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Pay Attention!:

The Critical Importance of Assessing Attention in Older Adults with Dementia

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Abstract

Attention is an important cognitive domain that is affected in Alzheimer's disease and other dementias. It influences performance in most other cognitive domains, as well as activities of daily living. Nurses are often unaware of the critical importance of assessing attention as part of the overall mental status examination. This article addresses an important gap in nurses' knowledge. The authors present a brief overview of attention as a critical cognitive domain in dementia; review instruments/methods for standardizing and enhancing the assessment of attention; and offer ways to help ensure that best practices in the assessment, recognition, and documentation of inattention are implemented in the clinical area. Clinical resources that practicing nurses may find helpful are included.

Alzheimer's disease (AD) is a memory disorder but may also be considered a disorder of attention. Recent evidence indicates that attention is affected from preclinical stages and is the first cognitive domain other than memory to show impairment in people with AD (Belleville, Chertkow, & Gauthier, 2007). Attention affects performance in other cognitive domains, as well as activities of daily living. In their study of hospital nurses' clinical documentation, Steis and Fick (2012) found that nurses were generally adept at assessing and recognizing problems with memory and orientation but failed to assess and recognize problems with attention. This is a significant finding, given the fundamental importance of attention to overall safety and function in people with AD.

In this article, which is based on the authors' research experience and clinical observations, we focus on an important gap in nurses' knowledge. We present a brief overview of attention as a critical cognitive domain in AD; review instruments/methods for standardizing and enhancing the assessment of attention; and offer ways to help ensure that best practices in the assessment, recognition, and documentation of inattention are implemented in the clinical area.

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OVERVIEW OF ATTENTION

Mental status is considered by many to be the sixth vital sign (Flaherty et al., 2009). The mental status examination is a structured evaluation of physical (i.e., appearance, behavior, motor activity), emotional (i.e., attitude, mood/affect, thoughts, perceptions and judgment), and cognitive (i.e., orientation, attention, level of consciousness, speech, memory, abstraction) domains that describe a person's state of mind (Trzepacz & Baker, 1993). Nurses are familiar with certain aspects of the mental status examination (i.e., orientation, level of consciousness) but pay less attention to other critical components (Steis & Fick, 2012). Attention is one such component.

Within the cognitive domain, attention involves the mental states and operations needed to detect stimuli, select stimuli over “noise,” and manage resources for the detection and processing of competing stimuli. There are three subtypes of attention: selective, sustained, and divided attention (Robertson, Ward, Ridgeway, & Nimmo-Smith, 1996). *Selective attention* is the ability to focus on a particular stimulus while filtering out other stimuli; *divided attention* is the ability to share attention resources across competing stimuli; and *sustained attention* is the ability to maintain focus on stimuli over time (Parasuraman & Haxby, 1993). In AD, selective attention and divided attention are affected early in the disease process, whereas sustained attention is relatively preserved until later stages (McGuinness, Barrett, Craig, Lawson, & Passmore, 2010).

Attention is basic to function in many other cognitive domains. For example, attention and working memory are closely related: Both decline with normal aging and substantially so with AD. Attention is the basis of working memory, and studies support this interplay at the cognitive and neurofunctional level (Störmer, Passow, Biesenack, & Li, 2012). Attention is also needed for planning, decision making, and problem solving—all aspects of executive function.

In addition to cognitive performance, attention is basic to physical performance including locomotor function and wayfinding ability. Inattention is often the source of unstable gait and falls (Chiu et al., 2004). From a safety perspective, attention can be enhanced in people with AD by implementing interventions that reduce environmental distractions and promote better self-reported mood (Kolanowski, Bossen, Hill, Guzman-Velez, & Litaker, 2012).

Inattention is an important feature of several neuropsychiatric disorders. Two neurotransmitter systems that have been associated with attention are the cholinergic and dopaminergic systems (Störmer et al., 2012). Dysfunctions in these systems are implicated in the attentional impairments seen in AD, as well as those in delirium and depression—both common neuropsychiatric disturbances in people with AD.

