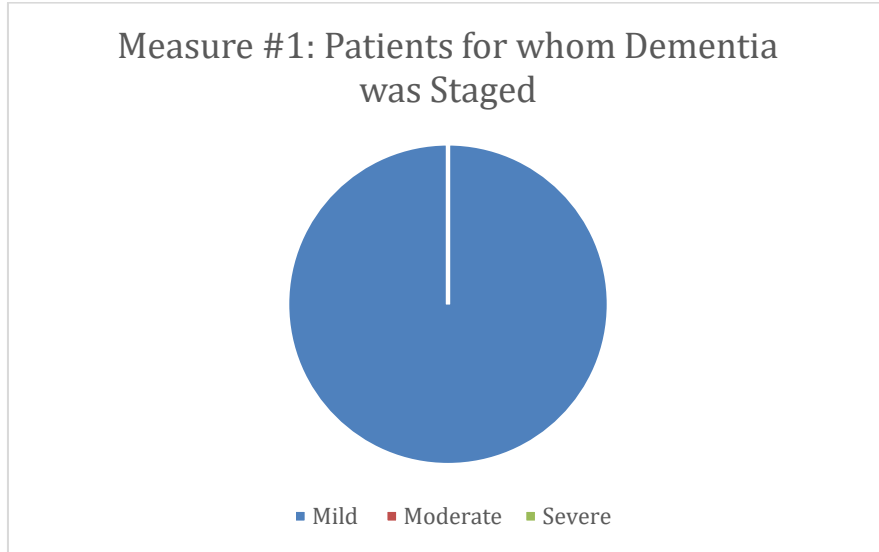


Summary of Gap Analysis of DPMS Recommendations Based on the Percentage of the Total Measures Addressed

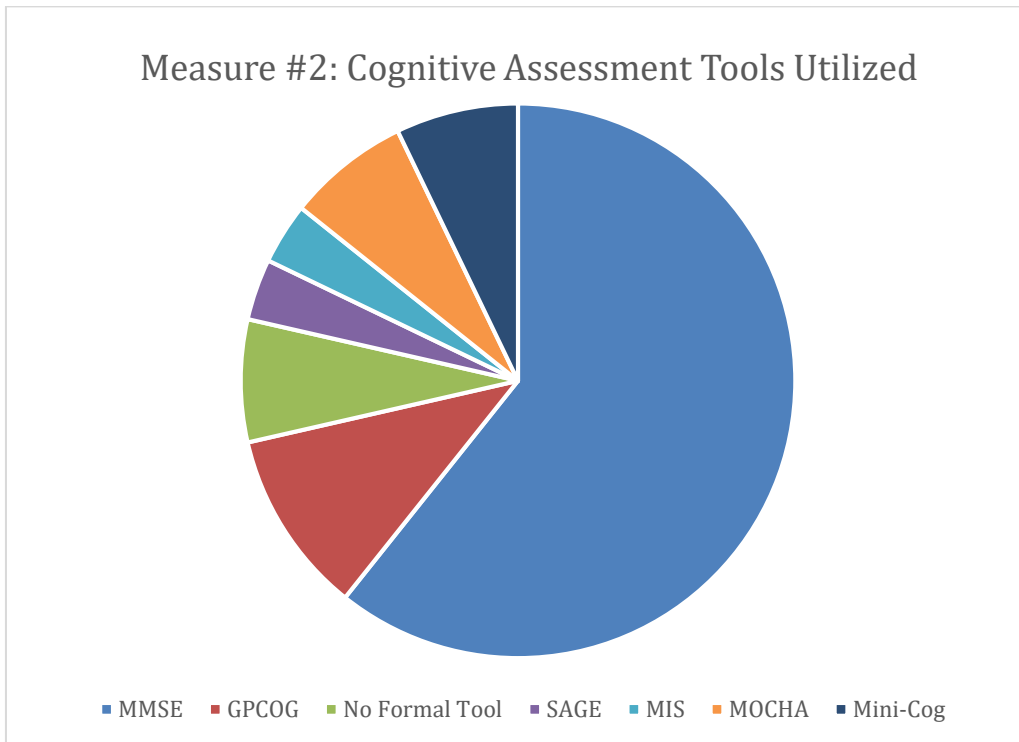
DPMS Measure	Number (n=30) for whom Measure Addressed	Percentage (%)
1	4	13.33%
2	22	73.33%
3	17	56.67%
4	28	93.33%
5	26	86.67%
6	21	70%
7	24	80%
8	16	53.33%
9	10	33.33%
10	23	76.67%



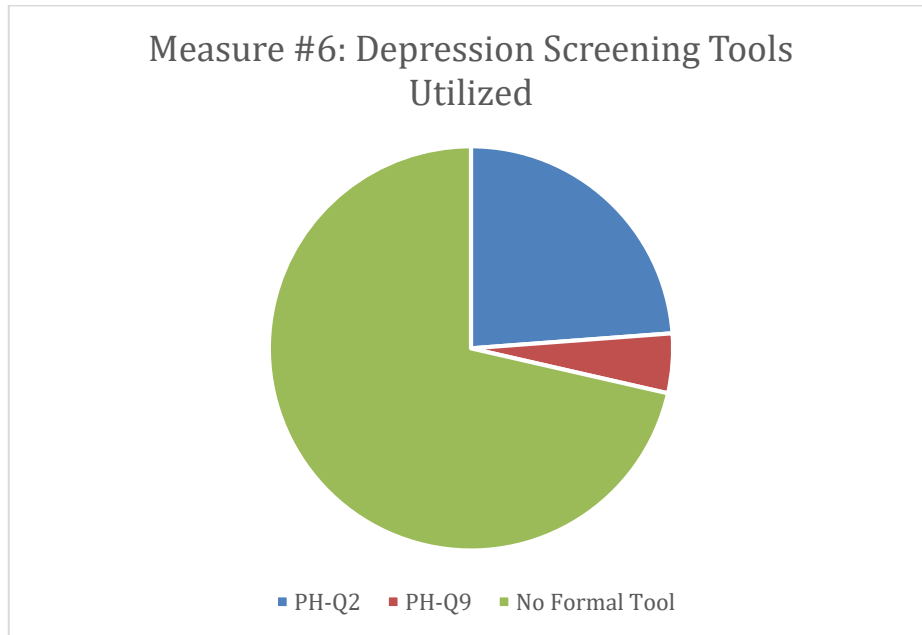
Measure #1: Staging of Dementia



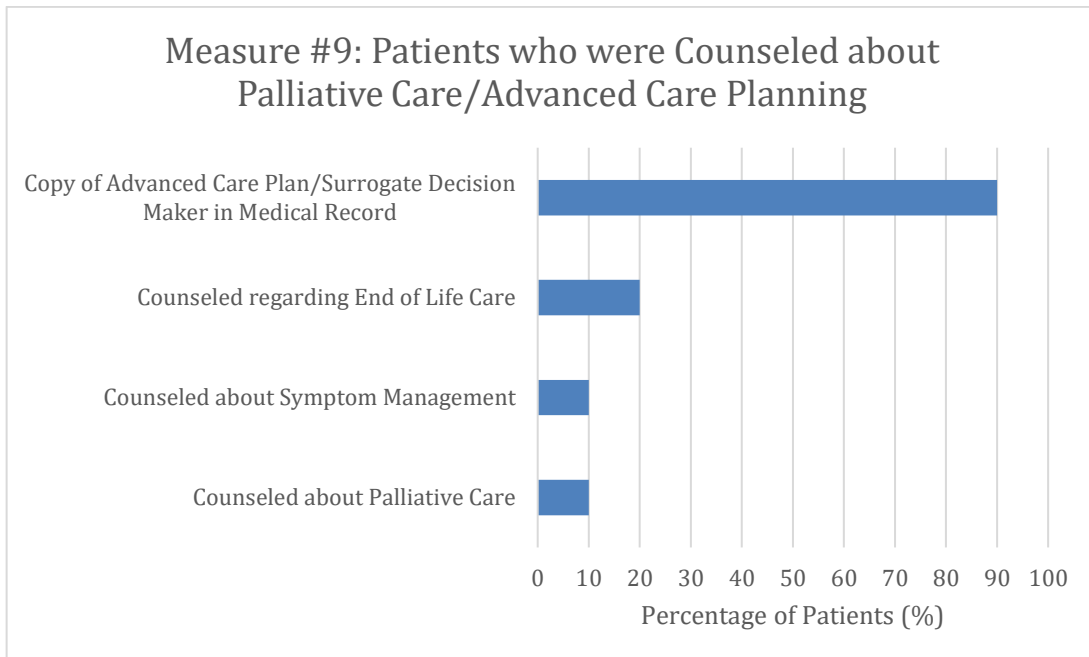
Measure #2: Cognitive Assessment



Measure #6: Screening for Depression



Measure #9: Palliative Care Counseling and Advanced Care Planning



Appendix M

Comprehensive Dementia Visit Protocol

A Protocol for the Delivery of Evidence-Based Primary Care to Patients
with Dementia

Written by Kaitlin B. DeMaagd BSN, RN

For use in the Primary Care Setting

Doctor of Nursing Practice Scholarly Project

April 2017

Comprehensive Dementia Visit Protocol

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Background: Dementia in Primary Care

Improvement in the effectiveness and optimization of care outcomes for patients with dementia in primary care is a national priority (American Medical Association-convened Physician Consortium for Performance Improvement [PCPI], 2014). Alzheimer's disease affects more than 5 million Americans. Patients with dementia cost the nation \$236 billion in 2016 (Alzheimer's Association, 2016). Despite the incidence and prevalence of this disease, serious gaps in care for this patient population exist. To address these gaps in care, the PCPI (2014) developed specific clinical performance measures for the outpatient setting called the Dementia Performance Measure Set (DPMS) (PCPI, 2014).

The Dementia Performance Measure Set (DPMS) is a guideline designed to address ten clinical quality improvement performance measures to improve the quality of care delivered to patients with dementia in the outpatient setting (PCPI, 2014). The ten recommendations are guidelines to standardize the care delivery to patients with dementia, and to improve the continuity of care across various outpatient settings (PCPI, 2014). The measures are separated into three categories: measures addressing underuse of effective services, measures addressing safety, and measures addressing underuse of patient-centered care strategies (PCPI, 2014). The DPMS recommendations include:

1. Staging of dementia.
2. Cognitive assessment.
3. Functional status assessment.
4. Neuropsychiatric symptom assessment.
5. Management of neuropsychiatric symptoms.
6. Screening for depressive symptoms.
7. Counseling regarding safety concerns.
8. Counseling regarding risks of driving.
9. Palliative care counseling and advance care planning.
10. Caregiver education and support (PCPI, 2014).

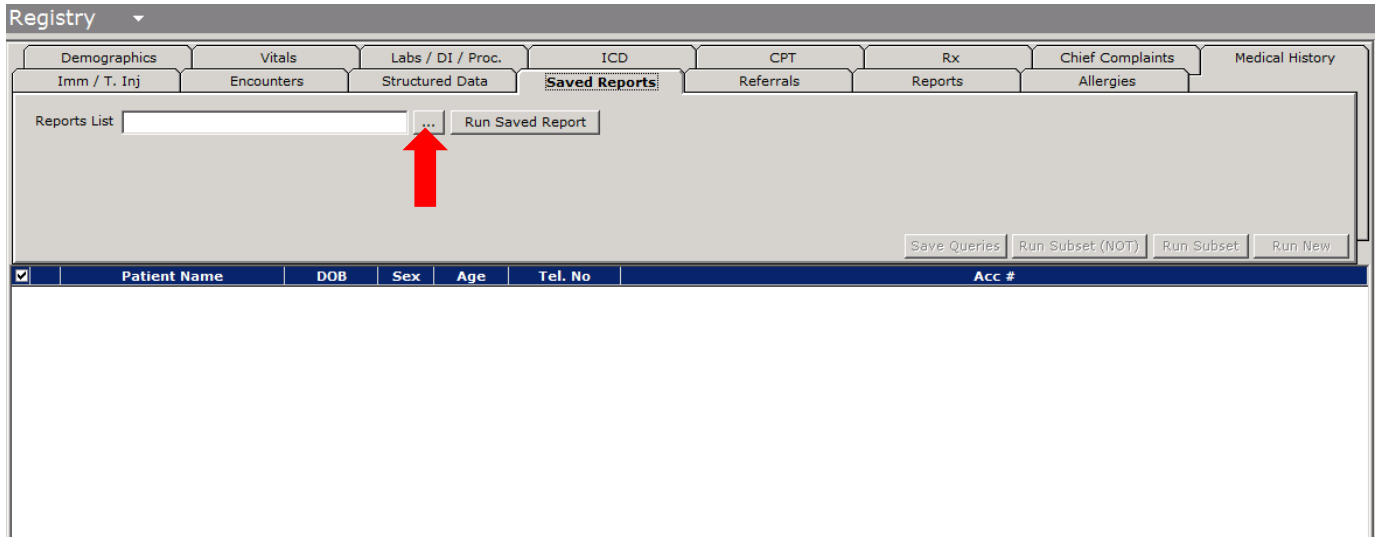
Identification of Eligible Patients

Background: The PCPI (2014) defines the inclusion criteria for patients who may benefit from receiving care based on the DPMS recommendations as patients with diagnosed dementia (ICD-10).

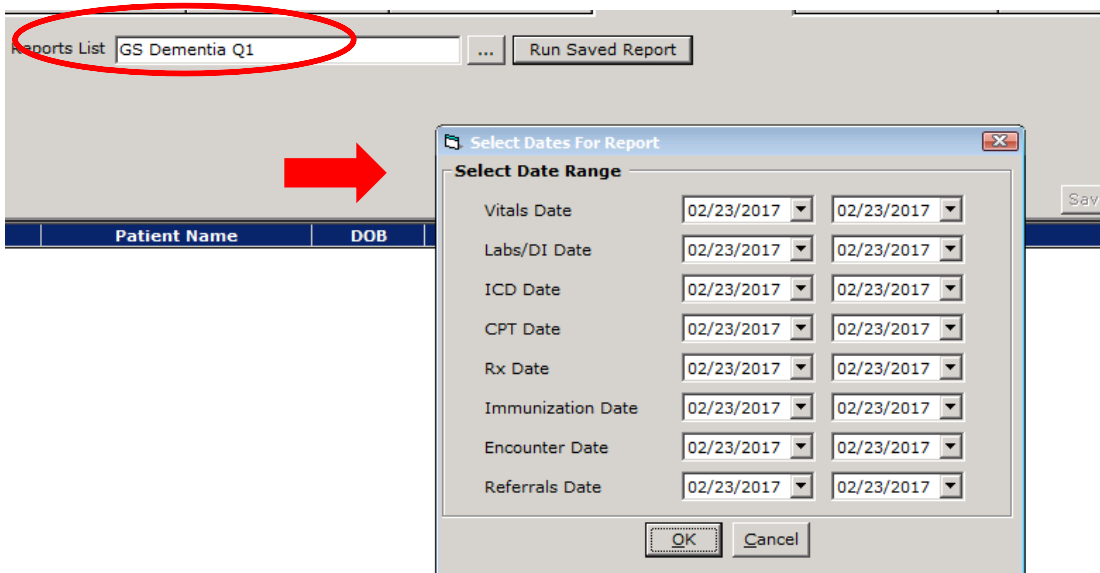
1. For this protocol, a saved search registry criteria for patients with the following ICD-10 diagnosis codes was created. The search criteria is saved as “**GS Dementia Q1.**”

Denominator (Eligible Population) Continued	ICD-10-CM Diagnosis Codes:	
	Code	Descriptor
	Late Syphilis	
	A52.17	Symptomatic neurosyphilis, General paresis
	Vascular Dementia	
	F01.50	Vascular dementia without behavioral disturbance
	F01.51	Vascular dementia with behavioral disturbance
	Dementia in Other Diseases Classified Elsewhere	
	F02.80	Dementia in other diseases classified elsewhere, without behavioral disturbance
	F02.81	Dementia in other diseases classified elsewhere, with behavioral disturbance
	Unspecified Dementia	
	F03	Unspecified dementia
	Delirium due to Known Physiological Condition	
	F05	Delirium due to unknown physiological condition
	Other Mental Disorders Due to Known Physiological Condition	
	F06.0	Psychotic disorder with hallucinations due to known physiological condition
	F06.8	Other specified mental disorders due to known physiological condition
	Alzheimer’s Disease	
	G30.0	Alzheimer’s disease with early onset
	G30.1	Alzheimer’s disease with late onset
	G30.8	Other Alzheimer’s disease
	G30.9	Alzheimer’s disease, unspecified
	Other Degenerative Diseases of Nervous System, Not Elsewhere Classified	
	G31.01	Pick’s disease
	G31.09	Other frontotemporal dementia
	G31.83	Dementia with Lewy bodies

2. To generate a search of eligible patients:
 1. Select “Registry” tab on left menu
 2. Within the registry tab, select “Registry.”
 3. Select “Saved Reports” tab on top menu → Select “...”



