

2016

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Citation: Pilot Scholars Version (Modified MLA Style)

Stell, Cassandra, "Voluntary Cognitive Impairment Screening in Primary Care" (2016). *Nursing Graduate Publications and Presentations*. 18.

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Voluntary Cognitive Impairment Screening in Primary Care

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Abstract

Diagnosis of cognitive impairment is difficult to achieve in primary care, but early diagnosis allows patients and families to plan for future needs. This practice improvement project teaches medical assistants to offer cognitive impairment screening to patients 75 and older, when they come to see their primary care provider.

Keywords: cognitive impairment, dementia screening, medical assistants, primary care

Voluntary Cognitive Impairment Screening in Primary Care

The United States (US) is an aging nation, and a principal risk factor for cognitive impairment (CI) is increased age.¹ Someone in the US will develop the disease every 66 seconds, and one in three seniors die with the disease.¹ Currently, five million Americans are living with CI, and the number is expected to rise to 15 million by year 2050.¹ The 2016 national cost burden of CI is projected to be \$236 billion.¹

Diagnosis of CI is difficult to achieve in primary care settings, even when affected individuals are at such advanced stages that their deficits are grossly apparent. Consequentially, as many as 50% of patients with CI lack a diagnosis.^{2,3} Yet there are a multitude of benefits for patients and families if CI is diagnosed early, including early treatment of reversible causes, decreasing use of complex polypharmacy, the possibility of memory preservation medications and connecting family members to care support services, and the advantage of being able to plan for end-of-life care wishes.^{2,3,4}

Literature Review

Several studies have reported the widespread underdetection of CI in primary care clinics.^{3,5,6} This gap is attributed to current healthcare practices in which the primary care provider (PCP) is often the sole clinician available to older patients with CI, and he or she carries the onus of recognizing the symptoms.² Studies have reported a multitude of PCP barriers to diagnosing CI: perceived complexity of the memory evaluation protocol, competing time demands, lack of CI disease knowledge, and lack of well-demarcated symptoms distinct from other older-adult chronic illness conditions.^{3,6}

Controversy around screening. The recommendation to routinely screen older adults for CI is controversial. There is no consensus on the optimal initial assessment, and choice is

currently dictated by clinician experience with a particular instrument, clinician time constraints, and clinic staff training.⁷ The recommendation to *not* routinely screen for CI is based on several factors: lack of a universally accepted gold-standard diagnostic strategy, lack of clarity as to the best age to initiate screening, and the possibility that a patient in the early stage of dementia will prefer to be in denial.^{6,7,8} The United States Preventative Services Task Force (2014) neither *supports* nor *rejects* the idea of routine screening for older adults, stating that “the current evidence is insufficient to assess the balance of benefits and harms of screening for cognitive impairment.”⁹

However, early screening and diagnosis of CI is promoted by dementia expert associations, such as the Alzheimer’s Association, the Alzheimer’s and Dementia Consensus Group, the American Academy of Neurology, the American Geriatrics Society, and the American Medical Association.^{3,10,11} In 2011, the Patient Protection and Affordable Care Act added a new Medicare benefit, the annual wellness visit, which *requires* a clinician to assess the patient for CI by any of the following methods: (a) use of a screening tool, (b) direct observation, (c) patient report, or (d) concerns raised by family members.⁶

Patient response to cognitive impairment screening. Few studies have evaluated patient response to a CI screening protocol. One study tested a dementia screen and diagnosis intervention for 703 patients in a rural primary care clinic.² Post intervention, 325 of the patients submitted anonymous surveys assessing whether they felt routine CI screening was appropriate. The survey results reported that (a) patients “had no concerns” with having their memory evaluated or they reported being “pleased to have their memory evaluated” (98%); (b) 91% responded that, in general, “memory evaluation for older patients was a good idea”; and (c) no patients responded they were “a lot uncomfortable” with the memory screening.²

A second study investigated traits of individuals who tested positive for CI but who refused further diagnostic assessment. In this study of 554 subjects, the 63 participants who screened positive completed the *Perceptions Regarding Investigational Screening for Memory in Primary Care* feedback survey. Of those 63, 21 (33%) accepted and 42 (67%) refused follow-up diagnostic assessment.⁴ The study identified characteristic traits of individuals who declined the assessment as (a) having larger scores for sense of stigma, (b) living alone, (c) self-identified as African American, (d) age 70 to 79, and (e) not perceiving themselves as having any decline in their cognitive abilities.⁴

