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### **Integrated Care for Older Adults and Memory: A Quality Improvement Approach**

Haley E. Curt

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Running head: OLDER ADULTS AND MEMORY

Integrated Care for Older Adults and Memory: A Quality Improvement Approach

by

Haley E. Curt

B.A., B.S., Colby-Sawyer College, 2013  
M.A., Tufts University, 2015  
M.S., Antioch University New England, 2018

DISSERTATION

Submitted in partial fulfillment for the degree of  
Doctor of Psychology in the Department of Clinical Psychology  
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Keene, New Hampshire



Department of Clinical Psychology  
**DISSERTATION COMMITTEE PAGE**

The undersigned have examined the dissertation entitled:

**INTEGRATED CARE FOR OLDER ADULTS AND MEMORY:  
A QUALITY IMPROVEMENT APPROACH**

presented on September 16, 2019

by

**Haley E. Curt**

Candidate for the degree of Doctor of Psychology  
and hereby certify that it is accepted\*.

Dissertation Committee Chairperson:  
F. Alexander Blount, EdD

Dissertation Committee members:  
Amanda Hitchings, PsyD  
Aimee Valeras, PhD

Accepted by the  
Department of Clinical Psychology Chairperson

**Vincent Pignatiello, PsyD**  
**9/16/19**

\*Signatures are on file with the Registrar's Office at Antioch University New England.

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### Abstract

Integrated care—a combination of medical and behavioral health—is necessary to address the complex needs of the rapidly growing population of adults over the age of 65 (Karel, Gratz, & Smyer, 2012). Cognitive impairment, a common issue associated with aging, is a major concern for aging adults, their caregivers and family members. Comprehensively addressing cognition, whether there is an identified impairment or not, in a primary care setting allows the individual to take advantage of their independence, be an active member of planning care and making decisions, and begin treating their disease earlier when it is more manageable (Callahan et al., 2006). This project was designed to address concerns for all older adults and to offer the potential impact of psychosocial support in relation to memory and cognition during the Medicare Wellness Visit (MWV). The goal was to gain further information from patients about their memory concerns, appreciate how this related to their score on a validated test of cognitive functioning, and provide more comprehensive care. A behavioral health clinician offered a 30-minute visit that provided the patient/family with concern specific information, tools, and strategies. Eighty three percent of eligible patients accepted the behavioral health component of their MWV. Of this group, 30% of patients had a positive (atypical) score on the Montreal Cognitive Assessment (MoCA), but 100% expressed concerns with their memory and cognition. These concerns included forgetfulness, distractibility, the associated frustration, and the need for tools and strategies to assist with functioning. All patients (100%) who accepted the BHC component of their MWV were followed up with two weeks later to gather information about perceptions and reactions to having their memory concerns addressed through an integrated care approach. Patients reported it was helpful to discuss topics including typical versus atypical aging, focus and concentration, mentally stimulating activities, and reducing distractions. These

results indicate that an integrated care approach to address memory concerns in older adults during their annual MWVs, regardless of MoCA score, had a positive impact on patient's quality of whole person care and indicate support for a system wide integrated approach to older adult primary care.

*Keywords:* quality improvement, integrated behavioral health, primary care,  
older adults, cognition, memory

### Integrated Care for Older Adults and Memory: A Quality Improvement Approach

The current project aimed to improve the quality of integrated care for older adults in relation to memory and cognition. This quality improvement project took place at a primary care clinic, Concord Hospital Family Health Center in Hillsboro, NH (CHFHC), which houses a portion of the NH Dartmouth Family Medicine Residency (NHDFMR). All patients, age 65 and older, were offered an opportunity to meet with a behavioral health clinician (BHC) as a routine part of their Medicare Wellness Visit (MWV). This visit with the BHC involved addressing the patient and family's concerns as they related to memory and cognition, and shared psychoeducation, tools, and strategies specific to the individual needs. This visit was offered to all patients, regardless of the outcome on the Montreal Cognitive Assessment (MoCA) memory screening tool that they were given as part of the MWV. This quality improvement approach operated under the assumption that convenient access to a wide range of resources benefited the patient and support system in living with the common stress and difficulty surrounding memory concerns and cognitive impairment.

## Literature Review

### Early Detection

Cognitive screening of older adults can provide critical information to monitor memory changes over time and allow for more effective management of care (Woodford & George, 2007). Screening in older adults presents both challenges and opportunities. Challenges that patients can experience upon learning about having dementia, Alzheimer's, or another disease include fear about finances, independence, sensation of a decrease in cognition but no diagnosis, and diminished social life, as well as symptoms of depression and anxiety (Borson et al., 2013). Comorbid conditions can also increase the complexity of an individual's clinical presentation. As

a result, there can be increased risk of negative outcomes, need for more sophisticated self management and additional members of the care team (Zulman et al., 2014). Often the short period of time during a medical visit is not adequate to address these complex needs and having a BHC available can assist with these challenges.

On the other hand, screening has advantages, including detecting dementia in its earliest stages and allowing patients to take advantage of their independence. For roughly nine percent of individuals with cognitive impairment, early identification of cognitive impairment can result in reversal of the symptoms, when they derive from reversible causes, like urinary tract infection, depression, and a deficiency of vitamin B12 (Alzheimer's Association, 2018a). Early detection can result in patient's taking an active role in diagnostic and treatment decisions, managing comorbid conditions, anticipating any challenges moving forward, understanding and complying with recommended therapy, assisting family in planning for future care, making decisions about advanced directives, and discussing parameters around assigning and enacting a power of attorney (Boustani et al., 2003; Smith, T., et al., 2018; U.S. Preventative Services Task Force [USPSTF], 2014). Furthermore, early identification of cognitive impairment can result in interventions that might slow the process of the decline, monitor frequency, intervene psychologically, manage finances, enroll in clinical trials, and potentially avoid being institutionalized (Smith, T., et al., 2018). Regardless of whether a memory deficiency is detected by a screener, aging adults often have concerns about their memory, as memory decline is part of the typical aging process.

### **Typical Aging**

Although early detection can present both challenges and opportunities, it is important to understand that some cognitive decline is part of the normal process of aging. Cognitive

impairment can be part of typical aging, atypical aging, and disease processes (Eshkoor, Hamid, Mun, & Ng, 2015; Woodford & George, 2007). As adults age, the body and brain begin to slow down. Specific areas of function that typically become slower with normal aging are mental flexibility (i.e., ability to shift and transition thinking among topics), memory changes (i.e., occasionally making a bad decision; missing a monthly payment; forgetting an actor's name or what day it is, but remembering later), and information processing (Alzheimer's Association, 2018b). Having an understanding of decline associated with typical aging can assist in relieving some of the stress associated with worrying about your memory, regardless of any kind of impairment. However, once decline extends past these typical parameters, atypical decline is considered.

### **Atypical Aging**

It is important for individuals to understand what normal aging is and when to seek out further help. The following examples are atypical signs of aging: poor judgment and decision making; inability to manage a budget; losing track of the date or the season; difficulty having a conversation; and misplacing things and being unable to find them later (Alzheimer's Association, 2018b). Some individuals experience additional mental health factors, including depression and anxiety, which can impact cognition (Wang, Kearney, Jia, & Shang, 2016). Both typical and atypical cognitive decline can be troubling for individuals and families, but integrated primary care can address the burden for both the patient and the family.

When atypical aging occurs in relation to memory and cognition, associated syndromes and diseases are diagnosed using multiple different methods. The diagnosis is typically made with certainty based on the individual's medical history, physical examination, laboratory tests, and the presence of characteristics common to each type of cognitive impairment. It is common

for doctors to make a diagnosis of cognitive impairment without specifying the specific type of impairment. It can be more challenging to narrow in on the specific impairment because the symptoms and deficits in the brain overlap (Alzheimer's Association, 2018c). The combination of utilizing a tool that is accessible to the primary care setting (i.e., the MoCA), in conjunction with working as an integrated team, may provide the depth needed for earlier recognition and treatment of cognitive impairment (Woodford & George, 2007). The goal of screening cognitive ability is to promote earlier recognition and awareness, with the hope that this could lead to an improved quality of life and healthcare for older adults.