Taken together, the clinical and biological evidence indicate that attentional impairments reflect exhausted cognitive reserves that signal heightened risk for further cognitive and physical decline. Given the pervasive influence of attention on practically all aspects of function and its prominence as a feature in delirium and depression, nurses need to recognize the clinical importance of assessing attention in people with AD.

DIFFICULTIES ASSESSING ATTENTION

Nurses have difficulty assessing a patient's attention level for several reasons. With the exception of level of consciousness and orientation, prelicensure programs do not include content on assessment of other cognitive domains that are essential in a mental status examination. Consequently, most nurses are not aware of the importance of attention for detecting delirium, for example. Few clinic-friendly instruments are available, and those that

exist are rarely used in practice. There is also confusion about who is best qualified to conduct a mental status examination: Is it the physician's or nurse's responsibility? Another important issue is the difficulty of assessing mental status changes in older adults, particularly those with dementia. Nurses may think a patient's increasing inattention or slowed reactions are a normal part of aging and ignore obvious changes in mental status. Finally, the typically hectic clinical setting is not conducive to the assessment of attention without environmental adjustments; making these adjustments to reduce distractions can be burdensome to already busy staff.

Studies have shown that although nurses and physicians prefer and are most comfortable with using orientation as an indicator of change in mental status, in fact, it is one of the least useful indicators (Inouye, Foreman, Mion, Katz, & Cooney, 2001; Steis & Fick, 2012). For this reason and others, nurses must begin to shift their thinking to make assessment of attention a priority over other constructs of mental status.

WAYS TO ASSESS ATTENTION IN PEOPLE WITH DEMENTIA

When conducting an assessment of attention, it is critical that the nurse establish rapport with the patient so the patient is relaxed and at ease throughout the process. The environment should be scanned and adjustments made to reduce noise, glare, or poor lighting conditions. If the patient has sensory impairments, eyeglasses and hearing aids should be in place. For those without these devices, a hearing amplifier and/ or low-vision enhancers (i.e., large font size for printed materials) can be used if sensory difficulties are encountered. At all times, the nurse should face the patient being assessed, keep within the patient's field of vision, and speak slowly and distinctly.

Attention can be assessed using neuropsychological tests such as the Stroop test (Stroop, 1935) or Wisconsin Card Sorting Test (Feldstein et al., 1999), but these require computerized administration or pen- and- paper testing for implementation and are typically conducted and interpreted by a neuropsychologist. Several other validated measures, such as the Test of Everyday Attention (Robertson et al., 1996) and the Edinburgh Delirium Test Box (Brown, Fordyce, Zaghani, Starr, & MacLulich, 2011), can be implemented by non-psychologists and have been used to assess attention in individuals with dementia (Cole & Tak, 2006). Although all of these instruments have strong psychometric properties, clinical staff must be trained in their use, and these instruments are often time consuming to use and must be purchased.

Nurses working at the bedside require a readily accessible measure that can be incorporated into their daily assessment. Observations of behavioral cues such as "having difficulty keeping track of a conversation" (Steis & Fick, 2012, p. 38), "lack of awareness of surroundings," or "staring off into space" (Huang et al., 2012, p. 1045) are helpful and important to note. However, when used alone, individual observations by nursing staff do not permit a consistent comparison across time, and the accuracy of these observations may depend on the nurse's clinical expertise.

The measures of attention presented in the Table offer some standardization for assessment, are not complicated, require no new knowledge or training, and can be integrated into routine assessment. In addition, they can be used regardless of patients' level of education or stage of dementia.

When conducting the assessment, it is important for nurses to account for the overlap between memory and attention. One approach is to employ several methods that can be used at the bedside and across care settings: a letter list of attention, which involves reading a list of letters and asking the patient to tap a finger or a pen when, for example, the letter "a" is

read (O’Keeffe & Gosney, 1997); and asking the patient to indicate the total number of times he or she hears clapping hands or to immediately recall a list of words read to them (Mansbach, MacDougall, & Rosenzweig, 2012).