Evidence for cognitive impairment screening instruments. CI screening instruments should be brief (<5 minutes), appropriately validated, easily administered by non-physician clinical staff, and available free of charge for use in a clinical setting.⁶ The Mini Cog-Clock Drawing Test (MC-CDT) is a standardized formal screening instrument that meets those qualities; it has been reported as having a high specificity and validity of adequate test performance to detect CI.^{8,10,11} The MC-CDT has demonstrated a high efficacy for increasing CI screening rates in primary care clinics.^{10,11} The test takes only about three minutes (a three-word recall and a clock drawing), is simply scored in two parts, and is publicly available.¹²

Purpose

Based on current evidence supporting the promotion of CI screening, the purpose of this practice improvement project was to teach certified medical assistants (MAs) the voluntary CI screening protocol and to offer and perform CI screening with patients, aged 75 and older, who had an appointment to see their PCP in the primary care clinic. The team of individuals who played key roles in the practice improvement project were the volunteer MAs and a nurse practitioner-dementia care specialist.

Practice Change Model

The Kotter and Cohen Practice Change Framework, developed in 1995,¹³ was chosen early in the implementation process of the practice improvement project. This evidence-based model outlines eight steps to facilitate successful healthcare organization practice change.¹³ Each essential step guided the voluntary CI screening practice change and involved the following: 1) create a sense of urgency, 2) build the guiding team, 3) form a strategic vision, 4) communicate the vision, 5) enable action by removing barriers, 6) generate short term wins, 7) sustain change, and 8) institute change.¹³

Implementation process. Highlighting the rising prevalence of individuals living with CI¹ to the primary care staff at the selected clinic helped to create an incentive to urgently improve the CI screening practice. The nurse practitioner-dementia care specialist, who was also the project manager, is a change-agent with a strategic vision to improve the care of individuals with CI and the MAs at the site have shown enthusiastic support to participate. Throughout the implementation process, the project manager communicated with the clinic leaders through emotional storytelling to relay the struggles that patients affected with undetected CI and their families endure. Education strategies were implemented to address the primary barrier of ensuring that the MAs were comfortable presenting the option to the patient to have his or her cognition screened. To generate short-term wins, the follow-up diagnostic assessments were completed within five days. To sustain the change, the screening protocol was matched with the clinic's approach for other routine screening efforts. Finally, demonstrating the feasibility to implement the screening practice into the current workflow may fuel gradual change so that voluntary CI screening becomes a recommended practice for all primary care clinics within the organization.

Methods

This was a practice improvement project, not research, and was not intended to create new knowledge. The project was approved by the university's institutional review board, and ethical practices were followed. Participants' confidentiality was maintained by the exclusion of identifying data. Study data were securely maintained and are reported here as aggregate group data to maintain privacy and confidentiality.

Each PCP and MA in the clinic was provided with a written executive summary of the proposed practice improvement project. The summary informed them that participation was voluntary and participants could withdraw from the pilot at any time; that the screening period would end once five patients had a positive screen score with the MC-CDT instrument, or after six weeks, whichever was earlier; each patient who had a positive screen score would be given the opportunity to return to the clinic for a follow-up diagnostic CI assessment with the nurse practitioner-dementia care specialist; and the project manager would be available in the clinic each day of the training and screening period to address any questions or concerns.

Ethical consideration. The primary ethical concern was to ensure that the volunteer MAs were comfortable presenting the option to the patient to have his or her cognition screened for impairment. The project manager explained to the MAs that they could opt out of the project at any time and that they could decline to screen patients at any time during the screening period. Each MA received a 15-minute one-on-one training session and was invited to attend a voluntary 30-minute group lunch in-service session aimed at incentivizing the MAs to partake in sensitivity role-playing with a MA-specific language script. Integrating a language script into the workflow of the voluntary CI screening protocol was done to ease the possibility of an uncomfortable MA-

patient-family member interaction. The language script was adopted from the Alzheimer's Association instructional CI screening video.¹⁴

Throughout the project, it was important to recognize blind spots that might cause inevitable threats to the voluntary participation of the MAs.¹⁵ To accomplish this, anonymous feedback forms (blank index cards) were placed next to the locked data box throughout the training and screening period. These feedback forms provided the MAs an anonymous method for communicating any concerns or questions to the project manager. MAs also were welcomed to verbally communicate questions or discuss concerns in the moment.

Data Collection

This practice improvement project was based on implementation of a routine voluntary CI screening protocol. Only descriptive statistics were used. The volunteer MAs (four) were asked to fill out a daily log sheet for each day of the screening period. There were three outcome choices to record on the daily log sheet: (a) the patient opted for screening and the resulting MC-CDT instrument score, (b) the patient declined screening, and (c) the patient offered a *reason to decline screening* comment. Patients who opted for screening were directed, at the start of their visit, by the attending MA to complete the MC-CDT instrument. The nurse practitioner-dementia care specialist scored each completed test, and then she discussed the results with the patient at the completion of the PCP visit.