### **Types and Prevalence of Cognitive Impairment**

When signs of atypical aging are present, cognitive decline can range from being mild to severe. Cognition encompasses complex mental processes including language, memory, attention, and decision making (Borson et al., 2013; Woodford & George, 2007). Mild cognitive impairment is different from dementia because it is not often severe enough to interrupt an individual's instrumental activities (e.g., manage money, prepare meals, grocery shop, laundry, etc.) of daily living (Boustani et al., 2003; USPSTF, 2014). The estimated incidence of mild cognitive impairment ranges from 15 to 20% in adults 65 years or older, but this is often considered an underestimate because of inconsistent reporting (Roberts & Knopman, 2013).

Dementia is a syndrome characterized by a set of symptoms including memory impairment and at least one other cognitive domain (e.g., language, visuospatial function, executive function) that interferes with social or occupational functioning (Boustani et al., 2003). It is typical for intelligence to remain stable, while the body and brain begin to slow down (Alzheimer's Association, 2018b). An estimated 10 to 15% of individuals per year with mild cognitive impairment progress to having dementia (Hermida, McDonald, Steenland, & Levey,

2012). Many diseases can cause dementia (Boustani et al., 2003). Alzheimer's disease is the most common cause of dementia, accounting for roughly 60% of cases (Galvin & Sadowsky, 2012). The remaining 40% of dementias are caused by diseases including vascular dementia, Lewy Body dementia (i.e., additional protein interacting with the chemical make up in the brain resulting in difficulties with thinking, movement, behavior, and mood), and frontotemporal lobe dementia (Chiu, Chen, Yip, Hua, & Tang, 2006). Alzheimer's disease is a non reversible neurodegenerative disease that destroys brain cells in a way that causes challenges with an individual's memory, thinking, and behavior often impacting work, family, social relationships, and basic activities of daily living (Galvin & Sadowsky, 2012).

### **Caregiver Burden**

Whether an individual who is experiencing cognitive decline wants to or not, they become more reliant on those around them (Boustani et al., 2003). Until a diagnosis is made, and sometimes after, family members are disappointed or frustrated inappropriately with the patient. They sometimes deny the difficulties the individual is facing or think the individual is not trying or is complaining. Caregivers begin to spend more time caring for their loved one, and this added burden can lead to increased caregiver stress, depression, and anxiety (Boustani et al., 2003). Many patients and families try to handle the situation surrounding their aging loved ones for a long time without seeking assistance. A financial burden is placed on the family because the continued care can deplete the available resources of the patient and family (Weimer & Sager, 2009), with an annual estimated cost of \$100 billion in health care costs and lost wages (Boustani et al., 2003). As cognitive decline advances, mental health symptoms increase for caretakers and family stress increases as families try to determine who will take up the care taking needs (Weimer & Sager, 2009). Patients with more mild forms of impairment are more



commonly overlooked, yet this is when treatment and intervention can make the most impact (Weimer & Sager, 2009). Without the proper tools and supports, the family and caregivers can experience a decline in quality of life (Callahan et al., 2006).

### **Integrated Behavioral Health in Primary Care**

Many aging adults have concerns about the normal impact of aging on their memory whether the MoCA score reflects cognitive decline or not, and many could benefit from behavioral health support. The stress caused by these concerns that individuals experience regardless of their cognitive assessment score can impact well being and functioning. Engaging with a BHC can further support medical care and address family/caregiver stress specifically as it relates to concerns about the patient's memory. Integrating medical and behavioral health care in the primary care setting for dementia and Alzheimer's resulted in significant improvement of psychological symptoms and caregiver stress (Callahan et al., 2006). There are benefits of integrating behavioral health care in the primary care setting for both people with and without a diagnosable impairment. Having access to a range of medical and behavioral resources can benefit the patient and support system in living with the common stress and difficulty surrounding memory concerns and cognitive impairment. Regardless of typical or atypical aging, individuals can experience a stress reaction as a result and can benefit from access to and support from a BHC. An integrated behavioral medicine visit for older adults is an ideal strategy for further understanding someone's cognitive ability.

Pharmacological and nonpharmacological treatments have been used to prevent further decline of cognition and are available in primary care with proper identification (Odawara, 2012; Pinto & Subramanyam, 2009). Medication intervention can be one method of treatment used for patients. The two pharmacological interventions approved by the US Food and Drug

Administration are Acetylcholinesterase (AChEIs) inhibitors and memantine (USPSTF, 2014). In addition to pharmacological intervention, psychological intervention can play a role in improving the quality of care provided to patients.

The recommended nonpharmacological interventions include cognitive training (e.g., thinking processes), autonomic training, lifestyle behavior interventions, social activities, aerobic exercise, educational interventions, multidisciplinary care interventions, caregiver interventions (e.g., education, support groups, individual or family counseling, or skills training), and support services (Boustani et al., 2003; Odawara, 2012). These treatments can assist psychologically and physically through positive effects of hyperlipidemia, isolation, depression, sleep quality, weight gain, social networking, and vascular risk factors such as hypertension (Pinto & Subramanyam, 2009). Additional strategies used to slow down cognitive deterioration include routine monitoring of patients, lifestyle assistance, cognitive activities (e.g., crossword puzzles, novels, sudoku), and treating additional diseases (Odawara, 2012; Pinto & Subramanyam, 2009).

Caregiver interventions are focused on the outcomes for the caregivers and the impacts on the patients (Boustani et al., 2003). Support groups for caregivers can be beneficial in alleviating the stress associated with caring for an individual with cognitive impairment. Additionally, primary care physicians can be provided with more guidelines and educational opportunities to improve their care with dementia patients (Borson et al., 2013). To improve an individual's quality of life it is important to manage current symptoms, mood, and behavior (USPSTF, 2014). To support the patient's behavioral health, the patients and caregivers received education on communication skills, caregiver coping skills, legal and financial advice, patient exercise guidelines with a guidebook and videotape, a caregiver guide provided by the local Alzheimer's Association chapter, and behavioral intervention (Callahan et al., 2006). The

expected rise in the older adult population over the next couple of decades calls for integrated care, mental health services combined with medical care, to ensure the geriatric population is receiving adequate prevention, diagnoses, care, and treatment (Jeste et al., 1999). Individuals with diseases associated with cognitive impairment need both medical intervention and behavioral health care. Providing the MWV with an integrated care approach can assist in reducing risk factors, raising awareness, identifying diseases early, providing psychoeducation, and thus supporting more effective and efficient treatment.

### **Medicare Wellness Visit**

Medicare Wellness Visits (MWV) encompass preventative and yearly exams to ensure preventive health care for patients with Medicare Part B. Medicare Part B covers specific preventative and medical services, care, and supplies. The “Welcome to Medicare” visit and the annual “Wellness” visit are the two types of visits covered when a person first initiates Medicare coverage (usually at age 65). The Welcome to Medicare visit is a one time visit that must occur in the first twelve months of the patient having Part B and includes reviewing history (i.e., medical and social), as well as education about prevention including screenings, vaccines, blood pressure, body mass index (BMI), height, weight, vision, review of safety, depression risk factors, and the option to discuss advanced directives. The yearly Wellness visit is used to establish and maintain a personalized prevention wellness plan. This annual visit is used to assess risk factors and current health to prevent disease and disability and includes reviewing medical history and related information, having a maintained list of providers and prescriptions, height, weight, blood pressure, routine measurements, detection of cognitive impairment, personalized health advice, risk factors, specific treatment, and a plan for future screening needs

(The Official U.S. Government Site for Medicare, 2018). This annual MWV allows the opportunity for a behavioral health check in that may not typically occur.