4. Under Registry Report’s List → Select “GS Dementia Q1” → Select “Ok.”
5. GS Dementia Q1 is saved query of patients with a diagnosis of dementia
3. Select “Run Saved Report”
4. Modify time frame for desired fields → Select “OK”



Patient Explanation of Comprehensive Dementia Care

Background: As of January 2017, the organization is closed to new patients. However, there is an opportunity to deliver the evidence-based care outlined in this protocol to established patients who have dementia in the practice. This protocol includes a letter that could be handed to patients with dementia and their caregivers in the office, could be mailed to eligible patients, or could be used to guide provider-patient conversations. This protocol includes the recommendation to distribute informational material to all patients and their caregivers with a known diagnosis of dementia. For step by step instructions on how to identify patients with dementia, see page four of the protocol.

“Dear _____,

It is a pleasure to serve your primary health care needs here at [REDACTED] As a primary care practice, we are continuously striving to improve the quality of care we provide to our you and your family. One of the areas we are seeking to improve in is how we provide care to our patients with dementia (or memory problems).

We have found that there are gaps in primary care for patients with dementia or memory problems, and the traditional structure of primary care practice does not always allow for the time and consideration needed to address the complex health and social needs for our patients. To address these gaps in care, we have created new guidelines that focus on addressing the complex health and social needs for our patients. These items are formally known as the Dementia Performance Measure Set recommendations, and include a focus on:

1. Staging of dementia
2. Cognitive assessment
3. Functional status assessment
4. Neuropsychiatric symptom assessment
5. Management of neuropsychiatric symptoms
6. Screening for depressive symptoms
7. Counseling regarding safety concerns

8. Counseling regarding risk of driving
9. Palliative care counseling and advance care planning
10. Caregiver education and support

If you or your family member are interested in scheduling an appointment to discuss any of these items, please feel free to contact us. We will also be doing our best to address these topics whenever we see you if it is appropriate. Please keep in mind, you may have an additional co-pay if you make an extra appointment to see us (depending on your insurance).

We would like to thank you for trusting us with your primary health care needs. We look forward to the opportunity to continue to care for you and your families in the future.

Sincerely,

A solid black rectangular box used to redact the signature of the sender.

Scheduling a Patient for a Comprehensive Dementia Visit

Background: Eligible patients can be scheduled for a Comprehensive Dementia Visit, or the provider can incorporate elements of the comprehensive dementia care into any office visit.

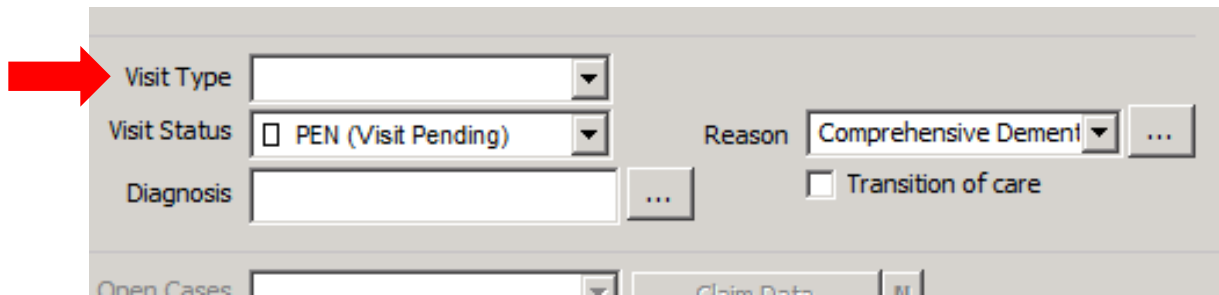
- To schedule a patient for a Comprehensive Dementia Visit:
 1. Log in to eClinicalWorks
 2. Select patient and/or visit encounter
 3. To schedule a New Appointment
 - a. Select “**New Appt**” on patient’s care summary page

The screenshot displays the patient care summary page for a patient named 'Test, test'. The page is divided into several sections:

- Header:** Includes tabs for Labs, DI, Procedures, Imm/T.Inj, Referrals, Allergies, CDSS, Alerts, and Notes.
- Patient Information:** Shows name, address (123 Any St, Any, MI-12345), DOB (01/01/1901), Age (116 Y), Sex (M), and Account No (16689). It also lists contact information (Home: 111-111-1111) and insurance (AARP).
- Financials:** Patient Balance: \$0.00, Account Balance: \$0.00.
- Appointments:** Last Appt, Next Appt, and Bumped Appts (NONE) are listed.
- Action Buttons:** A grid of buttons for various actions, with 'New Appt' circled in red. Other buttons include New Tel Enc, Print Label(s), Billing Alert, Patient Docs, Letters, Encounters, Medical Summary, Rx, Progress Notes, eClniForms, Devices, Problem List, Medical Record, Send eMsg, Account Inquiry, Guarantor Bal., Consult Notes, Letter Logs, Fax Logs, Action, Flowsheets, Billing Logs, PL 9 to 10, and ePrescription Logs.
- Right Sidebar:** Contains sections for Overview, DRTLTA, and History. It lists 'Global Alerts', 'Advance Directive', 'Problem List' (with a note 'Problem List has not been verified'), 'Medication Summary', 'Allergies', 'Immunizations', 'Therapeutic Injections', and 'Circle of Care'.

- b. If MU box enters screen, select “Close.”
- c. Set appointment date

- d. Visit type: **OV** (Office Visit)
- e. Reason: **“Comprehensive Dementia Visit”**



The image shows a screenshot of a medical form with several fields. A red arrow points to the 'Visit Type' dropdown menu. The 'Visit Status' dropdown menu is set to 'PEN (Visit Pending)'. The 'Reason' dropdown menu is set to 'Comprehensive Dement'. There is a checkbox for 'Transition of care' which is unchecked. The 'Diagnosis' field is empty. At the bottom, there are partial labels for 'Open Cases' and 'Clin Data'.

Visit Type	<input type="text"/>		
Visit Status	<input type="checkbox"/> PEN (Visit Pending)	Reason	Comprehensive Dement <input type="text"/>
Diagnosis	<input type="text"/>	<input type="checkbox"/> Transition of care	

The Delivery of Comprehensive Dementia Care

Background: Eleven templates are available to assist in the delivery and documentation of the evidence-based recommendations from the PCPI (2014). If the reason for the office visit is for a Comprehensive Dementia Visit, the provider can begin with the “PCPI Dementia Visit” Template. The PCPI Dementia Visit Template includes pre-populated patient information to enhance the visit documentation. The template includes, the history of present illness, objective and subjective exam, follow up, and the evaluation and management code for the visit. If the provider addresses any of DPMS recommendations in an office visit for a reason other than a Comprehensive Dementia Care encounter, the provider may select any of the 10 templates depending on the DPMS measures addressed. Each DPMS template contains pre-populated information in the treatment plan and CPT II codes correlating with the addressed measure.

- To document a “PCPI Dementia Visit”
 1. Open patient visit, select “**Templates**” (*located near bottom of the screen*).
 - a. Search for “**PCPI Dementia Visit(s)**” in the “**Find**” section
 - b. Merge “**PCPI Dementia Visit(s)**” template
 - i. Template includes: history of present illness, objective and subjective exam, follow up, and evaluation and management code for visit.

Subjective:
Chief Complaint(s):
 • PCPI Dementia Visit(s)

HPI: ▾
 General
 Patients presents today to PCP for a comprehensive dementia visit. Patient is accompanied by.

Current Medication:
Medical History:
Allergies/Intolerance:
Surgical History:
Hospitalization:
Family History:
Social History:



ROS: ▾

CONSTITUTIONAL

Appetite normal. Bowel Movement normal. Energy Level normal. no Fatigue. no Headaches. no Ill Contacts. no Loss of Appetite. Sleep good. no Weakness. no Weight Gain. no Weight Loss.

DOT Health History

Any Significant Illness or Injury in last 5 years No. Head or Brain injuries, disorders or illnesses No. Seizures or Epilepsy No. Muscular Disease No. Loss of, or altered consciousness No. Fainting, dizziness No. Stroke or paralysis No. Spinal injury or disease No.

CARDIOLOGY

no Chest Pain. no Shortness of Breath. no Dizziness. no Fatigue.

GASTROENTEROLOGY

no Abdominal Pain. no Nausea.

UROLOGY

no Difficulty urinating. no Urinary Incontinence.

NEUROLOGY

Memory Loss yes. no Seizures. no Gait Abnormality.

PSYCHOLOGY

no Depression. no Anxiety. no Mania. no Mood Swings. no Hallucinations.



Objective:

Vitals:

Past Results:

Examination: ▾

Physical Examination: ▾

GENERAL

General Appearance: well-appearing, no acute distress. Mental Status: alert and oriented. Mood/Affect: pleasant. Speech: unremarkable.

HEART

Rate: regular. Heart sounds: normal S1S2.

LUNGS

Rate: regular. Auscultation: CTA bilaterally.

ABDOMEN

General: normal. Bowel sounds: normoactive. Tenderness: none.

NEUROLOGICAL

Orientation: alert and oriented x 3. Motor: normal strength bilaterally. Reflexes: 2+ bilaterally and symmetric. Gait: normal. Romberg: Romberg Test Negative.



Billing Information:

Visit Code:

- 99214 Office Visit, Est Pt., Level 4.

Procedure Codes:

- 1490F DEM SEVERITY CLASSIFIED MILD.
- 1491F DEM SEVERITY CLASSIFIED MOD.
- 1493F DEM SEVERITY CLASS SEVERE.

- ii. To not include templated information, de-select on right side prior to merging template.

- iii. To clear the *entire* template: Select “ZZClear” template→Select “all options”→ Select drop down arrow next to merge template →Select “Copy Template.”
 - f. Merge additional templates for Dementia Performance Measure Set (DPMS) measures addressed during visit
 - To document DPMS addressed
1. Open patient visit, select “Templates” (*located near bottom of the screen*).
 2. Search for DPMS measure addressed in “Find” section. There are 10 separate templates for each of the 10 DPMS recommendations
 - a. Each DPMS template includes:
 - i. Templated treatment discussion with patient and/or caregiver counseling recommendations and considerations for the provider (*for a summary of templated information Appendix A*).
 - ii. To modify treatment section
 1. Select “Treatment”

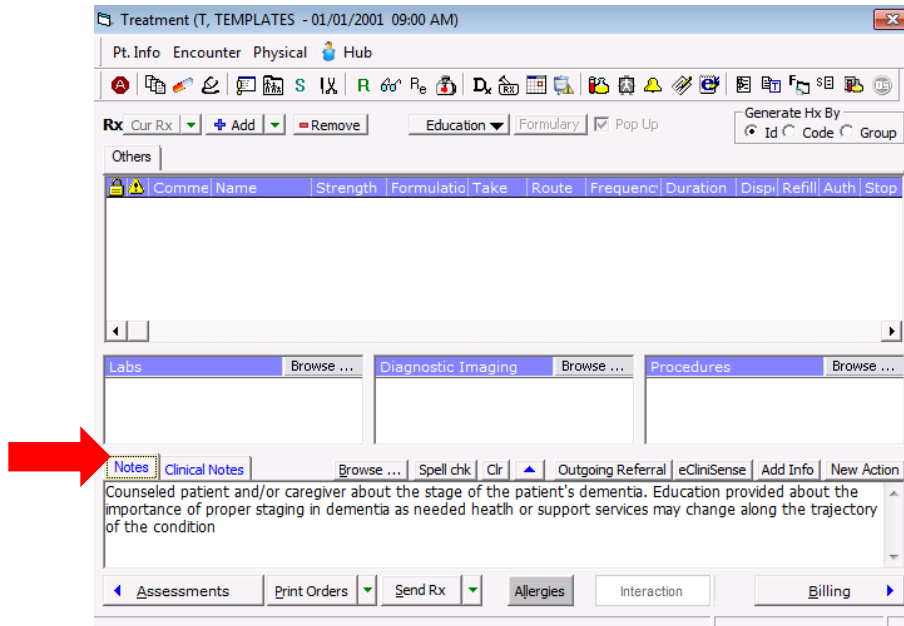
Plan:
Treatment:
Others

Notes: Counseled patient and/or caregiver about the stage of the patient's dementia. Education provided about the importance of proper staging in dementia as needed health or support services may change along the trajectory of the condition.

Clinical Notes: Consider using GDS, FAST, CDR, Dementia Severity Rating Scale, Formal Neuropsychological evaluation, or qualitative assessments to stage dementia.

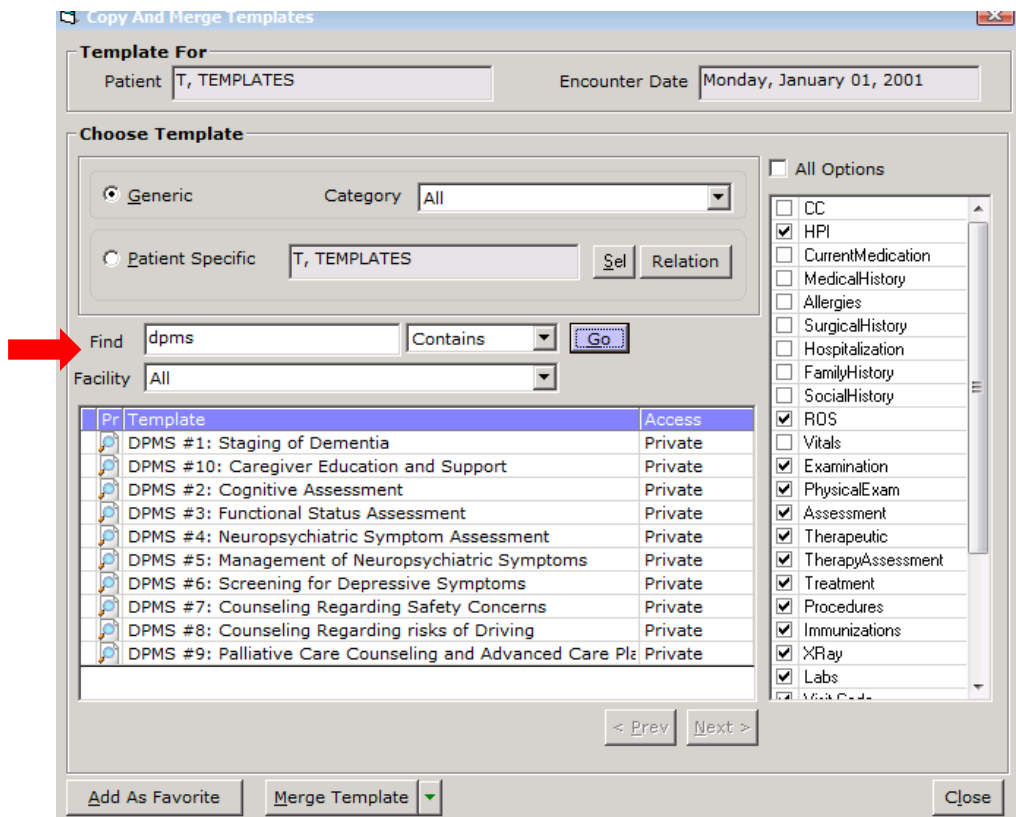
Procedures:
Immunizations:

2. Select section you would like to modify, and free text desired documentation:



- a. "Notes"
- b. "Clinical Notes"

iii. Templated CPT II codes correlating with the DPMS measure addressed



- b. **Note:** Some DPMS templates contain multiple CPT II codes. The provider must verify the correct CPT II code(s) are documented. Remove extra code(s) if not applicable or not addressed.