The MAs were asked to complete a Process Evaluation Feedback Survey at two points during the screening period: after two weeks and at the end of the screening period. The survey took less than 10 minutes to complete, and its completion was optional. The Process Evaluation Feedback Survey was developed specifically for this practice improvement project and is a Likert-type measure composed of four items measuring the MAs' satisfaction with the training

process, implementation of the screening protocol into their work flow, comfort in offering CI screening to the patients as a part of their visits, and the feasibility of providing the screening without depleting adequate time for the patients to address other concerns with their PCP.

Results

Screening occurred during seven non-consecutive days in September 2016 over two weeks and one day. Screening days were limited to those days when the project manager could be present in the clinic. Initially, four MAs volunteered to do the screening, and all four completed the training and screening period.

The daily log sheets revealed that a total of 23 patients aged 75 or older were seen in the primary care clinic during the seven-day screening period. Of those 23 patients, 4 patients declined to be screened. Of the 19 patients who opted to be screened, 2 patients originally declined the screening but after discussion with a present family member or with the PCP, the patients opted for the screening. Of the 19 patients who opted for screening, 6 patients scored positive. After the nurse practitioner-dementia care specialist met with the patients who had a positive score, one was found to not have CI.

The Process Evaluation Feedback Survey was completed by all four MAs at the end of the two-week screening period. All four indicated in their response that they were “completely” satisfied with the training process. Two of the MAs responded “completely” and two responded “somewhat” in response to the question that the screening protocol had been implemented into their work flow. All four were “completely” comfortable in offering the patients CI screening as a part of their visits. Three of the MAs responded “not at all” that the screening process depleted adequate time for the patient to address other concerns with the PCP, while one MA responded “somewhat.” No MAs used the anonymous feedback forms (blank index cards) during the

training and screening period, choosing instead to verbally communicate questions and concerns in the moment to the project manager. No PCPs in the clinic expressed any concerns with the voluntary CI screening protocol.

Limitations

The major limitation to this practice improvement project is the intentionally low sample size of five patients. The screening period ended once five patients had a positive screen score with the MC-CDT instrument. Several factors led to the intentional limit of five patients: 1) only one nurse practitioner-dementia care specialist was available to perform the follow-up diagnostic assessments, 2) patients might be less likely to decline the follow-up diagnostic assessment if appointments were available within five days, and 3) the follow-up diagnostic assessment was anticipated to be a time intensive process.

Discussion

The implementation of the voluntary CI screening practice change was time effective, used few additional resources, and applied a CI screening instrument that was readily available and free of charge. To sustain the practice improvement change, it was important that the voluntary CI screening protocol matched the clinic's approach for other routine screening efforts (currently for depression and alcohol use). For example, in the current clinic practice, if a patient screens a positive score for depression or alcohol abuse, most PCPs will delay the diagnostic assessment to another visit. The practice improvement project revealed it was extremely time-consuming to perform a follow-up diagnostic assessment for CI. Diagnostic assessment with the patients and family members included a complete history and physical examination, medication review, focused neurologic examination, and lab work. It was determined that diagnostic assessments following a positive screen score for depression, alcoholism, and CI are not possible

in the usual primary care 20-minute visit. For patients diagnosed with dementia, tailoring their plan of care and providing family support required up to three clinic visits and three phone visits with the nurse practitioner-dementia care specialist, due to the limitations of the PCP visit. Therefore, implementing 60-minute and 40-minute clinic visits for future diagnostic assessments and associated follow-up visits, respectively, is recommended.

Implications for the Nurse Practitioner

Between 2012 and 2050, the United States will experience considerable growth in its older population.¹⁶ The aging of the population will have a wide range of implications, including a rising prevalence of CI disease and its associated financial and social burdens.¹ Primary care is often the first point of contact for many older individuals with CI. Advanced practice registered nurses (APRNs) play an integral role as PCPs managing the healthcare of older adults. APRNs can work together to increase awareness that patients with early CI and their families may not always get the early help they need. APRNs can also build a guiding coalition to encourage national policymakers to prioritize and fund longitudinal support for education and coordination initiatives among PCPs and dementia expert associations.

Conclusion

Early recognition and detection enables people with CI and their families to better understand and come to terms with the diagnosis and to discuss future care.¹⁷ Based on current evidence supporting the promotion of CI screening, the purpose of this practice improvement project was to teach certified MAs the voluntary CI screening protocol and to offer and perform CI screening with patients, aged 75 and older, who had an appointment to see their PCP in the primary care clinic. This practice improvement project shows the feasibility of integrating CI

screening within a primary care clinic and the willingness of MAs to participate in a clinic-based screening protocol for voluntary CI screening.

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