### **Research Questions**

The research questions for the proposed quality improvement project were as follows:

1. What percentage of MWV patients accepted and declined the integrated care approach (i.e., the behavioral medicine visit) versus the medical (i.e., no behavioral medicine visit) approach?
2. Did the integrated care approach of combining medical and behavioral health for older adults meet the needs of patients with concerns about cognition and memory, based on their own perceptions and reactions?

### **Method**

#### **Context**

The CHFHCH was a primary care clinic that provided care for the entire family ranging from prenatal to elder house calls in the following domains: primary and preventative, behavioral health, and dental. CHFHCH was located in Hillsboro, NH and was a more rural satellite location for NHDFMR. As of November 2017, 18% of the CHFHCH patient population of 3895 included individuals age 65 years or older; 54% of the population were females and 46% were males. Seventy nine percent of patients age 65 years or older were on Medicare. The Hillsboro population was made up of the following races: 95% White, 1% Black, 1% Hispanic, and 3% unknown/unreported. The target population for the current quality improvement project was patients aged 65 years or older at the CHFHCH who attended a MWV. CHFHCH functioned as an integrated primary care clinic, which allowed behavioral and medical health to operate collaboratively, thus providing patients with the most comprehensive care possible. The goal of

this project was to gain information from patients about their concerns about their memory, assess how those concerns related to their cognitive score, and ultimately provide more comprehensive care to the patients regarding memory and cognition.

**Quality improvement design.** This project used a Quality Improvement (QI) approach. As such, the results directly impacted the care provided. QI differs from research in that systematic investigation and obtaining generalizable knowledge are not the primary purpose of the project; rather QI is intended to assess, analyze, and improve the process of care for a defined institutional setting and patient population. A common QI tool is a process map (Comley & DeMeyer, 2001). Process maps are used to visually show sequential steps of a workflow. These charts can depict both the current process of work, as well as identify a new workflow. Process maps can provide space for identifying any challenges with the current workflow or communication between team members about the work process. A process map was used to visually show the workflow changes implemented through the current QI project (Appendix A). This methodology did not hinder or prevent the delivery of patient care and did not impose any more risk to the patient than what was standard for routine care. Because QI involves improvement in healthcare delivery with a local context, findings are only applicable to the local institution and can adapt over time. In this regard, this project was able to inform the practice and ultimately was able to provide higher quality care to the older adult patient population (Nelson, Batalden, & Godfrey, 2007).

### **Intervention**

The current project aimed to improve the quality of integrated care for older adults in relation to memory and cognition. The MWV was split into multiple parts. The first part of the visit was with an RN who gathered information from the patient through a list of questions. The

MoCA, a brief measure used to assess short term memory recall, learning and delayed recall, visuospatial abilities, executive functioning (i.e., phonemic fluency, verbal abstraction), attention, concentration, working memory, and language (Smith, T., Gildeh, & Holmes, 2007), was administered to all patients. Visit Appendix B for the MoCA permissions request and approval. The MoCA was a measure already used by CHFHCH, which promoted care as usual for the patients. The results of the current study included an understanding of whether the MoCA results match with the primary focus of the study, the QI results.

In the second part of the visit, the patient met with a physician. After the physician conducted the bulk of the MWV, s/he introduced the integrated care component of the visit. Physicians were provided with a script (Appendix C) to describe this component of their MWV, which included meeting with a BHC for a 30 minute visit. The patient had the option to decline the behavioral health visit. The third part was a behavioral health (BH) portion of the visit that involved discussing any concerns the patient had about his/her memory, and the BHC provided the patient with information, tools, and strategies specific to those needs, regardless of whether the MoCA score indicated an identified memory issue. A standardized resource list (Appendix D) of psychoeducation and tools was utilized to structure these behavioral medicine visits. Patients that engaged in the integrated behavioral health visit as part of their MWV were called approximately two weeks later for follow up (Appendix E for the conversation guide).

### **Measures**

The current quality improvement project gathered information about the patient's perceptions and reactions to the integrated care experience, as it related to concerns about memory, during their MWVs between January and March 2019. Perceptions and reactions were defined as the patient's viewpoint, observations, and personal feedback. Relevant demographic

information (e.g., age, sex), MoCA scores, behavioral health visit notes, and follow up notes were collected from the patient's chart during the time of the integrated MWV. All information was summarized and de identified. No personal health information was linked to the aggregate data. Patient names, addresses, or medical record numbers were not collected.

This improvement project was assessed using process and outcome measures. *Process measures* included what was needed to ensure an intervention was occurring and to further understand how it was happening (Patton, 2015). The process measures that were collected included: (A) How many of the total eligible patients (i.e., age 65 years or greater, MWV during the time of the current study) attended a behavioral health visit as part of their MWV?; (B) How many caregivers/family members joined the integrated MWVs?; (C) How many patients refused to meet with the BHC?; (D) What were the range of MoCA scores for the patients that participated in integrated MWVs?; (E) A visit topic checklist (Appendix E) was used to track the frequency of the topics and concerns discussed and to document which psychoeducation and coping tools were provided and how often.

*Outcome measures* assessed whether the desired impact was achieved (Patton, 2015). Outcome measures for this study included: (F) a post-visit follow up conversation to gather information about patients' feedback on the relevance and usefulness of the behavioral health support and if the patients used the provided tools or skills since the visit. Follow-up conversations with patients are a routine part of care for the clinic. The purpose of this call was to understand the patients' perceptions and reactions, including how helpful the behavioral health visit was, any additional questions they had, whether they had utilized any of the strategies discussed, if the advice was helpful, how their partner/caregiver was doing with the information from the visit (if applicable), if they were interested in future behavioral health visits, any

worries they had regarding their memory and cognition, and any suggestions they had for how to make the behavioral health visit more beneficial for future patients. This follow-up conversation also gathered information about (F) patient and family satisfaction with the integrated MWV as a whole. This information was able to inform practice around integrated behavioral health in primary care.

### **Analysis**

The analysis of this quality improvement project included quantitative descriptive statistics and qualitative analyses. [The analyses below will be denoted “A” through “G” to correspond with the associated measures above.] Quantitative descriptive statistics were used to report the percentages for the number of total eligible patients who attend the behavioral health visit (A), the number of patients who attended the behavioral health visit with a caregiver/family member (B), and how many of the total eligible patients refused the behavioral health visit (C). Additionally, the frequency of positive and negative MoCA scores to how many of the patients accepted a behavioral medicine visit and how many of these patients expressed concerns regarding memory and cognition was assessed (D & E).

A qualitative approach was used to understand the subjective perceptions and experiences of the older adult patients. The Behavioral Medicine Visit Checklist was utilized to identify common concerns about memory and to retrospectively understand what tools and resources the patient was provided, based on what seemed relevant from the conversation (E). The checklist, created using a preconceived list (Appendix F) of topics (e.g., concerns, lifestyle, difficulties, discussion points), was a live document that could be amended based upon conversations with participants. In other words, if a patient raised a relevant topic of conversation that was not on the Checklist, the topic was recorded and added to the checklist for future visits.



One BHC (myself) completed the behavioral medicine visits using a therapeutic conversation guided by the patients concerns. From the information collected, common themes from the behavioral medicine visits were analyzed to assess what the most frequent concerns of older adults were in relation to their memory (Patton, 2015). Information was collected from the patients' post visit about their perceptions and reactions evaluating their integrated MWV (F & G). Thematic Analysis was used to observe themes from the visits and the patient's opinions to assist in further understanding the experiences and perceptions of older adults and their memory and cognition (Braun & Clarke, 2006; Patton, 2015). An inductive approach allowed meaningful units, clusters, and eventually themes to be extracted from the data.