Billing Information:

Visit Code:

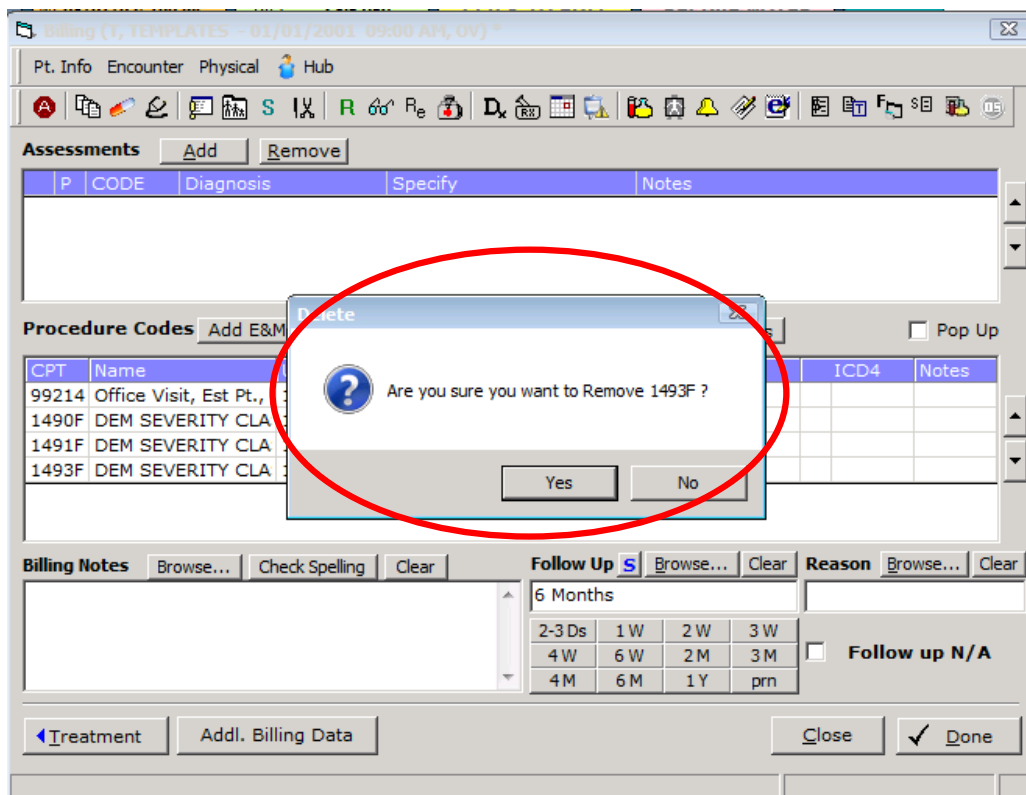
- 99215 Office Visit, Est Pt., Level 5.



Procedure Codes:

- 1490F DEM SEVERITY CLASSIFIED MILD.
- 1491F DEM SEVERITY CLASSIFIED MOD.
- 1493F DEM SEVERITY CLASS SEVERE.

1. To Remove: Select “**Procedure codes**” in visit note
2. Select CPT code you wish to remove → Select “**Remove**”
3. Select “**Ok.**”



Utilization of Standardized Screening Tools

Background: The PCPI (2014) defines assessment tools or recommendations for determining if a DPMS measure has been met. A complete list of the recommendations can be found in Appendix B. To standardize the delivery and evaluation of evidenced-based care for patients with dementia, this protocol includes the addition of several customized screening tools for the organization’s electronic health record. The utilization of standardized screening tools promotes the ability for the organization to monitor the DPMS quality improvement initiative in the future. A summary of the customized tools can be found below. In addition, this protocol includes instruction on how to modify, add, or remove screening tools later.

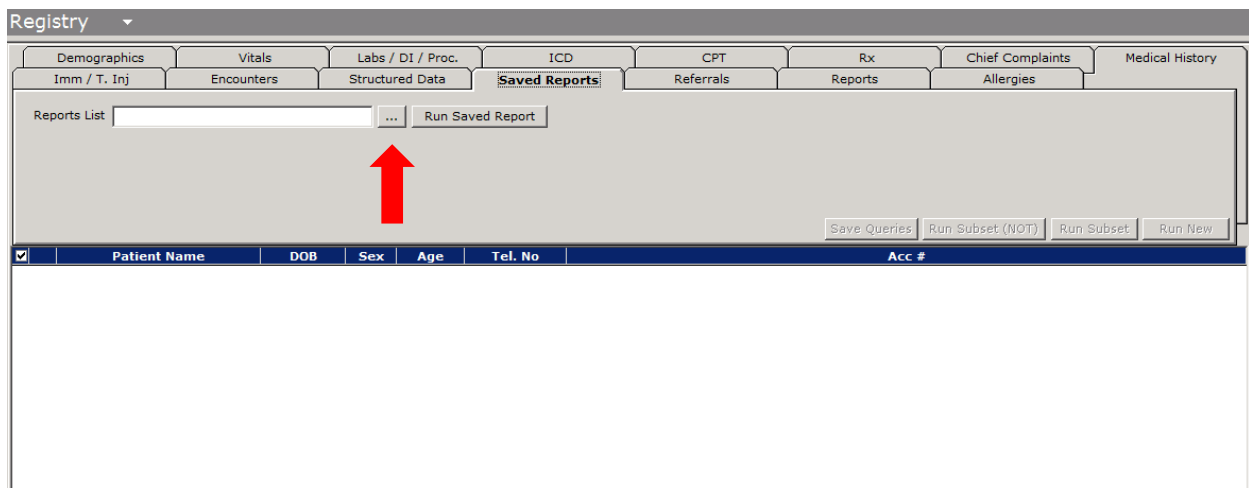
- To assess a DPMS measure with a standardized assessment tool and structured data
 1. Determine the DPMS measure you would like to assess
 - a. The screening tools are available in the “**HPI**” section of the visit note
 - b. Select “**HPI**” in visit note.
 - c. Based on DPMS measure selected, select the standardized screening tool in HPI:

Dementia Performance Measure Set (DPMS)	Standardized Screening Tool Available	HPI Category	Structured Data to Query
1. Staging of dementia	Functional Assessment Staging Test	Neurology→Functional Assessment Staging Test	4 or less=mild dementia 5 and 6=moderate dementia 6 and 7=severe dementia
2. Cognitive Assessment	General Practitioner Assessment of Cognition (GPCOG)	Neurology→GPCOG	9 or greater=no significant cognitive impairment 5-8=more information necessary 0-4=cognitive impairment is indicated
3. Functional status assessment	Barthel Index of Activities of Daily Living	Musculoskeletal→Barthel Index of Activities of Daily Living	Numeric values 1-20
6. Screening for depressive symptoms	Geriatric Depression Scale	Psychology→Geriatric Depression Scale	0-5=Normal >5=Suggests Depression

Quality Improvement

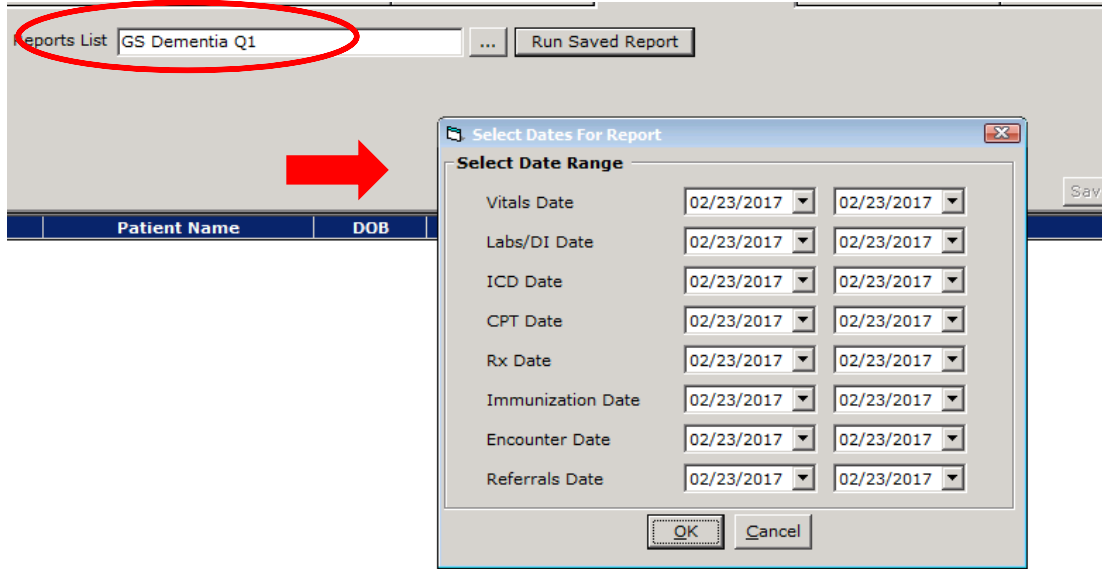
Background: The aims of these patient-centered care strategies are to improve the quality of care for patients with dementia and to lower health care costs. Since goals and outcomes are individualized in dementia care due to the variability in disease progression, the assessment of care quality should be focused on the measurement of evidenced-based care processes that have been associated with positive outcomes in the literature (Odenheimer et al., 2013). Evidence-based treatment measures, coupled with support for patients and their caregivers, can result in successful role transitions, decreased economic costs of dementia care, and improved quality of life for patients and their caregivers (Ducharme et al., 2011). The primary care setting is an optimal setting to deliver the Dementia Performance Measure Set (DPMS) recommendations (PCPI, 2014).

- To query DPMS in patient registry
 1. Option A
 - a. Log in to eClinicalWorks
 - b. Select “Registry” tab on left menu
 - c. Within the registry tab, select “Registry.”
 - d. Select “Saved Reports” tab on top menu → Select “...”

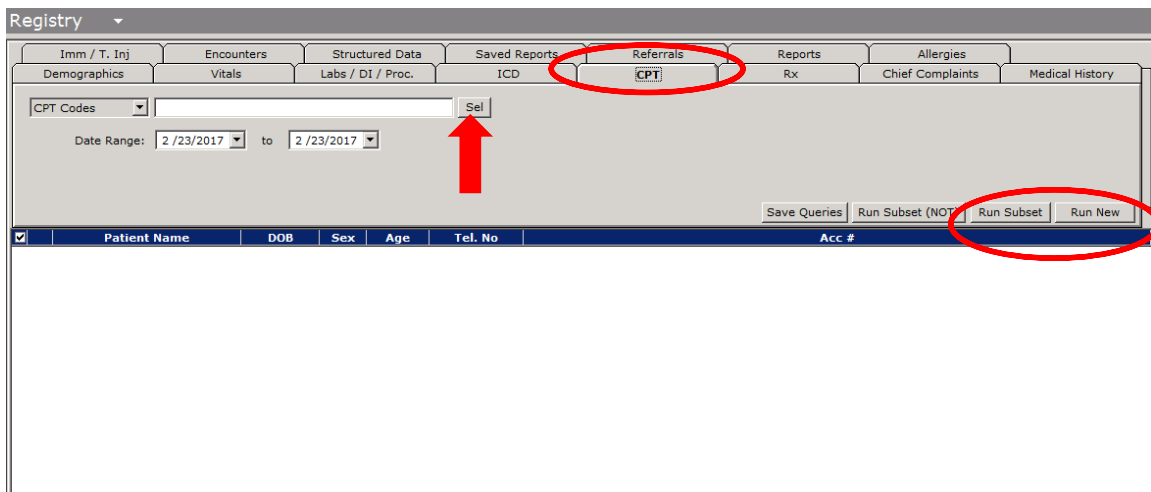


- e. Under Registry Report’s List → Select “GS Dementia Q1” → Select “Ok.”
 - i. “GS Dementia Q1” is saved query of patients with a diagnosis of dementia
- f. Select “Run Saved Report”

g. Modify time frame for desired fields → Select “OK”



h. Select “CPT” tab



- i. Select CPT II code (DPMS measure) for desired report
 - i. Note: May free text CPT codes or select CPT codes through the “Sel” tab
 - ii. Note: May select multiple CPT codes to review
 - iii. Note: May save search queries if desired
- j. Change date range to desired time frame
- k. Select “Run Subset”
- l. To clear search → Select “Clear Search” located near the bottom of screen.

3. Option B

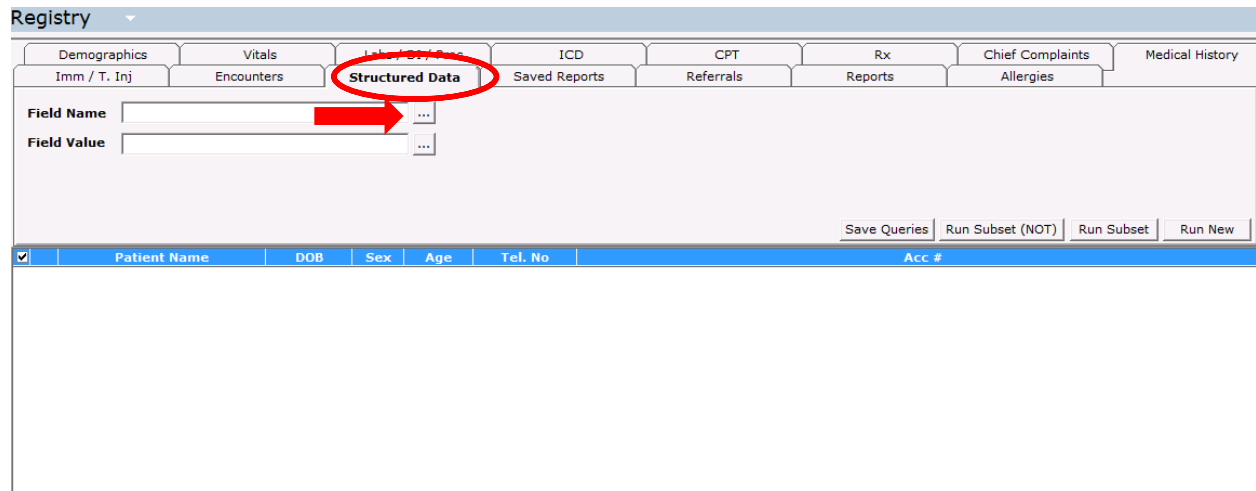
- a. To Search CPT Codes in Billing → Select “Billing” located in top drop down menu
- b. Select “CPT” → Type in desired CPT II Code.