The process included the following steps: familiarization of the data, coding, searching for themes, reviewing themes, defining/naming themes, and reporting the findings (Braun & Clarke, 2006). The BHC took detailed notes during the visit and the follow up conversation with the patients. The clusters and themes emerged from the visit and interview to assist in further understanding the experiences and perceptions of older adults and their memory (Patton, 2015). A systematic coding procedure was used to increase rigor and ensure reliability. Visits and interviews continued until no additional themes emerged and data saturation was reached. The lead author performed open coding of the field notes from all ten patients' BH visit and follow up conversation data. Groups of data were identified by the lead author and then organized into larger themes of the patient's perspective and experience. Two coders reviewed and critiqued multiple versions of the themes to maximize trustworthiness (comparable to internal validity for quantitative studies). This process resulted in refinement of the resulting themes. These process and outcome measures helped provide information on whether this project improved the quality of care for older adults in their MWV by addressing previously unaddressed concerns about their

memory and cognition in their aging process. This information was able to inform practice and ultimately provide higher quality care to the patients.

### **Ethical Considerations**

Psychotherapy and counseling by nature have risks associated, and the current project had no additional risks. The potential risks of this current project included discussing unpleasant aspects of life, in addition to experiencing uncomfortable feelings like sadness, guilt, anger, frustration, loneliness, or helplessness. The intervention of the QI project was to have a BHC involved in the MWV to address memory concerns, which ideally was part of improving routine care for the patient. CHFHCH already offers integrated behavioral health for patients in crisis, but not in a routine standardized population focused manner. The physician offered the patients the option of including a BHC to their visit and the patient had the right to decline. This quality improvement project was overseen by the Concord Hospital Institutional Review Board (IRB) and the Antioch University New England IRB. The patient could refuse behavioral health services at any time. The risk of harm from this quality improvement project was minimal, but if any patient exhibited concerns further behavioral health support was available to coordinate care as necessary. This project did not pose more risk than routine integrated primary care.

### **Results and Implications**

Ten patients from CHFHCH participated in the BH portion of the MWV. Patients were seen by the BHC for approximately 30 minutes while they were at the primary care office for their MWV between January and March 2019. All ten patients were followed up with via telephone two weeks after their MWVs. No caregivers or family members were present during the MWVs. Two patients declined the BH component of the MWV. There were more males (70%) than females (30%) with an average age of 69.5 years (range 65 to 77 years). Three

patients (30%) had a MoCA score under the cutoff score of 26, indicative of mild cognitive impairment. The median score overall was 27.3, with a range from 25 to 30. Please access further details of patient demographics in Table 1.

The BH portion of the MWV involved a discussion of any concerns the patient had about his/her memory. The BHC used a standardized resource list (Appendix C) of psychoeducation and tools during the behavioral medicine visits, but the patients' specific concerns guided the unique conversations (Figure 1 denoted frequencies of psychoeducation topics). The BHC (the author) provided the patient with information, tools, and strategies personalized to each patient's needs. Analyses of how the patients experienced the BH component of their MWV and the follow up conversation with the BHC resulted in three main themes: (a) patients' lived experience with forgetfulness, (b) psychoeducational tools, and (c) behavioral change as a result of the BH visit.

### **Patients' Lived Experiences with Forgetfulness**

**Acknowledgement of forgetfulness.** All ten patients reported the experience of forgetfulness and memory loss with a range of impact on their daily lives. For example, one patient reported "I don't feel like I am losing my mind, but I do notice some memory loss. Remembering names is hard for me." Three patients explained that they forget things (e.g., lists of work tasks), but that they are able to recall forgotten tasks later on. Both remembering names and word finding were difficulties that four individuals reported experiencing.

**Emotional toll of forgetfulness.** Despite all patients reporting difficulty with memory, there were differences in the lived experiences of the individuals who scored positively and negatively on the MoCA. Three patients scored positively on the MoCA and seven patients scored negatively (within normal limits) on the MoCA. The qualifiers of mild or moderate

emotional toll with memory difficulty were identified. Mild emotional toll due to memory difficulty was defined as awareness and recognition of memory difficulty, but not perceiving impact from it in daily life. Patients who scored within normal limits reported experiencing forgetfulness (e.g., word finding, remembering names, memory is not as sharp). On the other hand, a moderate emotional toll due to memory difficulty was defined as awareness and recognition of memory difficulty, negative feelings regarding the difficulty, and noted impact on daily life. The patients who scored positively shared feeling frustrated by experiencing forgetfulness constantly and all day, irritated due to forgetting things, absent minded, and preoccupied. They described ways their daily life and routine were impacted, such as missed appointments and meetings. Despite similar instances of forgetfulness and memory difficulty, the lived experience and emotional toll between the two groups showed differing levels of perceived impact. Forgetfulness seemed to take a greater emotional toll on the three individuals that scored positively.

**Implications.** Aging patients have concerns and worries about their memory and utilizing an integrated medical and behavioral approach was beneficial for the patients. Individuals' anxiety about memory and how it may be changing can cause a heightened awareness of normal changes of aging, and thus may attribute these shifts in ability as a mild impairment or early disease process (Kinzer & Suhr, 2016). The BH component of the MWV allowed for an individualized discussion with each patient to describe their concerns and worries from their own perspective. This opportunity allowed the patients to highlight what they were noticing was difficult, what was normal, and areas for increased support. The results suggest that as individuals age, it seemed clear that most individuals experienced noticeable forgetfulness. For some individuals the forgetfulness was increasingly noticeable and beginning to impact their

daily life, but for other individuals the forgetfulness was something they began to recognize and worked to adapt to, while not having a major impact on their daily life. Patients who experienced moderate symptoms of forgetfulness were missing appointments, constantly feeling forgetful, and feeling irritated and frustrated by these feelings of forgetfulness. Patients who experienced mild symptoms of forgetfulness were not feeling as sharp as they once were, having difficulty with word finding and forgetting names, but largely had no difficulty remembering these things later. The body and brain slow down as individuals age. Some cognitive decline is part of the normal aging process, but can cause stress and worry if individuals are not aware of what is typical versus atypical aging (Eshkoo et al., 2015; Woodford & George, 2007).

### **Psychoeducational Tools**

The BH conversation was reported to be helpful for all patients, regardless of a positive or negative score on the MoCA. The conversation provided the patients access to information that the patients found valuable, regardless of their score on the cognitive screener. Nine out of ten patients described specific benefits to engaging in this conversation about the topic of memory and aging.

**Psychoeducation for the patients who scored positively on the Montreal Cognitive Assessment (MoCA).** The three patients who scored positively on the MoCA had similarity in the psychoeducation and tools that were discussed during their conversations with the BHC. All three conversations included the following topics: diet, exercise, sleep, limit distractions/increase focus and attention, prioritize, put out of your mind (notes), social support/stay connected, cognitively stimulating activities/keeping the mind active, and typical versus atypical aging memory.

**Psychoeducation received by all patients.** Three topics that were discussed with all ten of the patients were cognitively stimulating activities/keeping the mind active, social support/stay connected, and typical versus atypical aging memory. Additional topics that were present in 70% of the conversations included diet, exercise, forgetfulness, limit distraction/increase focus and concentration, prioritizing, and putting tasks out of your mind using notes.

**Understanding normal aging memory and the impact on overall health.** Five patients noted the benefit of further understanding normal aging in relation to memory. Two patients shared that they were not expecting the BH component of the visit because it was not something they had access to previously. The overall consensus was that the conversation was helpful, patients saw benefit, further understanding of typical versus atypical aging memory occurred, and the overall patient perception was positive and appreciative. Patients made a connection between memory and overall health. One patient reported, “To be honest, as we get older, memory loss sneaks up on us. I found it valuable to have the conversation about memory, better understand what is normal, and see how some of these strategies can help with overall health.” Another patient shared the following about the BH visit, “It was good to be reminded of an important part of our overall health that should be thought of and discussed.” Many patients echoed this sentiment and added that the BH conversation raised their awareness for aging and memory and provided them with ways to preserve their memory.

**Implications.** These individuals, experiencing some mild impairment as they age or not, were having some of the most common information from primary care reinforced (e.g., diet, exercise, sleep), but also receiving information and strategies related to brain health. Behavioral change education in the primary care setting should include diet, physical activity, sleep, and

general health (Norrie et al., 2011). The reinforcement of basic health categories and brain health support the individuals experiencing challenges as they age, regardless of impairment or not. The BH component of the MWVs allowed patients to not only receive knowledge about brain health, but also bring awareness to personalized concerns and strategies to combat their unique challenges. As research supports, early intervention is optimal and provides the most benefit for individuals. There are few formal programs and limited access to knowledge and education about cognition and aging for individuals who do not have identified impairment (Scerri & Scerri, 2017). There is also little evidence to support that increasing individuals' knowledge about cognition and aging increases fear for the topic (Scerri & Scerri, 2017). Providing screening and education to patients about signs of early dementia is positive (Kinzer & Suhr, 2016). The breakdown of psychoeducation and tools from the current study provided insight into areas that were more frequently discussed with patients compared to topics that seemed to be less frequently discussed. This provided insight into what could have been the most impactful areas to address for early intervention and what would be most utilized by patients.

Providing patients with learning opportunities can address concerns they are feeling and experiencing (Scerri & Scerri, 2017). Lack of education in the area of aging and memory can lead to increased worry and possible self misdiagnosis of impairment (Kinzer & Suhr, 2016). Providing awareness and education can limit the confusion and assist in avoiding excessive treatment and limiting worry (Kinzer & Suhr, 2016). Psychoeducation is an effective strategy to increase individuals' knowledge about aging brain health (Norrie et al., 2011). There is increased awareness about risks factors as well as tools and strategies to promote healthy brain aging (Norrie et al., 2011). Even if the concerns the patient was experiencing were typical aging, the

BH component of the visit allowed the patients some relief and power of understanding to have a conversation normalizing their own experiences.

### **Behavioral Change as a Result of the Behavioral Health (BH) Visit**

**Behavioral change for all patients.** At two weeks follow up, 50% of patients reported that they had increased the frequency of or adopted new behaviors as a result of the conversation with the BHC. Among these increased and new behaviors were note taking, using a calendar or centralized location for notes, sleeping more, mentally stimulating activities, and thoughtful concentrating, focusing, and planning in regard to responsibilities. One patient reported that he had increased his utilization of notes and a calendar to increase focus and limit distractibility. Due to this increase and adoption of new behaviors, one patient shared how he had not missed any appointments since the BH visit at his MWV. This patient reported that he had been working to concentrate, focus more on what he was doing and his responsibilities, and he increased the amount of time he was sleeping since the visit.

**Behavioral change for patients with a positive Montreal Cognitive Assessment (MoCA) score.** All three patients who scored positively on the MoCA reported that they engaged in behavior change at follow up, including utilizing more notes, using a calendar, increasing sleep, increasing focus, and limiting distractibility. Based on the patients' reports at follow up, these behavior changes have led to noticeably improved memory, increased focus, and no missed appointments.

**Consciousness raising.** Half of the patients reported conscious awareness and/or thoughts about the BH conversation at two weeks follow up, while it seemed to impact the patients in different ways. For five patients it caused them to further think about or bring more awareness to their own memory functioning. One patient reported, "our conversation caused me



to bring awareness to my own memory and the ways that I can maintain and strengthen it.” For this patient the conversation had allowed him to spend more time being aware of his own memory. Five patients shared that the BH conversation had stayed with them since the time of their initial visit and the information discussed in the initial visit had allowed them to bring more awareness to their own memory and informed them of ways to make small changes to positively impact their memory. One patient shared the following at follow up, “for a while I thought there was a lapse with my memory, but now I am more aware of what I am doing, putting more energy into focusing, having a better understanding of how I can help myself more, and concentrating better.” Overall, consciousness was raised as a result of the conversation for five out of ten patients. As a result, at follow up patients continued thinking about their aging memory in terms of awareness of difficulties, strategies and tools for assistance, and typical versus atypical aging memory.

**Implications.** Providing nonpharmacological interventions including lifestyle behavior interventions, social activities, aerobic exercise, educational interventions, multidisciplinary care interventions, and support services can benefit patients (Boustani et al., 2003; Odawara, 2012). Providing patients with information and intervention can support them psychologically and physically (Pinto & Subramanyam, 2009). Raising patients’ awareness of cognitive diseases does not induce increased fear, but provides aging adults with new relevant knowledge (Scerri & Scerri, 2017). There is evidence that tailored education can help to challenge patients’ fallacies about cognitive diseases and thus promote whole health and health behavior change for patients (Scerri & Scerri, 2017). When individuals have more information about a topic, cognitive health in this case, they feel more stable in respects to their cognitive functioning (Reijnders, Geusgens, Ponds, & van Boxtel, 2017). Greater sense of stability allows individuals to regain

control and feel they have power over their memory changes and abilities (Reijnders et al., 2017). When there is an increase of knowledge and awareness for cognitive aging, patients can be provided with increased skills and tools to assist them in coping with the changes being experienced (Reijnders et al., 2017). If provided with education on the topic of aging memory, patients reported changes of impact, more control over their shifting abilities, decreased feeling of being worried, feeling less afraid of aging memory, and an increased ability to manage changes in their memory functioning (Reijnders et al., 2017). Evidence correlating knowledge and behavioral change is limited and the relevance of the knowledge to the particular patient is often questioned (Norrie et al., 2011).

Individuals typically first acquire new knowledge and then take time to change their behavior associated with the knowledge (Prochaska & Velicer, 1997). One complex process that impacts behavior change includes consciousness raising, or raising awareness (Prochaska & Velicer, 1997). Many of the patients appreciated the awareness brought to the topic of aging cognition. Half of the patients reported at follow up that they had continued to think about the BH conversation and what was discussed, and the different tools that were mentioned. There was an impact for the patients, conscious awareness and thoughts had returned to these areas explored after the visit was over and the patients were back to their normal routines. Through discussing memory and any concerns related to this area of aging different areas of psychoeducation were discussed and tools/strategies were explored to assist the patient's unique needs. Research supports that individuals appreciate gaining knowledge and being more informed about aging cognitive health (Reijnders, van Heugten, & van Boxtel, 2015). Often, with new insight into aging cognitive health, patients experience a decrease in negative emotions associated with their aging memory and an increase in the patient's ability to utilize newly

acquired coping skills (Reijnders et al., 2015). Psychoeducation relating to cognitive health is often facilitated to individuals who provide care for someone with cognitive concern (Norrie et al., 2011). Aging patients should be directly provided with education and prevention regarding cognitive health (Norrie et al., 2011). Aging patients can directly benefit from psychoeducation regarding cognitive health due to increased knowledge, greater self efficacy, greater skills in managing their own health, making healthy choices, negotiating with providers, and the ability to improve quality of life (Norrie et al., 2011).

The patients of the current QI project not only reported consciousness raising and the acquisition of new knowledge, but also behavior change from the intervention at the time of follow up. This finding is especially impressive, given the individual intervention the patients participated in and what is known about behavior change. Both patients who scored positively and negatively reported behavior change at follow up, five of the ten patients had increased or adopted new behaviors as a result of the BH component of their MWV. The three patients who scored positively on the MoCA reported increased note writing, use of a calendar, sleep, and focus and limiting distractibility. One explanation for this finding could be that individualized psychoeducation and tools raised the patient's awareness of their difficulties and assisted them in making changes to begin to combat their aging memory (Prochaska & Velicer, 1997). During the BH visit the patients were able to express their intention for behavioral change and at follow up 100% of the patients who scored positive on the MoCA reported engaging in overt actions that they made toward changing their behaviors.

### **Discussion**

Eighty three percent of eligible MWV patients accepted the integrated care approach. Regardless of any signs of impairment or not, all ten patients who accepted the behavioral

medicine visit reported concerns about their memory and that the conversation with the BHC was adequate or helpful for them. Seventy percent of individuals scored within normal limits on the cognitive screening measure. All individuals reported experiencing noticeable forgetfulness, for some this was impacting their daily life, but for others they were recognizing changes without experiencing impact on their daily life. Regardless of the toll of cognitive change, all individuals expressed interest in wanting to work to adapt to the changes they were experiencing. The information discussed helped the patients further understand typical versus atypical aging, as well as, strategies and tools to specifically support their memories. The BH component of the visit provided space to talk about tasks that were becoming more difficult for the patients and ways to adapt to continue to be independent. Providing the patients with knowledge and tools supported their independence, empowered them to actively engage in their well being, and ultimately improved the quality of care being received.