Dementia Performance Set Measure	CPT Category II Code
1. Staging of dementia	1490F: Dementia severity classified, mild 1491F: Dementia severity classified, moderate 1493F: Dementia severity classified, severe
2. Cognitive Assessment	1494F: Cognition assessed and reviewed
3. Function status assessment	1175F: Functional status for dementia assessed and results reviewed
4. Neuropsychiatric symptom assessment	1181F: Neuropsychiatric symptoms assessed and results reviewed
5. Management of neuropsychiatric symptoms	4525F: Neuropsychiatric intervention ordered 4526F: Neuropsychiatric intervention received
6. Screening for depressive symptoms	3725F: Screening for depression performed
7. Counseling regarding safety concerns	6101F: Safety counseling for dementia provided 6102F: Safety counseling for dementia ordered
8. Counseling regarding risks of driving	6110F: Counseling provided regarding risks of driving and the alternatives to driving
9. Palliative care counseling and advance care planning	4350F: Counseling provided on symptom management, end of life decisions, and palliation 1123F: Advanced care planning discussed and documented advanced care plan or surrogate decision maker documented in the medical record 1124F: Advanced care planning discussed and documented in the medical record, patient did not wish or was not able to name a surrogate decision maker or provide an advanced care plan

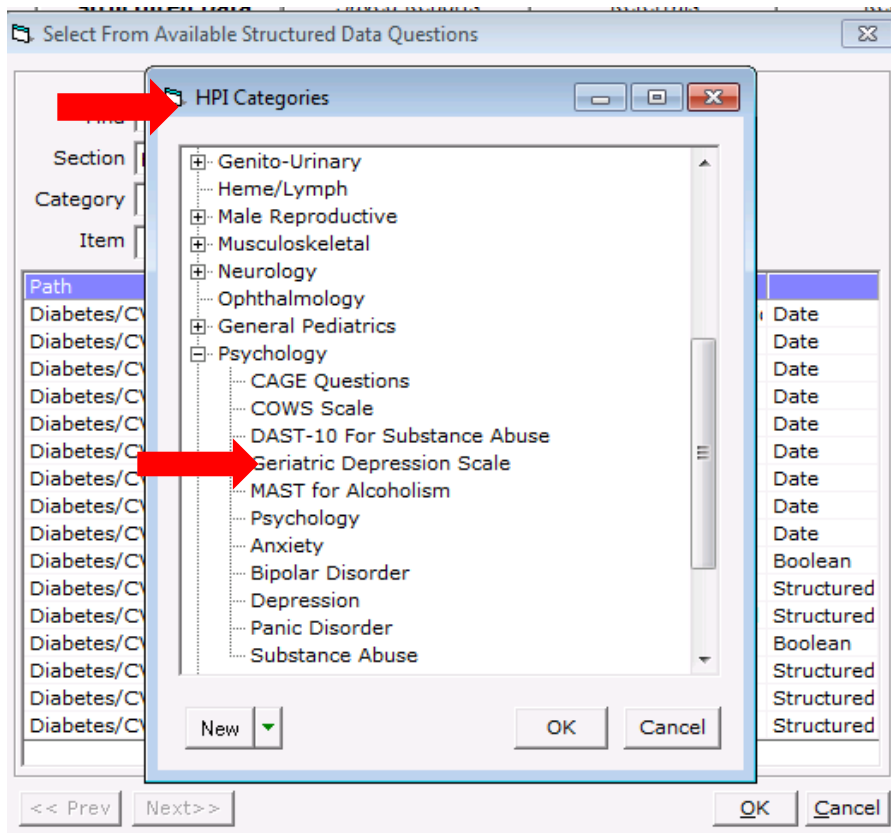
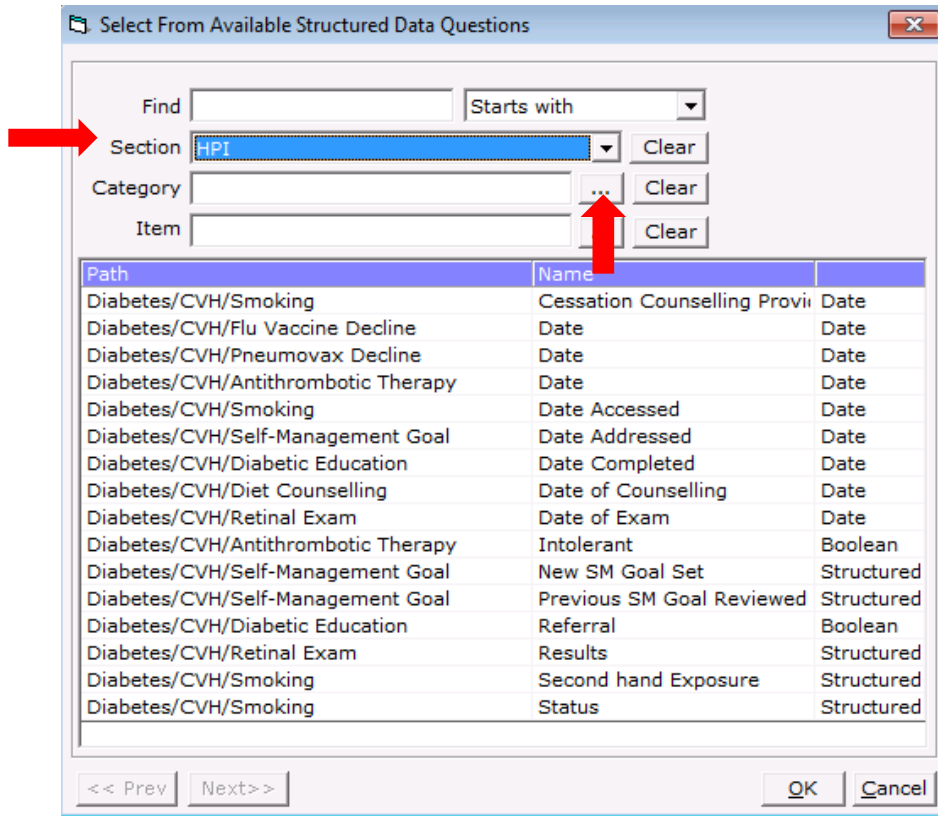
Monitoring Quality Improvement Initiative

Background: There is evidence to support the ten DPMS recommendations. A summary of the evidence can be found in Appendix C. Data that is able to be queried can be generated if standardized, evidence-based screening tools are utilized to determine if a recommendation was addressed. This protocol includes instruction on how to query the results of the customized screening tools available the electronic health record. In addition, this protocol includes instruction on how to modify, add, or remove screening tools later.

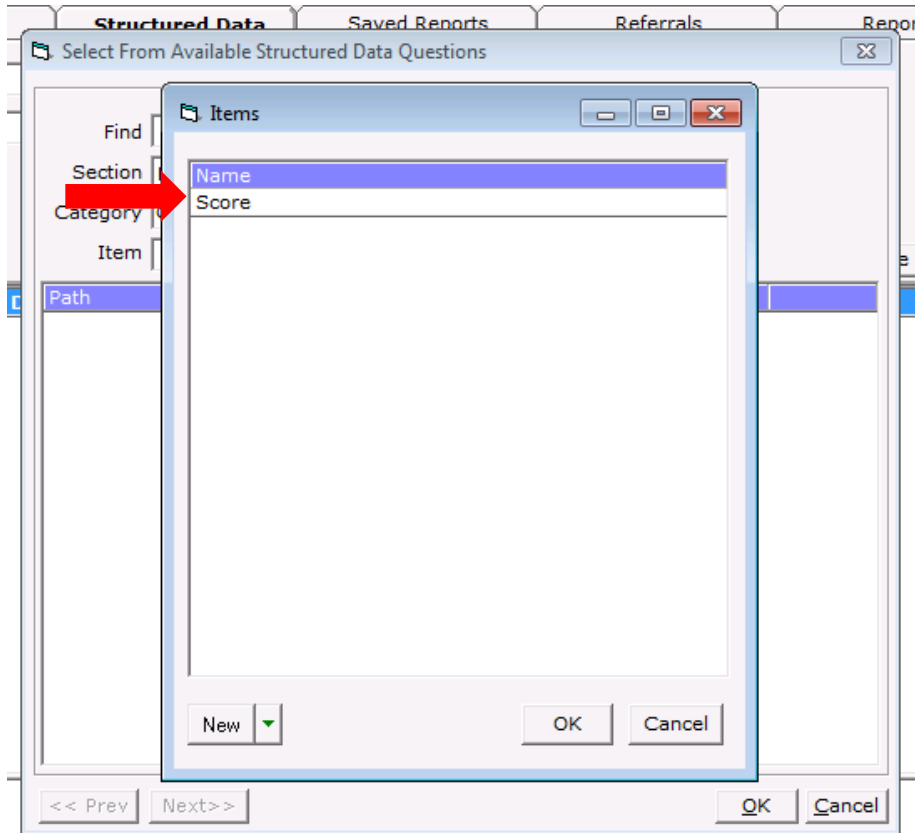
- To query the results of a screening tool (To query structured data)
 1. Log in to eClinicalWorks
 2. Select “Registry” tab on left menu
 3. Within the registry tab, select “Registry.”
 4. Select “Structure data” tab



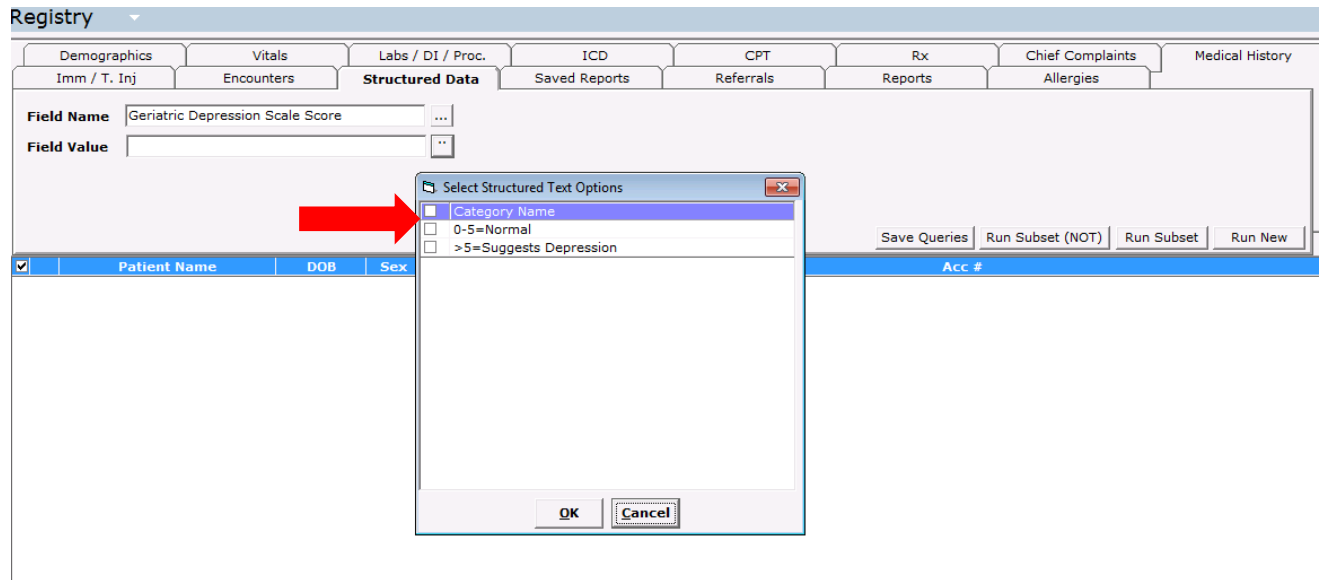
5. Select “...” next to the Field Name section → Select the “Section” from the drop down list of options. All of the options for this protocol are in the HPI section
6. Select the search and navigation tools, drop-down lists, and “...”
7. Next, select the “Category.” Under the HPI Section, you must select a subcategory (*see table below*) → Select “OK”



8. Select from available structured data questions you would like to query
 - a. **Note:** In this protocol, there is only one option for each of the screening tools created.



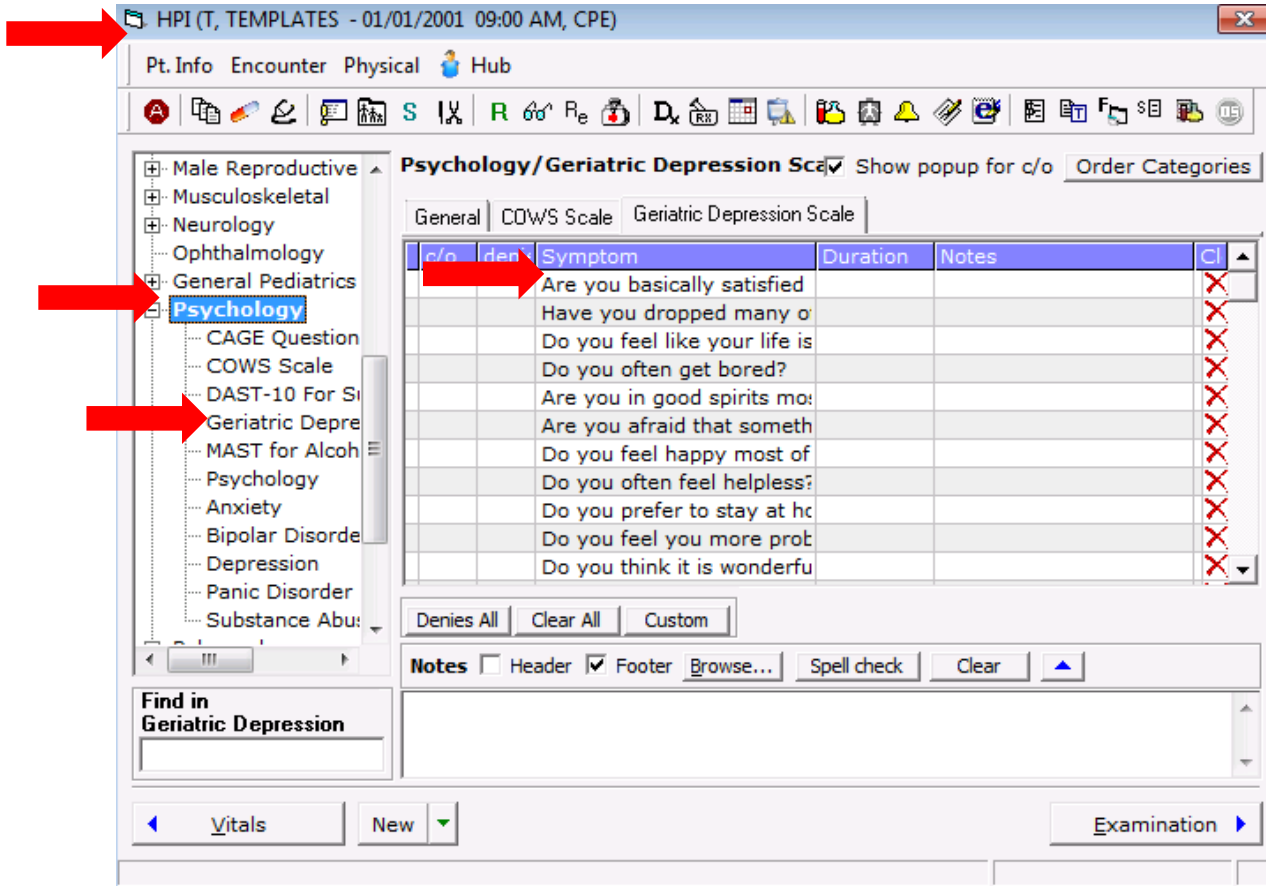
- b. Select “**Ok**”→Then select “**Ok**” again→This will bring you back to the Structured data tab.
9. Type in “**Field Value**” or select from “...”
10. Select the item you would like to query→Select “Ok”→Select “Run New”