This study explored concerns of older adults and the impact of psychosocial support in relation to memory and cognition during the MWV. The goal was to further understand the patients' perspective about their memory concerns, analyze how this related to their cognitive score, and offer more comprehensive whole person care to the patients. This approach embraced the belief that access to resources can benefit patients living with the common stress and difficulty surrounding memory concerns and cognitive impairment. An integrated care approach to cognitive screening was an effective way to improve the quality of care for the current patients. The current intervention did not only raise conscious awareness of aging cognition, but also resulted in overt behavior change from both patients who scored positively and negatively on the MoCA. Patients reported that they increased or adopted new behaviors as a result of the BH component of their MWV. Integrated care supported the patients with an increase of

knowledge, resources they would not typically receive, and positive changes in their behavior. In addition, they were able to discuss their specific concerns with the BHC and gained specific tools or strategies that could assist their unique concerns.

The current QI project was well received by the CHFHCH clinic. Intentionally adding a BH component of the MWV was welcomed by all staff, specifically the nurses, advanced practitioners, and physicians. The primary care providers (PCP) of the patients who engaged in the integrated MWV reported that it was exciting, and they appreciated a BHC meeting with their older adult patients. PCPs reported that they believed this was a benefit for the patients and it improved access to care. The PCPs and BHC believe that having an integrated MWV allows providers to utilize a population based approach to an issue and to learn more about the population of older adults as a whole. It seems that memory is a way of opening a conversation about the broader experience of the patients for older adults. Despite learning more about the whole population of older adult patients, it is clear that patients who are positive on the MoCA are a distinct group in their lived experiences.

### **Implications for Practice**

Regardless of impairment, all patients' concerns are valid and feel real to them. A BHC can take the time to purposefully meet with patients to consult and educate patients about their brain health. With integrated primary care, the BHC can reinforce basic health related areas (e.g., diet, exercise, sleep), but also provide specific and individualized information to patients about their brain health. Individuals experience increased worry and concern when they are misinformed about their aging memory, so personalized education is beneficial to overall health (Scerri & Scerri, 2017). The focus of the study was to improve whole patient care and improve the patients' ability to cope with their aging memory. Quality of care for the patients was

improved through greater understanding of the patients' perspective, increasing awareness, providing education, and creating change. The results showed that an integrated care approach to address memory concerns during the MWV, regardless of MoCA score, had a positive impact on patient's quality of whole person care and indicated support for a system wide integrated approach to older adult primary care. The findings of this project highlight the benefit of integrated behavioral and medical MWVs for older adult patients, specifically related to aging and memory. Based on the current findings, it is recommended that all patients aged 65 years or older should (a) be administered the MoCA as a baseline measure of cognition, and (b) be offered to meet with a BHC at their annual MWV.

### **Limitations**

The above recommendations for practice are tentative given the small sample size of the current project. The study was completed at one clinic with a small sample of patients, thus limiting the generalizability of the information to additional populations. Further research is needed to examine larger samples. The study was limited by how it defined impairment amongst patients. Impairment was defined by the cutoff used on the MoCA tool, thus anyone scoring below 26 falls in the category of experiencing impairment. The three patients who scored positively on the MoCA scored a 25, all only one point away from a negative screening score. Using the manual cut off for cognitive impairment allowed further exploration into patients' subjective perception of nuanced and mild changes with an individual's experience with cognitive functioning (Kinzer & Suhr, 2016). It was difficult to assess whether any objective cognitive changes occurred. The focus of the study was the patients subjective experience.

### **Future directions**

Long term follow up could be done to assess the longevity of behavior changes and

impacts of the BH component of the MWV. Additionally, the care of patients could be tracked over time to understand if there are any differences in care for patients regardless of a positive or negative cognitive screen. The physician's perspective of the behavioral and medical integration could provide information on what, if any care changes the PCP would make for a patient based on the BH component of the MWV. Continuing to monitor the perception of memory and memory impairment in relation to an individuals' biological sex may provide insight into the role of an individuals' sex and cognitive aging.

Another topic of consideration could be the individual's capacity for discussing psychoeducation and tools. Is there a difference between individuals who screen negative versus positive? Do individuals who score within normal limits have a greater capacity to bring up and discuss a broader range of topics, or do they have a better capacity to wonder about these things because they are not experiencing cognitive impairment? Further research could be conducted on whether one's cognitive capacity impacts the range of topics discussed with a patient. As the population increases, it will be important to continue to develop and incorporate training and education opportunities for older adult patients to raise awareness about cognitive impairment, what is normal aging, red flags, and what they can be actively doing to support their brain health (Scerri & Scerri, 2017). A program on cognitive fitness may be recommended to the sub group of people who score positively on the MoCA or experience negative lived experiences due to memory and cognition. Further research could help distinguish what type of program would be most helpful for this sub set of the older adult population.

### **Conclusion**

Overall, the BH component of the MWV was perceived as valuable and appreciated. With the population aging, more adults are going to be experiencing worry and concern related

to their memory. Without screening or purposeful conversations, we cannot know how the patients are feeling, regardless of any identified impairment. Patients have concerns regarding memory loss and forgetfulness, regardless of any signs of impairment. Individualized work can support the awareness of and knowledge/education of the patient to assist them in areas they need.

An integrated care approach to MWVs allowed patients to voice their own concerns, and provided them with knowledge, strategies, and tools that specifically relate to their lives and experiences. Integrating care in this way supported the quality of care provided to the patients. Not only was the conversation helpful for the three patients who scored positively, but all seven patients who scored within normal limits reported that the conversation was a helpful and an effective use of their time. Typically functioning patients found value in the conversation and education regarding a topic that was concerning and important to them. Each of the ten patients were offered varying psychoeducation and tools based on the concerns they presented in the BH component of their visit. Unique personalized education through an integrated primary care team provided individualized knowledge and skills, thus improving the quality of health care for aging adults.



References

- Alzheimer's Association, (2018a). Public health Alzheimer's resource center. Retrieved from <https://www.alz.org/publichealth/early-detection.asp>
- Alzheimer's Association, (2018b). Ten early signs and symptoms of Alzheimer's. Retrieved from <https://www.alz.org/10-signs-symptoms-alzheimers-dementia.asp>
- Alzheimer's Association, (2018c). What is dementia? Retrieved from [https://www.alz.org/what-is-dementia.asp?gclid=Cj0KCQjw4\\_zVBRDVARIsAFNI9eAFDvIJIaZCWhM4hOVBuV\\_kzID5YjX\\_y-Qq8ZINKdVuV3HSjquGvIEEaAj8SEALw\\_wcB#diagnosis](https://www.alz.org/what-is-dementia.asp?gclid=Cj0KCQjw4_zVBRDVARIsAFNI9eAFDvIJIaZCWhM4hOVBuV_kzID5YjX_y-Qq8ZINKdVuV3HSjquGvIEEaAj8SEALw_wcB#diagnosis)
- Borson, S., Frank, L., Bayley, P. J., Boustani, M., Dean, M., Lin, P., ... Ashford, J. W. (2013). Improving dementia care: The role of screening and detection of cognitive impairment. *Alzheimer's & Dementia*, 9(2), 151-159. doi:10.1016/j.jalz.2012.08.008
- Boustani, M., Peterson, B., Hanson, L., Harris, R., Lohr, K. N., & U.S. Preventative Services Task Force. (2003). Screening for dementia in primary care: A summary of the evidence for the U.S. Preventative Services Task Force. *Annals of Internal Medicine*, 138(11), 927-937. doi:10.7326/0003-4819-138-11-200306030-00015
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. doi:10.1191/1478088706qp063oa
- Callahan, C. M., Boustani, M. A., Unverzagt, F. W., Austrom, M. G., Damush, T. M., Perkins, A. J., ... Hendrie, H. C. (2006). Effectiveness of collaborative care for older adults with Alzheimer disease in primary care: A randomized controlled trial. *JAMA*, 295(18), 2148-2157. doi:10.1001/jama.295.18.2148
- Chiu, M.-J., Chen, T.-F., Yip, P.-K., Hua, M.-S., & Tang, L.-Y. (2006). Behavioral and psychologic symptoms in different types of dementia. *Journal Of The Formosan Medical Association = Taiwan Yi Zhi*, 105(7), 556-562. doi:10.1016/S0929-6646(09)60150-9
- Comley, A. L., & DeMeyer, E. (2001). Assessing patient satisfaction with pain management through a continuous quality improvement effort. *Journal of Pain and Symptom Management*, 21(1), 27-40. doi:10.1016/S0885-3924(00)00229-3
- Eshkoor, S. A., Hamid, T. A., Mun, C. Y., & Ng, C. K. (2015). Mild cognitive impairment and its management in older people. *Clinical Interventions in Aging*, 10, 687-693. doi:10.2147/CIA.S73922
- Galvin, J. E., & Sadowsky, C. H. (2012). Practical guidelines for the recognition and diagnosis of dementia. *The Journal of the American Board of Family Medicine*, 25(3), 367-382. doi:10.3122/jabfm.2012.03.100181

- Hermida, A. P., McDonald, W. M., Steenland, K., & Levey, A. (2012). The association between late-life depression, mild cognitive impairment and dementia: Is inflammation the missing link?. *Expert Review Of Neurotherapeutics*, 12(11), 1339-1350. doi:10.1586/ern.12.127
- Jeste, D. V., Alexopoulos, G. S., Bartels, S. J., Cummings, J. L., Gallo, J. J., Gottlieb, G. L., & Lebowitz, B. D. (1999). Consensus statement on the upcoming crisis in geriatric mental health: Research agenda for the next 2 decades. *Archives of General Psychiatry*, 56(9), 848–853. doi:10.1001/archpsyc.56.9.848
- Karel, M. J., Gatz, M., & Smyer, M. A. (2012). Aging and mental health in the decade ahead: What psychologists need to know. *American Psychologist*, 67(3), 184-198. doi:10.1037/a0025393
- Kinzer, A., & Suhr, J. A. (2016). Dementia worry and its relationship to dementia exposure, psychological factors, and subjective memory concerns. *Applied Neuropsychology: Adult*, 23(3), 196-204. doi:10.1080/23279095.2015.1030669
- Mayo Clinic, (2019). Patient care and health information. *Mayo Foundation for Medical Education and Research (MFMER)*. Retrieved from <https://www.mayoclinic.org/patient-care-and-health-information>
- National Institute on Aging, (2019). National Institutes of Health: Health information. *U.S. Department of Health and Human Services*. Retrieved from <https://www.nia.nih.gov/health>
- Nelson, E. C., Batalden, P. B., & Godfrey, M. M. (2007). *Quality by design: A clinical microsystems approach*. San Francisco, CA: Jossey-Bass.
- Norrie, L. M., Diamond, K., Hickie, I. B., Rogers, N. L., Fearn, S., & Naismith, S. L. (2011). Can older “at risk” adults benefit from psychoeducation targeting healthy brain aging? *Intentional Psychogeriatrics*, 23(3), 413-424. doi:10.1017/S1041610210001109
- Odawara, T. (2012). Cautious notification and continual monitoring of patients with mild cognitive impairment. *Psychogeriatrics: The Official Journal of the Japanese Psychogeriatric Society*, 12(2), 131-132. doi:10.1111/j.1479-8301.2012.00417.x
- Patton, M. (2015). *Qualitative research & evaluation methods: Integrating theory and practice* (Fourth ed.). Thousand Oaks, California: SAGE Publications.
- Pinto, C., & Subramanyam, A. A. (2009). Mild cognitive impairment: The dilemma. *Indian Journal Of Psychiatry*, 51(1), 144-51. PMID:PMC3038541
- Prochaska, J. O., & Velicer, W. F. (1997). The transtheoretical model of health behavior change. *American Journal of Health Promotion*, 12(1), 38-48. doi:10.4278/0890-1171-12.1.38

- Reijnders, J., Geusgens, C. A. V., Ponds, R. W. H. M., & van Boxtel, M. P. J. (2017). "Keep your brain fit!" Effectiveness of a psychoeducational intervention on cognitive functioning in healthy adults: A randomized controlled trial. *Neuropsychological Rehabilitation*, 27(4), 455-471. doi:10.1080/09602011.2015.109045
- Reijnders, J., van Heugten, C., & van Boxtel, M. (2015). Keep your brain fit! A psychoeducational training program for healthy cognitive aging: A feasibility study. *Educational Gerontology*, 41(8), 613-620. doi:10.1080/03601277.2015.1024554
- Roberts, R., & Knopman, D. S. (2013). Classification and epidemiology of MCI. *Clinics In Geriatric Medicine*, 29(4), 753-772. doi:10.1016/j.cger.2013.07.003
- Scerri, A., & Scerri, C. (2017). Training older adults about Alzheimer's disease-impact on knowledge and fear. *Educational Gerontology*, 43(3), 117-127. doi:10.1080/03601277.2016.1266445
- Smith, T., Cross, J., Poland, F., Clay, F., Brookes, A., Maidment, I., & ... Fox, C. (2018). Systematic review investigating multi-disciplinary team approaches to screening and early diagnosis of dementia in primary care: What are the positive and negative effects and who should deliver it? *Current Alzheimer Research*, 15(1), 5-17. doi:10.2174/1567205014666170908094931
- Smith, T., Gildeh, N., & Holmes, C. (2007). The Montreal cognitive assessment: Validity and utility in a memory clinic setting. *The Canadian Journal of Psychiatry*, 52(5), 329-332. doi:10.1177/070674370705200508
- The Official U.S. Government Site for Medicare (2018). Your Medicare coverage. *U.S. Centers for Medicare & Medicaid Services*. Retrieved from <https://www.medicare.gov/coverage/preventive-visit-yearly-wellness-exams>
- U.S. Preventative Services Task Force (USPSTF) (2014). Final recommendation statement: Cognitive impairment in older adults: Screening. Retrieved from <https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/cognitive-impairment-in-older-adults-screening>
- Wang, J., Kearney, J. A., Jia, H., & Shang, J. (2016). Mental health disorders in elderly people receiving home care: Prevalence and correlates in the national US population. *Nursing Research*, 65(2), 107-116. doi:10.1097/NNR.0000000000000147
- Weimer, D. L., & Sager, M. A. (2009). Early identification and treatment of Alzheimer's disease: Social and fiscal outcomes. *Alzheimer's & Dementia*, 5(3), 215-226. doi:10.1016/j.jalz.2009.01.028
- Woodford, H. J., & George, J. (2007). Cognitive assessment in the elderly: A review of clinical methods. *An International Journal of Medicine*, 100(8), 469-484. doi:10.1093/qjmed/hcm051

Zulman, D. M., Asch, S. M., Martins, S. B., Kerr, E. A., Hoffman, B. B., & Goldstein, M. K. (2014). Quality of care for patients with multiple chronic conditions: The role of comorbidity interrelatedness. *Journal of General Internal Medicine*, 29(3), 529-537. doi:10.1007/s11606-013-2616-9

Table 1

*Patient Demographic Characteristics*

Sex	Age	MoCA Score
Female	74	30
Female	73	30
Male	68	29
Male	66	28
Male	71	28
Male	65	27
Male	67	26
Male	77	25*
Male	67	25*
Female	67	25*

*Note.* \* indicates patients who scored positive on the MoCA.