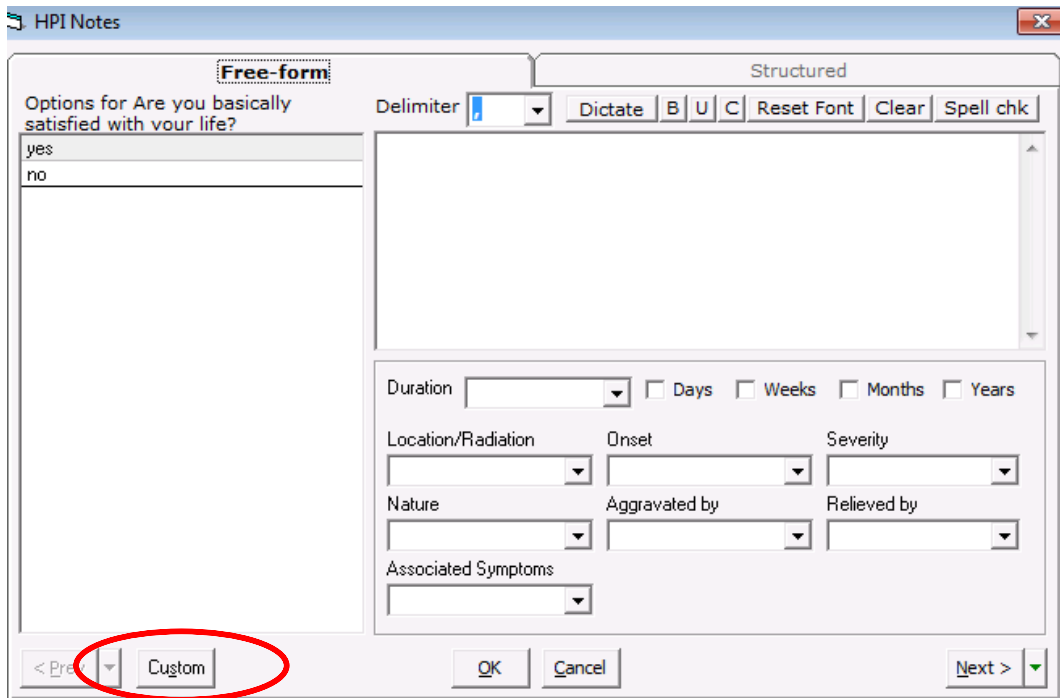
11. List of DPMS measure, category, subcategory, and field value

Dementia Performance Measure Set (DPMS)	Standardized Screening Tool Available	HPI Category	Structured data to query
1. Staging of dementia	Functional Assessment Staging Test	Neurology→Functional Assessment Staging Test	4 or less=mild dementia 5 and 6=moderate dementia 6 and 7=severe dementia
2. Cognitive Assessment	General Practitioner Assessment of Cognition (GPCOG)	Neurology→GPCOG	9 or greater=no significant cognitive impairment 5-8=more information necessary 0-4=cognitive impairment is indicated
3. Functional status assessment	Barthel Index of Activities of Daily Living	Musculoskeletal→Barthel Index of Activities of Daily Living	Numeric values 1-20
6. Screening for depressive symptoms	Geriatric Depression Scale	Psychology→Geriatric Depression Scale	0-5=Normal >5=Suggests Depression

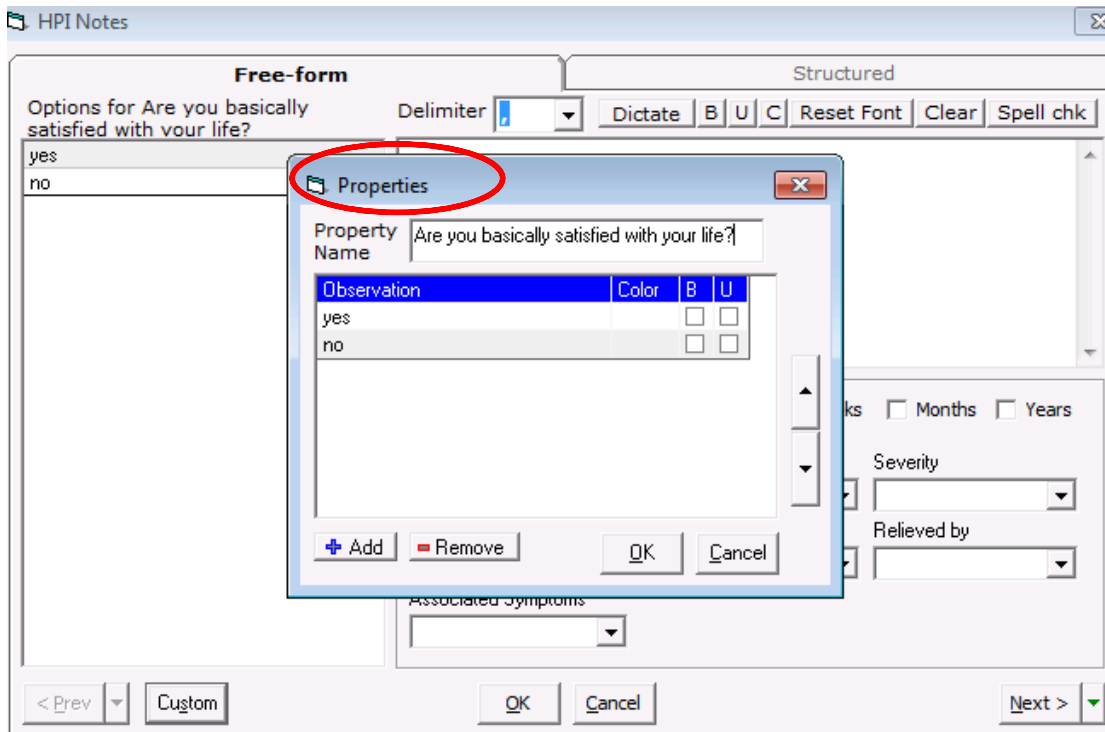
- To modify, add, or remove a screening tool
 1. In patient encounter or templates, select “HPI”
 2. Select category you would like to modify, add, or remove
 - a. To modify
 - i. Select subsection in category you would like to modify



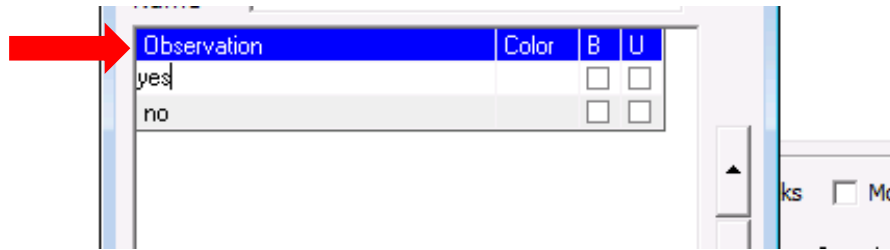
- ii. Double click on the symptom you would like to modify
- iii. Select “Custom”



iv. In Property Name, modify as desired



v. To modify observation categories, select observation you would like to modify and free text the modification

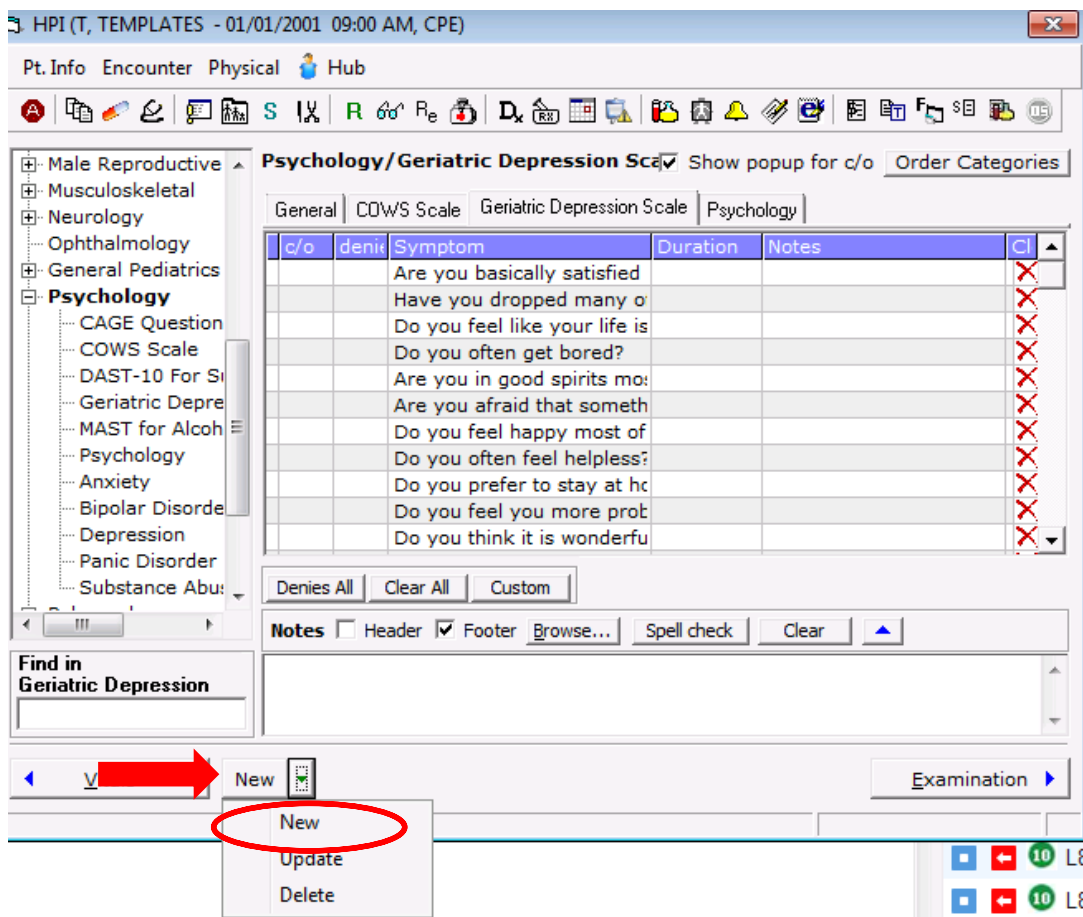


vi. When modifications are complete, select “Ok”

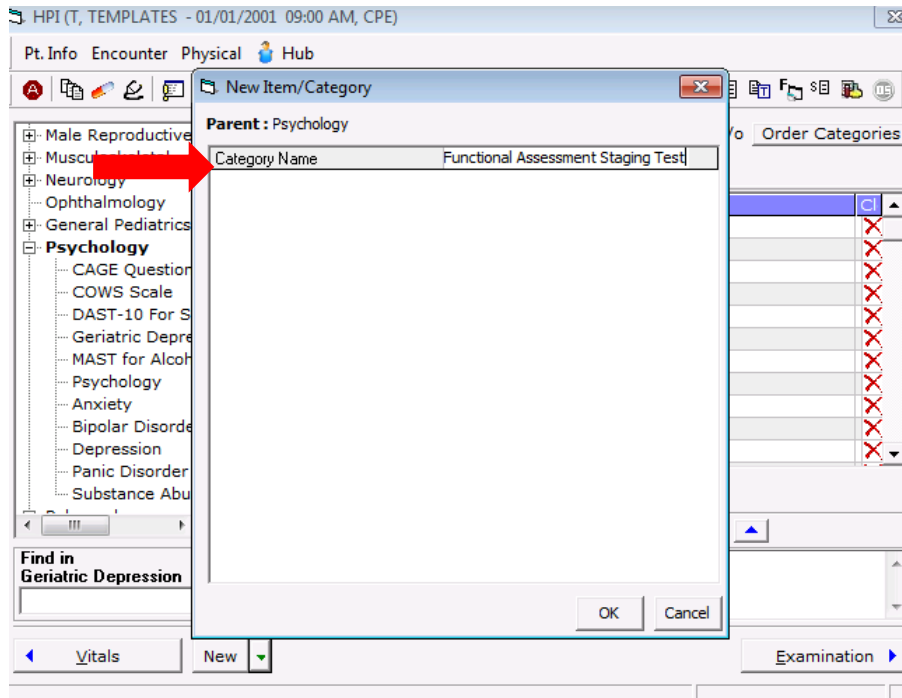
b. To add

i. Select subsection in category you would like to modify

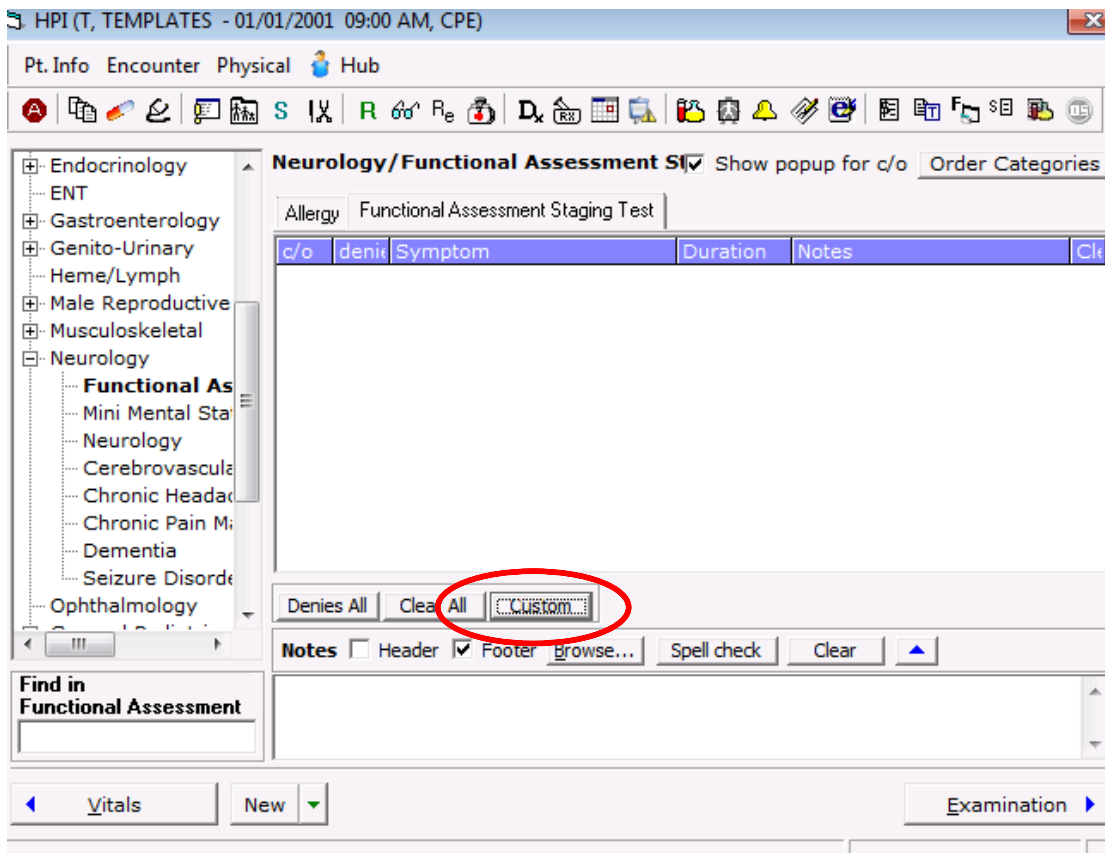
ii. Select “New”→Select “New”



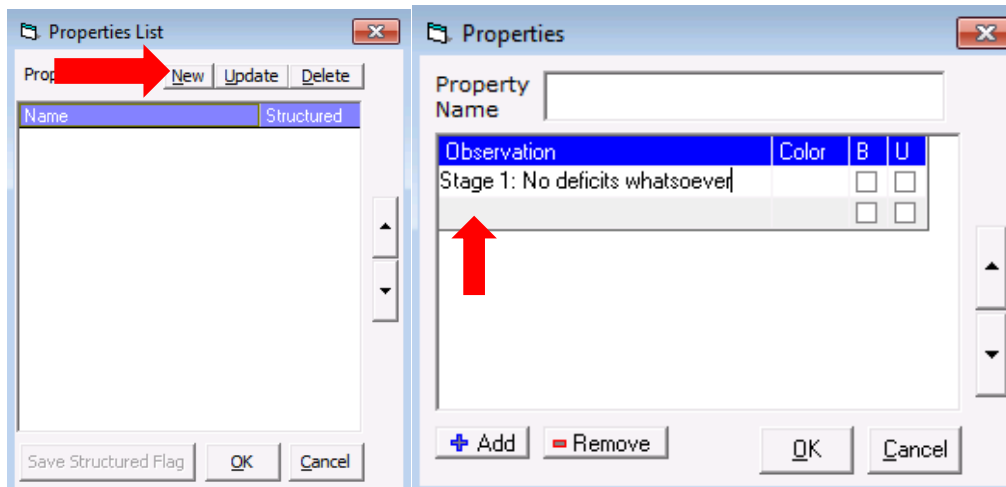
iii. In Category Name, Type description→Select “Ok”



- iv. To add symptoms to the new subcategory, select the subcategory you created → Select “Custom”



1. Select “New”



2. Type description in Property Name section

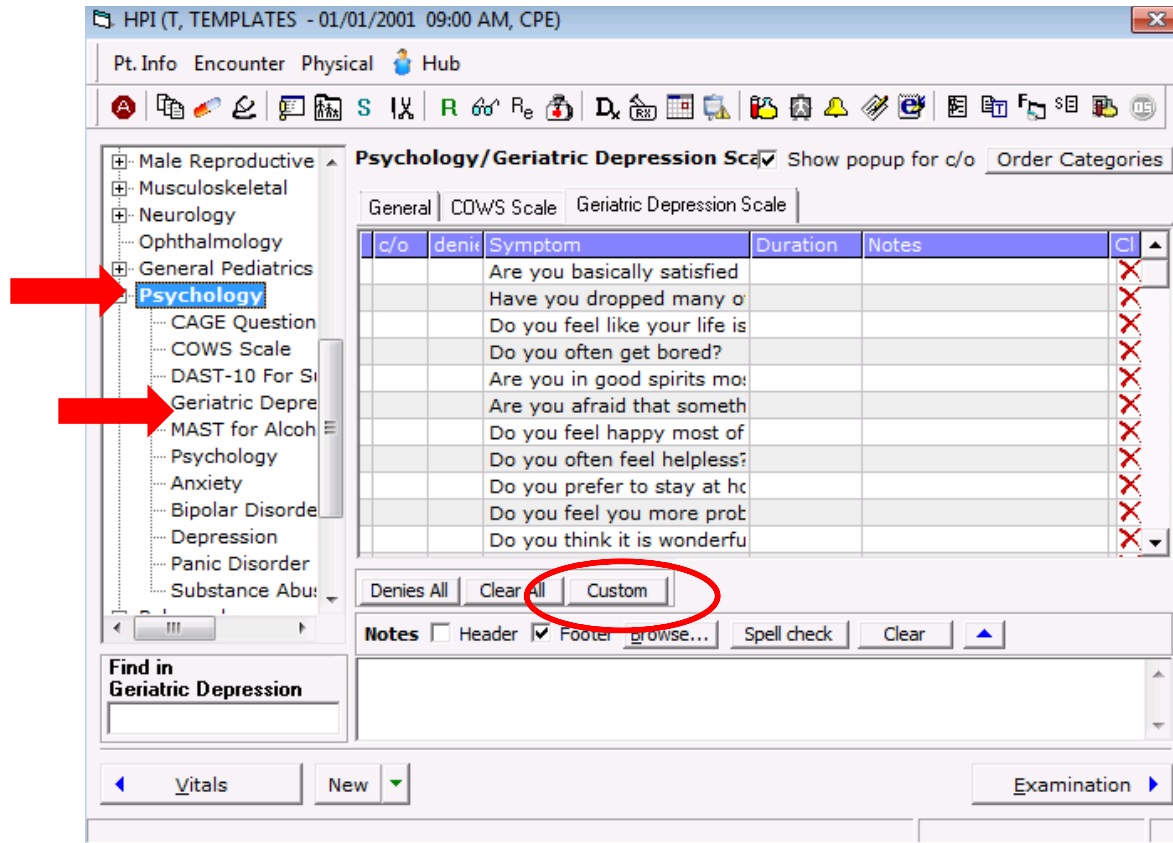
3. Select area under observation and type observations → Select “Ok”

c. To remove

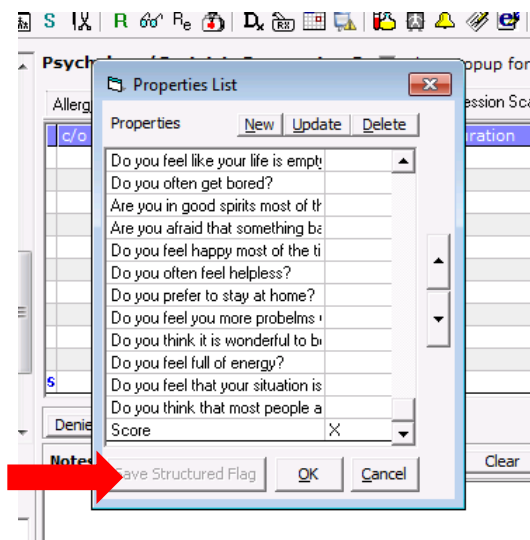
i. Select subsection in category you would like to modify

ii. Select down arrow next to “new” → Select “Delete”

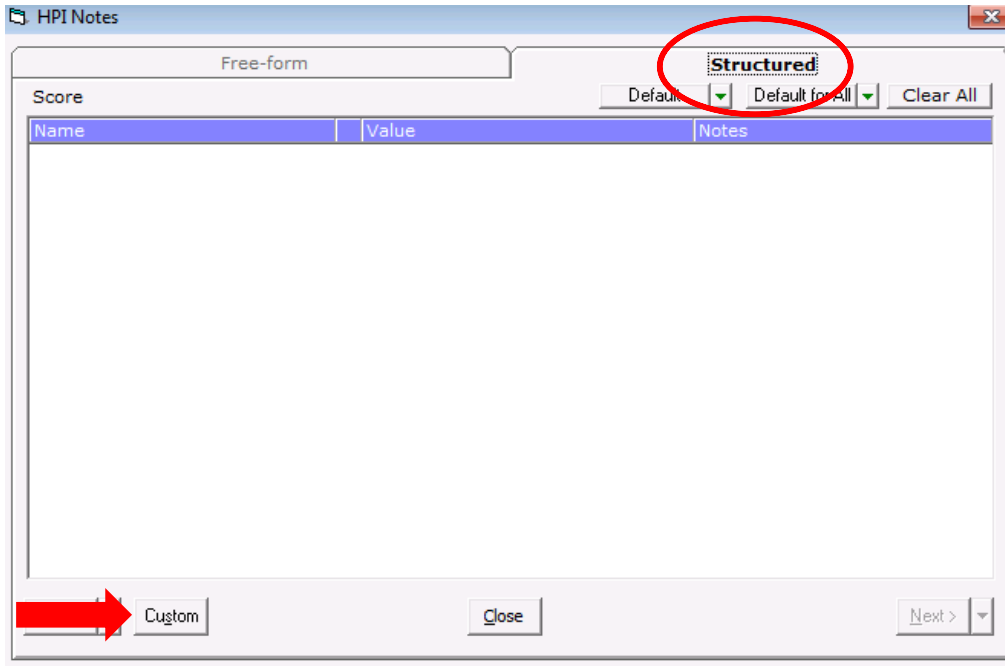
- To create structured items in screening tool that can be queried in the registry reports
 1. Select subsection in the category you would like to create structured data
 2. Select “Custom”



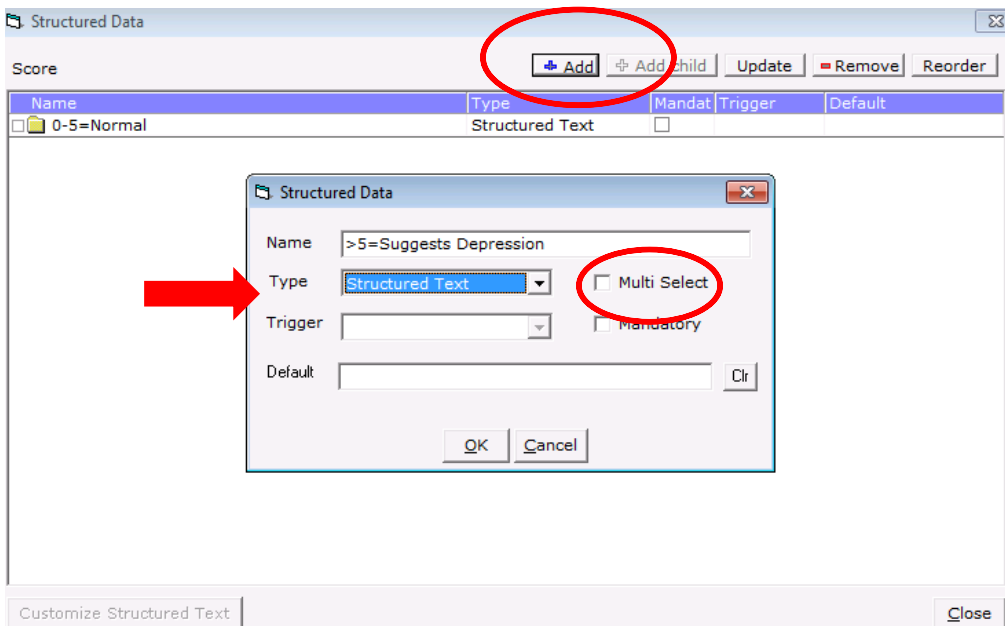
3. Select item you would like to structure → An “X” will populated after selection is made → Select “Save Structured Data” → Select “Ok”



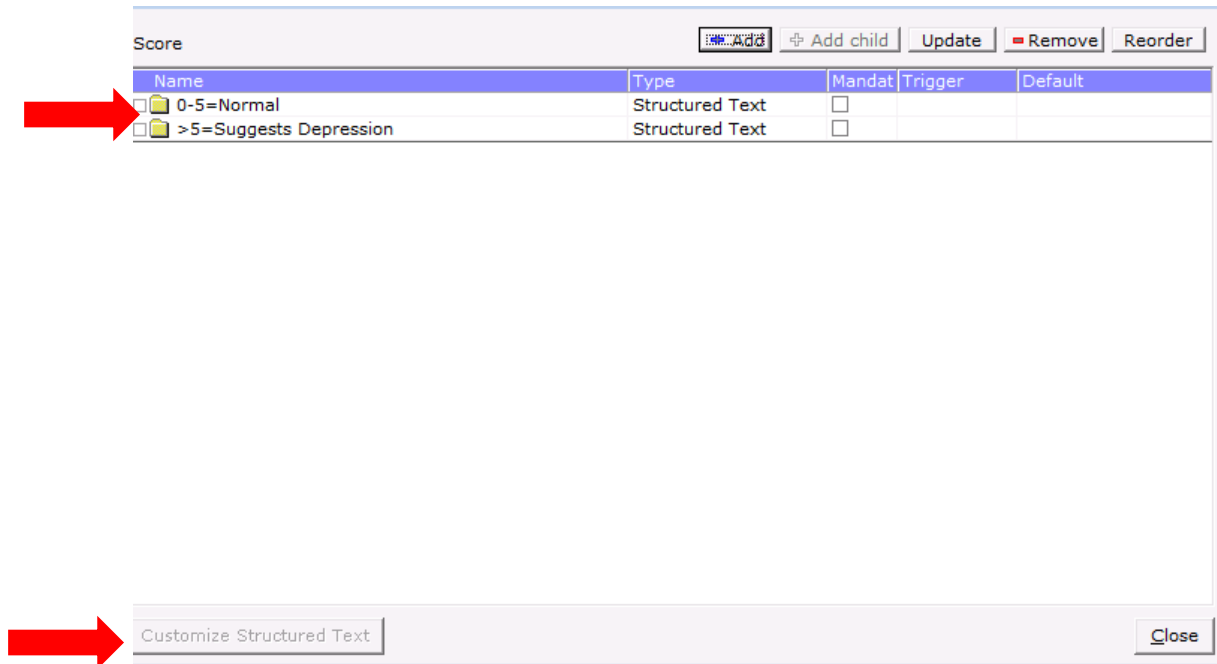
4. After the symptoms have been selected to be structured → Double click on symptom or select in notes section → The Structured tab will open automatically.



5. Select “Custom” → Select add → Type in structured response name → Select Type as “structured text” → Select Multitext → Select “Ok”



- a. After structured data name is created, select category over “Name,” and select “Customized Structured Text”



- b. Select “Add” within the window to type options you would like structured → Select “Ok”
6. When finished with created structured data, select “Close” → Select “Close” again

Billing

Background: The pre-templated evaluation and management (E&M) code for visit is a 99214. This billing code was selected for the customized “PCPI Dementia Visit” template. A level 4 code was selected, because use of the protocol may take additional provider time and/or may include a higher complexity of care. A level 4 billing code can be used for complexity or for time. If more than 50% of the visit time is spent in counseling and coordinating care, the provider can code on the basis of time. Since the PhD prepared Nurse Practitioner in the practice is allotted additional time with patients due to the unique structure of the practice, there is opportunity for the NP to bill a level 4 code when appropriate. If the “PCPI Dementia Visit” template is used, but the level 4 billing code is not appropriate, the provider can modify the E&M code.

- To modify the E&M code
 1. Select “Visit Code”

Billing Information:

Visit Code:

- 99215 Office Visit, Est Pt., Level 5.

Procedure Codes:

- 1490F DEM SEVERITY CLASSIFIED MILD.
- 1491F DEM SEVERITY CLASSIFIED MOD.
- 1493F DEM SEVERITY CLASS SEVERE.

2. Select the pre-populated “99214 Office Visit, Est Pt.” → Select “Remove”
 - a. When asked if you are sure you want to remove → Select “Yes”

The screenshot shows a software window titled "Billing (T, TEMPLATES - 01/01/2001 09:00 AM, CPE) *". It features a menu bar with "Pt. Info", "Encounter", "Physical", and "Hub". Below the menu is a toolbar with various icons. The main interface is divided into several sections:

- Assessments:** Includes "Add" and "Remove" buttons and a table with columns for "P", "CODE", "Diagnosis", "Specify", and "Notes".
- Procedure Codes:** Includes "Add E&M" (highlighted with a red arrow), "Remove", "EM Coder", "Medicare Edits", and a "Pop Up" checkbox. Below this is a table of procedure codes:

CPT	Name	Units	M1	M2	M3	M4	ICD1	ICD2	ICD3	ICD4	Notes
1490F	DEM SEVERITY CLA	1.00									
1491F	DEM SEVERITY CLA	1.00									
1493F	DEM SEVERITY CLA	1.00									
99215	Office Visit, Est Pt.,	1									
- Billing Notes:** Includes "Browse...", "Check Spelling", and "Clear" buttons.
- Follow Up:** Includes "S", "Browse...", and "Clear" buttons. A dropdown menu is set to "6 Months". Below it is a grid of follow-up intervals:

2-3 Ds	1 W	2 W	3 W
4 W	6 W	2 M	3 M
4 M	6 M	1 Y	prn

 A checkbox labeled "Follow up N/A" is also present.
- Bottom Section:** Includes "Treatment", "Addl. Billing Data", "Close", and "Done" buttons.