Figure

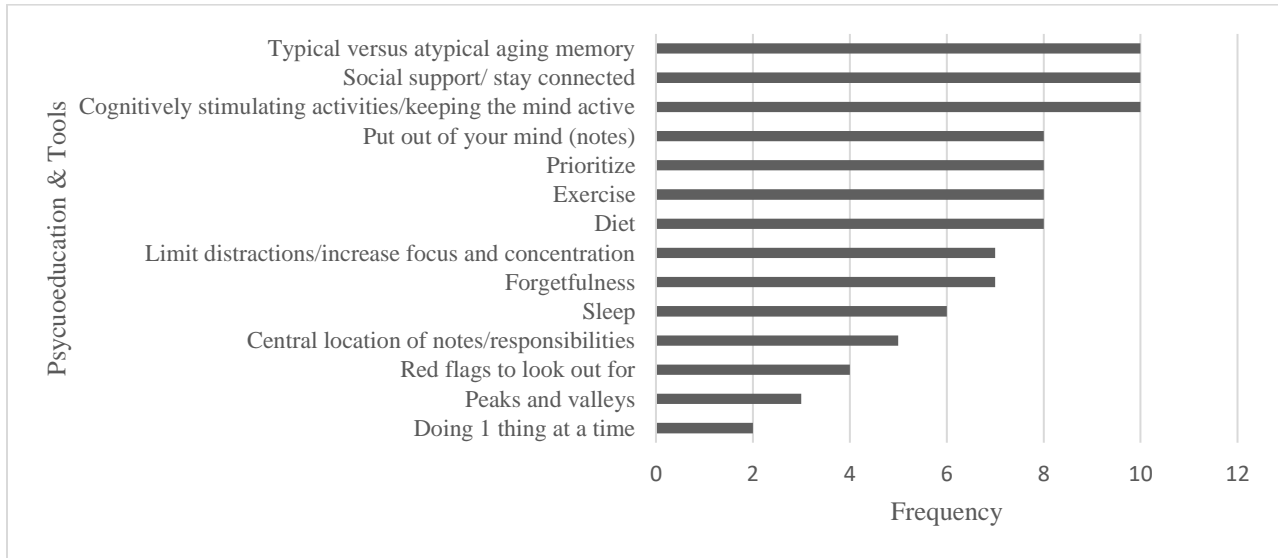


Figure 1: Frequency of psychoeducation and tools discussed during the BH conversation.

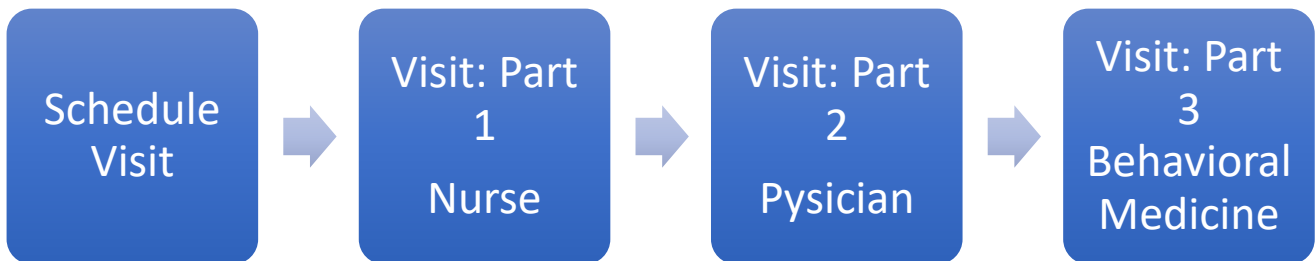
Appendix A: Process Map

**Medicare Wellness Visit (MWV) Process Map**

**Previous Workflow**



**Current Quality Improvement Workflow**



## Appendix B: Montreal Cognitive Assessment (MoCA) Permissions Request and Approval

**Study Title**

Integrated Care for Older Adults and Memory: A Quality Improvement Approach

**Study Objectives**

This quality improvement (QI) project aims to implement a behavioral health component in patients' Medicare Wellness Visits (MWV). This will take place at a primary care clinic, where the Principal Investigator is completing a psychology internship. Patients will be provided with appropriate and relevant psychoeducation and tools to optimize their independence and functioning. I hypothesize that many aging adults have concerns about the impact of normal aging on their memory, and whether or not patients' Montreal Cognitive Assessment (MoCA) score reflects cognitive decline, many patients could benefit from behavioral health support in this regard.

This project uses a Quality Improvement approach. As such, the results will be used to directly impact the care provided. QI differs from research in that systematic investigation and obtaining generalizable knowledge are not the primary purpose of the project. QI is intended to assess, analyze, and improve the process of care for a defined institutional setting and patient population. This methodology does not hinder or prevent the delivery of patient care, and does not impose any more risk to the patient than what is standard for routine care. Because QI involves improvement in healthcare delivery with a local context, findings are only applicable to the local institution and can adapt over time. In this regard, this project will be able to inform our practice and ultimately be able to provide higher quality care to our older adult patient population.

**Source of Funding**

No funding

**Name of Principal Investigator**

Haley E. Curt, M.A., M.S.

**Institution**

Antioch University New England

**Country**

United States

**Email**

hcurt@antioch.edu



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4896 Taschereau Blvd, suite 230

Greenfield Park, Quebec, Canada, J4V 2J2

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## Appendix C: Physician Script

Behavioral health is part of this Medicare Wellness Visit. Part of my team is behavioral health staff members who are specifically trained in helping cope with the normal themes of physical aging and with any additional concerns about cognitive or memory processes that may form with aging. Would you like to meet with my partner, Haley Curt?

## Appendix D: Resource List

**Healthy aging**

- Support aging cognition
- Multitasking and concentration
- Maintaining cognitive health
- Forgetfulness
- Cognitive health for older adults
- Risks to cognitive health
- Typical versus atypical aging memory and cognition
- The aging brain

**Caregivers**

- Caregiver stress
- Caregiver support
- Caregiver guilt

**Moving forward**

- Seeking help for memory loss
- Dementia

**Alzheimer's**

- Alzheimer's disease
- Dementia and Alzheimer's
- Early onset Alzheimer's
- Diabetes and Alzheimer's
- Depression or Alzheimer's
- The progression of Alzheimer's
- Accessing healthcare with Alzheimer's

The above resource list provides topics useful for the conversations in the intervention of the current quality improvement project. This list of topics was curated from resources recommended by the Mayo Clinic, the National Institute on Aging, and the Alzheimer's Association (Alzheimer's Association, 2018a; Mayo Clinic, 2019; National Institute on Aging, 2019). For materials to support the topics on the resource list please visit the web addresses associated with the listed citations.

## Appendix E: Follow Up Qualitative Survey Conversation Guide

My name is Haley Curt. We met on XXX and discussed XXX (brief summary of what the patient said and what we discussed in our visit).

Please answer the following questions.

1. Do you have any additional questions since our visit together?
  
2. Have you used any of the tools/tips we discussed in our visit? If so, which ones and in what ways?
  
3. Is there anything you are still concerned/worried about?
  
4. Would you be interested in meeting again?
  
5. If a friend or family member of yours came in, what would you recommend I do differently? Do you have any suggestions?
  
6. How is your partner/caregiver doing since our visit? (if relevant)

Appendix F: Behavioral Medicine Visit Checklist

Topic	Discussed in Visit
<b>Healthy Aging</b>	
Supporting aging cognition	
Multitasking and concentration	
Maintaining cognitive health	
Forgetfulness	
Cognitive health for older adults	
Risks to cognitive health	
Typical versus atypical memory and cognition	
The aging brain	
<b>Caregivers</b>	
Caregiver stress	
Caregiver support	
Caregiver guilt	
<b>Moving Forward</b>	
Seeking help for memory loss	
Dementia	
<b>Alzheimer's</b>	
Alzheimer's disease	
Dementia and Alzheimer's	
Early onset Alzheimer's	
Diabetes and Alzheimer's	
Depression and Alzheimer's	
The progression of Alzheimer's	
Accessing healthcare with Alzheimer's	
<b>Other</b>	
Specify other stressors:	