At the bottom of the window, the text "99215, Office Visit, Est Pt., Level 5" is visible.

- To code using the E&M coder for time
 1. Select "Visit Code"
 2. Select "EM Coder"
 3. Select "Time Based EM Coder"

Chart Based EM Coder | **Time Based EM Coder**

Patient Type

5 Minutes (Established Patient)
 10 Minutes (Established Patient)
 15 Minutes (Established Patient)
 25 Minutes (Established Patient)
 40 Minutes (Established Patient)

Code

Accept Code | Close

4. Select Patient Type
5. Select desired Minutes → The code will populate in “Code” section
 - a. Select “Accept Code”

EM Coder

Chart Based EM Coder | **Time Based EM Coder**

Patient Type

5 Minutes (Established Patient)
 10 Minutes (Established Patient)
 15 Minutes (Established Patient)
 25 Minutes (Established Patient)
 40 Minutes (Established Patient)

Code

Accept Code | Close

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Appendix A

Dementia Performance Measure Set (DPMS) Template Summaries

DPMS Measure	Treatment Plan (Counseling/Provider Considerations)	CPT Category II Codes
1. Staging of dementia	<p>Counseling: Counseled patient and/or caregiver about the stage of the patient’s dementia. Education provided about the importance of proper staging in dementia as needed health or support services may change along the trajectory of the condition.</p> <p>Considerations: Consider using GDS, FAST, CDR, Dementia Severity Rating Scale, Formal Neuropsychological evaluation, or qualitative assessments to stage dementia.</p>	<p>1490F: Dementia severity classified, mild 1491F: Dementia severity classified, moderate 1493F: Dementia severity classified, severe</p>
2. Cognitive Assessment	<p>Counseling: Cognition assessed and results reviewed with the patient and/or caregiver. Counseled patient and/or caregiver about how the information from the cognitive assessment can be used to guide treatment interventions and support for patients with dementia and their caregivers.</p> <p>Considerations: Consider Blessed Orientation-Memory-Concentration Test (BOMC), Mini-Cog, Montreal Cognitive Assessment (MoCA), Cognitive Abilities Screening Instrument (CASI), St. Louis Univeristy Mental Status Examination (SLUMS), Mini-Mental State Examination (MMSE), Short Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE), Ascertain Dementia 8 (AD8) Questionnaire, Minimum Data Set (MDS) Brief Interview of Mental Status (BIMS), or Formal neuropsychological evaluation to assess cognition.</p>	<p>1494F: Cognition assessed and reviewed</p>
3. Functional status assessment	<p>Counseling: Reviewed results of the functional status assessment with the patient and/or caregiver. Counseled patient and/or caregiver about the importance of this measure, because functional status</p>	<p>1175F: Functional status for dementia assessed and results reviewed</p>

	<p>challenges can be identified through screenings and assessments. Education provided regarding how functional status decline can be associated with other declines in health status; therefore, proper assessment is important in the patient’s individualized treatment plan.</p> <p>Considerations: Consider the Lawton instrumental activities of daily living scale (IADL Scale), Barthel activities of daily living (ADL) Index, Katz Index of Independence in ADL, or qualitative assessments to determine functional status.</p>	
<p>4. Neuropsychiatric symptom assessment</p>	<p>Counseling: Assessed neuropsychiatric symptoms and discussed results with the patient and/or caregiver. Counseled and educated patient and/or caregiver about the importance of regular neuropsychiatric symptom assessments, because negative symptoms may present challenges, and these challenges may require modification in the treatment plan or discussion about additional resources that may be needed.</p> <p>Considerations: Consider the Dementia Signs and Symptoms (DDS) Scale, Neuropsychiatric Inventory (NPI), Behavioral and Psychological Symptoms of Dementia (BPSD), Minimum Data Set (MDS), or qualitative assessments to determine if neuropsychiatric symptoms are present.</p>	<p>1181F: Neuropsychiatric symptoms assessed and results reviewed</p>
<p>5. Management of neuropsychiatric symptoms</p>	<p>Counseling: Counseled patient and/or caregiver about the neuropsychiatric symptom management plan and/or intervention for the patient.</p> <p>Considerations: In mild to moderate stages of the condition, consider documentation of behaviors and identification of target symptoms, assessment of triggers for symptoms, and ruling out other potentially treatable causes of symptoms. In the severe stage of the condition, consider assessment, diagnosis, and identification of target</p>	<p>4525F: Neuropsychiatric intervention ordered 4526F: Neuropsychiatric intervention received</p>

	<p>symptoms, patient and caregiver safety, environment safety, non-pharmacological interventions, and pharmacologic interventions.</p>	
<p>6. Screening for depressive symptoms</p>	<p>Counseling: Counseled patient and/or caregiver about the results of the depression screening. Educated patient and/or caregiver about the importance of screening for depression in patients with dementia, because depression can be closely intertwined with other mood disorders experienced by patients with dementia, including delirium, apathy, psychosis, irritability, or anxiety.</p> <p>Considerations: Consider the Cornell Scale for Depression in Dementia, Geriatric Depression Scale, PHQ-9, or qualitative symptoms of depression to screen for depressive symptoms.</p>	<p>3725F: Screening for depression performed</p>
<p>7. Counseling regarding safety concerns</p>	<p>Counseling: Counseled patient and/or caregiver about safety and/or ordered safety counseling. Counseled patient and/or caregiver about how safety concerns should be identified as patients and/or caregiver may be at a greater risk for harm if measures are not addressed.</p> <p>Consideration: Consider resources from the Alzheimer’s Association, and consider counseling patient and/or caregiver about the following safety concerns: fall risk, gait, balance, medication management, financial management, home safety risks, physical aggression, wandering, access to firearms or other weapons, access to dangerous materials, being left alone or locked in room, inability to respond to crisis or household emergency, driving, operation of hazardous equipment, suicidality, abuse, or neglect.</p>	<p>6101F: Safety counseling for dementia provided 6102F: Safety counseling for dementia ordered</p>
<p>8. Counseling regarding risks of driving</p>	<p>Counseling: Counseled patient and/or caregiver regarding the risks of driving and alternatives to driving. Driving recommendations should be individualized for patients with dementia. Educated patient</p>	<p>6110F: Counseling provided regarding risks of driving and the alternatives to driving</p>

	<p>and/or caregiver that a diagnosis of dementia does not qualify as a legal reason to take privileges away, and even early in the condition, dementia can increase risks of motor vehicle accidents.</p> <p>Consideration: Consider “The Physician’s Guide to Assessing and Counseling Older Drivers,” patient self-rating of safe driving ability, or Clinical Dementia Rating scale to assess driving risk.</p>	
<p>9. Palliative care counseling and advance care planning</p>	<p>Counseling: Counseled patient and/or caregiver on symptom management, end of life decisions, and palliative care.</p> <p>Considerations: Consider counseling the patient and/or caregiver about: Hospitalization wishes, Treatment for infection, Surgery, Artificial nutrition and hydration, Cardiopulmonary resuscitation, Mechanical ventilation, Comfort care, Timing of a natural death, or Hospice Referral.</p>	<p>4350F: Counseling provided on symptom management, end of life decisions, and palliation 1123F: Advanced care planning discussed and documented advanced care plan or surrogate decision maker documented in the medical record 1124F: Advanced care planning discussed and documented in the medical record, patient did not wish or was not able to name a surrogate decision maker or provide an advanced care plan</p>
<p>10. Caregiver education and support</p>	<p>Counseling: Counseled caregiver about the resources and support services available. Counseled caregiver on the importance of proactive discussions about resources, because the utilization of resources or support services may decrease the caregiver’s risk for caregiver burden and stress.</p> <p>Considerations: Consider education or discussion about support groups, respite care, nursing homes, long-term care facilities, financial or legal counseling, or caregiver wellbeing. Consider assessment</p>	<p>4322F: Caregiver provided with education and referred to additional resources for support</p>

	of caregiver wellbeing with the Caregiver Health Self-Assessment Questionnaire.	
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Appendix B

Recommendations for Assessment Tools

Recommendations for Dementia Performance Measure Set Assessment Tools adapted from the PCPI (2014)

The primary care practice reserves the right to modify assessment criteria based on their experience and wishes. Per the organization’s wishes, a criterion is met if a single component is met in measures containing multiple components.

Measure	Description	Recommended Assessment Tools
#1: Staging of Dementia	Patient with a diagnosis of dementia who severity was classified as mild, moderate or severe in a 12-month period (PCPI, 2014)	<ul style="list-style-type: none"> • Global Deterioration Scale (GDS) <ul style="list-style-type: none"> ○ Mild: Stage 4 ○ Moderate: Stage 5 and 6 ○ Severe: 6 and 7 • Functional Assessment Staging Tool (FAST) <ul style="list-style-type: none"> ○ Mild: Stage 4 ○ Moderate: Stage 5 and 6 ○ Severe: Stage 6 and 7 • Clinical Dementia Rating (CDR) <ul style="list-style-type: none"> ○ Mild: 1 ○ Moderate: 2 ○ Severe: 3 • Dementia Severity Rating Scale • Mini-Mental State Examination (MMSE) <ul style="list-style-type: none"> ○ Mild: Score >18 ○ Moderate: Score 10-18 ○ Severe: Score <10 • Formal Neuropsychological Evaluation • Qualitative Assessment Options <ul style="list-style-type: none"> ○ Mild: <ul style="list-style-type: none"> ▪ Difficult to balance checkbook ▪ Difficult to prepare complex meal ▪ Difficult to manage complicated medication schedule ○ Moderate: <ul style="list-style-type: none"> ▪ Difficult with simple food preparation ▪ Difficult to clean house ▪ Difficult to do yard work

		<ul style="list-style-type: none"> ▪ Assistance needed for some self-care ○ Severe: <ul style="list-style-type: none"> ▪ Require considerable or total assistance with personal care
Measure #2: Cognitive Assessment	Patient with a diagnosis of dementia for whom an assessment of cognition and the results reviewed in a 12 month period (PCPI, 2014)	<ul style="list-style-type: none"> • Blessed Orientation-Memory-Concentration Test (BOMC) • Mini-Cog • Montreal Cognitive Assessment (MoCA) • Cognitive Abilities Screening Instrument (CASI) • St. Louis University Mental Status Examination (SLUMS) • Mini-Mental State Examination (MMSE) • Short Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE) • Ascertain Dementia 8 (AD8) Questionnaire • Minimum Data Set (MDS) Brief Interview of Mental Status (BIMS) • Formal neuropsychological evaluation
Measure #3: Functional Status Assessment	Patient with a diagnosis of dementia for whom an assessment of functional status is performed and the results reviewed in a 12 month period (PCPI, 2014)	<ul style="list-style-type: none"> • Lawton instrumental activities of daily living (IADL) Scale • Barthel activities of daily living (ADL) Index • Katz Index of Independence in ADL • Qualitative Assessment Options: <ul style="list-style-type: none"> ○ Direct examination of the patient by the provider ○ Information gathered from knowledgeable informant
Measure #4: Neuropsychiatric Symptom Assessment	Patient with a diagnosis of dementia for whom an assessment of neuropsychiatric symptoms is performed and results reviewed in 12 month period (PCPI, 2014)	<ul style="list-style-type: none"> • Dementia Signs and Symptoms (DSS) Scale • Neuropsychiatric Inventory (NPI) • Behavioral and Psychological Symptoms of Dementia (BPSD) • Minimum Data Set (MDS) • Qualitative Assessment Options: <ul style="list-style-type: none"> ○ Direct examination of the patient by the provider ○ Information gathered from knowledgeable informant ○ May include information about activity, mood, thought or perceptual disturbances <ul style="list-style-type: none"> ▪ Activity: agitation, wandering, purposeless

		<p>hyperactivity, verbal or physical aggressiveness, resistiveness with care, apathy, impulsiveness, socially inappropriate behaviors, appetite change, eating disturbances, sleep problems, diurnal/sleep-wake cycle disturbances, or repetitive behavior.</p> <ul style="list-style-type: none"> ▪ Mood: anxiety, dysphoria, euphoria, irritability, mood lability or fluctuations. ▪ Thought or perceptual: delusions, hallucinations, or paranoia
<p>Measure #5: Management of Neuropsychiatric Symptoms</p>	<p>Patient with a diagnosis dementia who have one or more neuropsychiatric symptoms who received or were recommended to receive an intervention for the symptom (s) in a 12 month period (PCPI, 2014)</p>	<ul style="list-style-type: none"> • Mild to moderate Alzheimer’s disease <ul style="list-style-type: none"> ○ Includes documentation of behaviors and identification of target symptoms ○ Assessment of triggers for symptoms ○ Ruling out other potentially treatable causes for symptoms • Severe Alzheimer’s disease <ul style="list-style-type: none"> ○ Begins with assessment, diagnosis, and identification of target symptoms ○ Consider safety of patient, caregiver, and environment ○ Non-pharmacologic interventions: behavioral management, caregiver education programs, music therapy, or controlled multisensory stimulation ○ Pharmacologic interventions: may be initiated in severe depression, psychosis or aggression
<p>Measure #6: Screening for Depressive Symptoms</p>	<p>Patients with a diagnosis of dementia who were screened for depression in a 12 month period (PCPI, 2014)</p>	<ul style="list-style-type: none"> • Cornell Scale for Depression in Dementia • Geriatric Depression Scale • PHQ-9 • Other symptoms may include: caregiver report of patient’s depressive symptoms, anxiety, sadness, lack of reactivity to

		pleasant event, irritability, agitation, retardation, multiple physical complaints, acute loss of interest, appetite loss, lack of energy, diurnal variation of mood, difficulty falling asleep, multiple awakenings during sleep, early morning awakenings, suicide, self-depreciation, pessimism, or mood congruent delusions.
Measure #7: Counseling Regarding Safety Concerns	Patients with a diagnosis of dementia or their caregivers who were counseled or referred for counseling regarding safety concerns in a 12 month period (PCPI, 2014)	<ul style="list-style-type: none"> • Use of educational materials from the Alzheimer’s Association • Counseling regarding the following safety concerns: fall risk, gait, balance, medication management, financial management, home safety risks, physical aggression, wandering, access to firearms or other weapons, access to dangerous materials, being left alone or locked in room, inability to respond to crisis or household emergency, driving, operation of hazardous equipment, suicidality, abuse, or neglect.
Measure #8: Counseling Regarding Risks of Driving	Patients with a diagnosis of dementia or their caregivers who were counseled regarding risks of driving or driving alternatives in a 12 month period (PCPI, 2014)	<ul style="list-style-type: none"> • The Physician’s Guide to Assessing and Counseling Older Drivers • Patient self-rating of safe driving ability • Clinical Dementia Rating scale
Measure #9: Palliative Care Counseling and Advance Care Planning	Patients with a diagnosis of dementia or their caregivers who received 1) palliative care and end of life decisions counseling and/or 2) have advance care plan or decision maker documented in medical record. If patients do not wish to have either of those, there must be documentation of their wish in the medical record within the last 2 years (PCPI, 2014)	<ul style="list-style-type: none"> • Counseling may include discussion on the following: <ul style="list-style-type: none"> ○ Hospitalization wishes ○ Treatment for infection ○ Surgery ○ Artificial nutrition and hydration ○ Cardiopulmonary resuscitation ○ Mechanical ventilation ○ Comfort care ○ Timing of a natural death ○ Hospice referral
Measure #10: Caregiver education and support	Patients with a diagnosis of dementia or their caregivers who were provided education on dementia disease management, health behavior changes, or were referred to	<ul style="list-style-type: none"> • Education may include discussion on the following topics: <ul style="list-style-type: none"> ○ Support groups ○ Respite care ○ Nursing homes ○ Long-term care facilities ○ Financial or legal counseling

	<p>additional support in a 12 month period (PCPI, 2014)</p>	<ul style="list-style-type: none"> ○ Caregiver education ● May also include assessment of caregiver wellbeing <ul style="list-style-type: none"> ○ Caregiver Health Self-Assessment Questionnaire
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Appendix C

Synthesis of Literature for an Evidenced Based Initiative

DPMS Measure	
<p>Staging of Dementia</p>	<ul style="list-style-type: none"> • The PCPI (2014) recommends regular assessments for the staging of dementia. • Validated staging tools can predict the incidence and severity of the stage of dementia (Santabarbara, 2016). <ul style="list-style-type: none"> ○ Mini-Mental Status Exam (MMSE) ○ Higher incidence of dementia cases and lower MMSE scores (p<0.001). ○ An individual’s risk of dementia is relative to the severity of his or her cognitive impairment. • Dementia is known as a progressive disease in which symptoms may evolve over time (Rabins, Rovner, Rummans, Schneider & Tariot, 2014). <ul style="list-style-type: none"> ○ Treatment recommendations may vary (California Workgroup on Guidelines for Alzheimer’s Disease Management, 2008). ○ Benefit from holistic approach in early disease management and intervention (Beuttner, 2006). <ul style="list-style-type: none"> ▪ As a result of the intervention, Mini-Mental State Examination, Geriatric Depression Scale, instrumental activities of daily living, and quality of life scores significantly improved, (p< 0.05) (Beuttner, 2006). • Staging in dementia is an important step in the treatment plan for patients and their caregivers. The primary care setting is an optimal location to stage the disease, and staging can easily be performed using screening tools like the MMSE.
<p>Cognitive Assessment</p>	<ul style="list-style-type: none"> • The PCPI (2014) recommends regular cognitive assessments, because earlier interventions and support for patients with dementia and their caregivers (Ducharme et al., 2011). • Recommendations from the U. S. Preventive Services Task Force (USPSTF) (Moyer, 2014). <ul style="list-style-type: none"> ○ Grade I recommendation ○ Benefit on caregiver burden and depression. ○ 29-76% of dementia cases are undiagnosed in primary care setting. • Cognitive screening was added as a free service to eligible Medicare beneficiaries through the Annual Wellness Visit, but providers are reimbursed through Medicare for the service (Moyer, 2014). <ul style="list-style-type: none"> ○ Screening is performed in primary care ○ Suitable screening tools for primary care setting exist (Mini-Cog, MIS, and GPCOG) (Cordell et al., 2013). • Cognitive assessment and the role of pharmacological interventions (Tan et al., 2014). <ul style="list-style-type: none"> ○ ChEIs ○ Memantine

	<ul style="list-style-type: none"> • Effect of pharmacological interventions (ChEIs) on Nursing Home placement (Becker, Andel, Rohrer, & Banks, 2006). <ul style="list-style-type: none"> ○ Risk of nursing home placement decreased by 28%. ○ Medications most effective when initiated early in the disease progression.
<p>Functional Status Assessment</p>	<ul style="list-style-type: none"> • The PCPI (2014) recommends regular functional status assessments). When function status challenges are identified through screenings or assessments, health care providers can provide education and offer treatments or resources to patients and their caregivers. • Functional decline is associated with a high risk of health decline (Colón-Emeric, Whitson, Pavon, & Hoenig, 2013). • Declines in functional status are associated with the development of depression and apathy in patients with dementia, and declines in quality of life (Andersen, Wittrup-Jensen, Lolk, Andersen, & Kragh-Sorensen, 2004; Boyle et al., 2003; Starkstein, Jorge, Mizrahi & Robinson, 2005). • The Barthel Index of Activities of Daily Living and the Lawton Instrumental Activities of Daily Living (IADL) are valid tools to assess functional status, but the Barthel Index of Activities of Daily Living is advantageous to the primary care setting due to the limited amount of time needed to complete the assessment (Graf, 2007; Sinoff & Ore, 1997). • Primary care practices must weigh these factors when designing the best screening tool to use in their setting.
<p>Neuropsychiatric Symptom Assessment</p>	<ul style="list-style-type: none"> • The PCPI recommends regular assessments of neuropsychiatric symptoms, because negative symptoms can pose potentially dangerous threats to patients and their caregivers (PCPI, 2014). • In addition, neuropsychiatric symptoms have been associated with the following: <ul style="list-style-type: none"> ○ Accelerated cognitive decline, ○ Increased functional impairment, ○ Decreased mean survival time, ○ Increased co-morbid conditions, ○ Increased danger to self, ○ Increased danger to others, ○ Increased health care service utilization, ○ Higher risk for institutionalization, ○ Greater caregiver stress and burden (PCPI, 2014). • Important measure to address in the care for patients with dementia throughout the trajectory of the disease.
<p>Management of Neuropsychiatric Symptoms</p>	<ul style="list-style-type: none"> • The symptom assessment data gathered from the neuropsychiatric symptom assessment measure can guide symptom management recommendations. • Non-pharmacological interventions <ul style="list-style-type: none"> ○ Brodaty and Arasaratnam (2012):

	<ul style="list-style-type: none"> ▪ Caregiver skills training, activity planning and patient participation in activities, and home modification had a significantly positive effect on the reduction of neuropsychiatric symptoms, ($p < 0.01$) and improvement in the caregivers' reaction to the neuropsychiatric behaviors, ($p = 0.006$). ○ Gitlin et al. (2008): <ul style="list-style-type: none"> ▪ In-home activity programming for caregiver and patient dyads on problematic patient behaviors significantly decreased problematic patient behaviors ($p = 0.010$) and amount of time spent by caregivers having to do things for patients ($p = 0.005$). ○ Deudon et al. (2009): <ul style="list-style-type: none"> ▪ Significant reduction in CMAI global scores from baseline to week eight ($p < 0.001$) and baseline to week 20 ($p < 0.001$) as a result of the intervention, which involved individualized staff training, feedback, and key cards with specific instructions for commonly encountered behavioral challenges with patients with dementia. • Pharmacological interventions <ul style="list-style-type: none"> ○ Sultzer et al. (2008) found significant improvement in the following: <ul style="list-style-type: none"> ▪ Neuropsychiatric Inventory (NPI) score when treated with Olanzapine ($p < 0.007$) or risperidone ($p < 0.001$). ▪ Clinical Global Impression of Change (CGIC) score when treated with Risperidone ($p < 0.001$). ▪ Brief Psychiatric Rating Scale (BPRS) hostile suspiciousness factor ($p < 0.006$ and $p < 0.003$) when treated with olanzapine or risperidone ▪ BPRS psychosis factor ($p < 0.010$) when treated with risperidone.
<p>Screening for Depressive Symptoms</p>	<ul style="list-style-type: none"> • The PCPI (2014) recommends regular assessment for depression in patients with dementia. Care must be individualized and closely monitored. • Screening tools: <ul style="list-style-type: none"> ○ Valid: The Geriatric Depression Scale (GDS) and The Cornell Scale for Depression in Dementia (CSDD) (Korner et al., 2006). ○ The CSDD has more validity in older adults with dementia (Korner et al., 2006) ○ CSDD: Sensitivity 93% and specificity 97% ○ GDS: Sensitivity 82% to 90% and specificity 75% to 94% ○ Screening can help PCP's identify patients with dementia who also have depression, and can assist in the design of early interventions to treat these patients. • Treatment: <ul style="list-style-type: none"> ○ Mixed evidence regarding the efficacy of pharmacological treatment of depression with antidepressants in patients with dementia

	<p>(California Workgroup on Guidelines for Alzheimer’s Disease Management, 2008).</p> <ul style="list-style-type: none"> ○ Nelson and Devanand (2011), Banerjee et al. (2011), and Rosenberg et al. (2010) examined the effect of different pharmacological antidepressant treatment in patients with dementia. <ul style="list-style-type: none"> ▪ Results underpowered and had confounding variables ▪ No benefit of sertraline or mirtazapine when compared to placebo (Banerjee et al., 2011), and there was no benefit of sertraline when compared to placebo (Rosenberg et al., 2010).
<p>Counseling Regarding Safety Concerns</p>	<ul style="list-style-type: none"> • The provision of safety counseling for patients with dementia and their caregivers is evidenced-based and supported in the literature (PCPI, 2014). • May include: fall risk, gait, balance, medication management, financial management, home safety, physical aggression to caregivers, wandering, access to firearms or weapon or dangerous materials, being left alone, inability to respond during an emergency at home, driving, suicidal thoughts or actions, abuse and neglect (Rabins et al., 2014). • Important measure to consider as many patients live at home, and patients are at a greater risk for harm if these safety measure are not addressed. • Proper counseling regarding safety risks and referral to resources may help patients with dementia live in their homes longer, keep patients and caregivers safe, and help maintain quality of life (PCPI, 2014).
<p>Counseling Regarding Risk of Driving</p>	<ul style="list-style-type: none"> • Driving counseling is important for patients with dementia and their caregivers. • Not a single screening tool available to assess driving safety in patients with dementia (Allan, Behrman, Baruch, & Ebmeier, 2016). • Education for patients and family members related to driving privileges (PCPI, 2014). • Driving risk in early stages of disease (Iverson et al., 2010) • Motor vehicle related incidents are the leading cause of injury deaths in adults 65 years and older (Joseph, 2013). • Iverson et al. (2010) two Level A recommendations (Appendix I): <ul style="list-style-type: none"> ○ Clinical Dementia Rating scale is a valid screening tool to assess driving safety risk ○ Patient’s self-rating of safe driving is a reliable indicator for driving safety • Primary care is an optimal setting to discuss driving concerns.
<p>Palliative Care Counseling and Advance Care Planning</p>	<ul style="list-style-type: none"> • Palliative care counseling and advance care planning are inadequately addressed in primary care (PCPI, 2014). • Advantages to addressing these measures sooner: <ul style="list-style-type: none"> ○ To respect patient wishes ○ To avoid these discussions in crisis situations (Rabins et al., 2014)

	<ul style="list-style-type: none"> • May include discussion of: <ul style="list-style-type: none"> ○ Survival ○ Function maintenance ○ Comfort • Primary care providers should regularly assess: <ul style="list-style-type: none"> ○ Pain ○ Dyspnea ○ Depression (California Workgroup on Guidelines for Alzheimer’s Disease Management, 2008). ○ Consideration of Hospice referral • Proper counseling can assist patients and families in establishing goals in order to ensure the patient’s wishes and autonomy are respected in the later stages of the dementia disease process.
<p>Caregiver Education and Support</p>	<ul style="list-style-type: none"> • Caregiver education and support is an important component of primary care delivery to patients with dementia, and it is well documented in the literature (PCPI, 2014). • Proactive Interventions <ul style="list-style-type: none"> ○ Successful role transitions ○ Decreased economic costs of dementia care ○ Improved quality of life for patients and caregivers (Ducharme et al., 2011) • Ducharme et al. (2011) <ul style="list-style-type: none"> ○ Efficacy of a psychoeducational program for primary caregivers ○ Significant improvement (p<0.05) in caregiver confidence in dealing with caregiver situations, preparedness for caregiving, self-efficacy, planning for relatives’ future care needs, knowledge of formal services, problem solving, and reframing.

Appendix N

Business Case for Designed Protocol

S-B-A-R

Situation: The Dementia Performance Measure Set (DPMS) are ten evidence-based recommendations to improve outpatient care to patients with dementia (PCPI, 2014). An independently owned, non-system affiliated primary care practice has identified a need to improve the quality of care provided to patients with dementia through the development of a standardized protocol based on the ten DPMS recommendations. The situation was that to effectively incorporate the recommendations, the protocol must be designed to be sustainable within the practice. To assess the sustainability of the protocol, a business case was presented based on billing data from the practice and national statistics related to reimbursement and coding.

Background: Prior to the protocol design, there was no standardized way to efficiently document the complex physical and social needs addressed during office encounters with patients with dementia. To assist in the documentation and monitoring of dementia care, 11 customized templates were created. The templates contain pre-populated information to enhance documentation regarding care provided to patients with dementia. The templates can be used individually or collectively during a dementia focused visit or incorporated into any office encounter with patients with dementia.

Assessment: To evaluate the sustainability of the protocol, billing and reimbursement practices were assessed. The total number of office encounters with Medicare patients was 2043 in 2016. In addition, Medicare beneficiaries account for 23% of the payer mix. Providing DPMS recommended care qualifies this visit for a higher level. As a result of coding just one level 4 visit per day, the practice could gain an additional \$11,268 of revenue per year for the existing Medicare population in the practice. This information highlighted the significant number of Medicare patient office encounters that occurred in one year, and with almost a quarter of the payer mix, Medicare beneficiaries represent a significant patient population who are at risk for dementia and may need additional care.

2016 Office Visit Summary	99213 (Level 3 visit)	99214 (Level 4 visit)	99215 (Level 5 visit)
Physician	514	1848	113
Nurse Practitioner	111	315	10
Total	625	2163	123
Percentage % (with respect to 99213,99214,99215 visits)	21.5%	74.3%	4.2%
Medicare Reimbursement	99213 (Level 3 visit)	99214 (Level 4 visit)	99215 (Level 5 visit)
Physician	\$67.46	\$99.78	\$134.16
Nurse Practitioner	\$67.90	\$99.78	\$134.73
Lost Revenue as a result of Under Coding One Level 4 Visit per day	Over 1 Month	Over 1 Year	Over 5 Years
Physician (n=5 days)	\$673.33	\$8080	\$40,400
Nurse Practitioner (n=2 days)	\$265.67	\$3188	\$15,940
Total	\$939	\$11,268	\$56,340
Lost Revenue because of Under Coding One Level 5 Visit per month	Over 1 Month	Over 1 Year	Over 5 Years
Physician	\$134.16	\$1609.92	\$8049.60
Nurse Practitioner	\$134.73	\$1616.76	\$8083.80
Total	\$268.89	\$3226.68	\$16,133.40

*Note: Calculations made based on 5 work days/week and 50 weeks per year (Example accounts for 2-week non-working/vacation weeks)

*Note: In the calculation for lost revenue as a result of under coding one level 4 visit per day, the physician was calculated based on full time (5 days/week), and the nurse practitioner was calculated on part time (2 days/week).

Recommendation: Last, a recommendation was made to the organization. The recommendation was to accept the dementia visit protocol and utilize the templates to improve documentation and facilitate accurate evaluation and management coding. Enhanced documentation may improve reimbursement from Medicare and provide additional revenue for the primary care practice.

The pre-templated evaluation and management (E&M) code for visit is a 99214. This billing code was selected for the customized “PCPI Dementia Visit” template. A level 4 code was selected, because use of the protocol may take additional provider time and/or may include a higher complexity of care. A level 4 billing code can be used for complexity or for time (Hermansen & Jackson, 2014). If more than 50% of the visit time is spent in counseling and coordinating care, the provider can code on the basis of time. Since the PhD prepared Nurse Practitioner in the practice is allotted additional time with patients due to the unique structure of the practice, there is opportunity for the NP to bill a level 4 code when appropriate. If the “PCPI Dementia Visit” template is used, but the level 4 billing code is not appropriate, the provider can modify the E&M code. Adding the DPMS care recommendations adds time and complexity to the office visit. Therefore, providing DPMS recommended care qualifies this visit for a higher level, resulting in an additional \$11,268 of revenue per year for the existing Medicare population in the practice.