The Digit Span is a subtest of the Wechsler Adult Intelligence Scale (Wechsler, 1981), which is typically used by neuropsychologists but can be readily and easily implemented by nursing staff. The patient is asked to repeat a series of numbers, increasing in length, first forward and then backward. The assessment ends when the patient fails to correctly repeat two sequences in a row. Most nurses are familiar with the Mini-Mental State Examination (MMSE, Folstein, Folstein, & McHugh, 1975). The Serial 7s component of the MMSE (i.e., the individual is asked to subtract 7 from 100 and to keep subtracting 7 from each number obtained until told to stop) assesses attention but assumes a level of educational attainment and requires a complex cognitive process. Other options include asking the patient to list a common sequence of items, such as the days of the week, backward. All of these methods are objective and help ensure more consistent assessment over time. Their use also helps improve the precision of documentation.

RECOMMENDATIONS FOR DIFFUSION INTO PRACTICE

Nurses have the most direct care contact with older adults in the clinical setting and are well suited to conduct an assessment of attention, which, in many instances, can be completed in less than 5 minutes. Due to the fluctuating nature and significance of attention to delirium, we recommend nurses assess and document attention in people with dementia during each shift and any time a change in physical or mental functioning is suspected. Nurses should assess attention using an objective measurement—preferably one that can be easily scored and documented.

Given that nurses do not routinely assess attention in the clinical setting, environmental and workflow changes are needed to enable nurses to successfully implement and sustain innovation in day-to-day clinical practice (Rogers, 2003). The Promoting Action on Research Implementation in Health Services (PARIHS) framework (Helfrich, Li, Sharp, & Sales, 2009) may be used to guide implementation. Three main principles from the framework that support the implementation of innovation are: (a) provision of strong evidence to nursing staff, other disciplines, and administrative leaders of the importance of and return on investment in attention assessment; (b) maintenance of a quality-appropriate environment that supports and values implementation of change; and (c) active facilitation of attention assessments.

Specific ways in which these principles can be applied include facility-focused education on attention assessment, the use of relevant tools, and the significance of undetected attention deficits. An effective way to provide staff with feedback on their assessment performance is by using advanced practice nurses or unit champions who help staff integrate attention assessment into their everyday workflow. This feedback often occurs within the context of nursing rounds, where specific cases in which attention assessment was critical to a diagnosis or intervention are discussed. Other techniques that may encourage nurses to routinely assess attention include the adoption of innovative workplace components, such as information technology and easy-to-carry pocket cards with attention tools and directions for scoring. These practices allow attention assessment to easily fit within nursing and facility workflows.

The assessment of attention cannot be viewed as just another academic exercise; both nursing staff and organizational leadership must believe in its necessity. Work by Rogers (2003) and others has shown that for clinicians to adopt new methods, they must understand and appreciate the value of doing so and must have the support of nursing and facility

leadership. Because care of patients with delirium and attention deficits increases nursing workload, sharing information on studies and specific cases in which attention assessment assisted in detecting delirium and decreased workloads is more likely to facilitate implementation of change (Rogers, 2003).

Lastly, nurses need to clearly document the results of their attention assessment. Documentation should be in a place where change over time is immediately evident, as this is key to detecting delirium. In the age of the electronic health record, this may be done by using a “status board” function where key information about the patient is updated and easily visualized at the top of each page of the record.

CONCLUSION

Attention is a critical cognitive domain that nurses should assess when conducting the mental status examination. Inattention can signal the onset of delirium or may be a symptom of depression—both common in people with dementia. Thus, it is important to document in the patient record and communicate to the health care team a finding of inattention. Several resources for nurses are listed in the Table. By using evidence-based practices, nurses can improve the quality of their care and the health of their patients.

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TABLE**EVERYDAY MEASURES TO ASSESS ATTENTION AND CURRENT RESOURCES**

Measures
<ul style="list-style-type: none"> • Counting the number of times the nurse claps his or her hands or rings a bell. • Displaying objects, taking them away, and then asking for a recall of the items. • Naming the colors in the rainbow. • Repeating a digit span forward and backward. • Stating the days of the week or months in a year backward. • Tapping or signaling when a certain letter or word is said in a list.
Additional Websites and Resources
<p>Hartford Institute for Geriatric Nursing http://consultgerim.org/resources This website is a resource for multiple assessment tools on dementia, delirium, and general functional status assessments. It also provides important implications for assessment of attention.</p>
<p>Improving Antipsychotic Appropriateness in Dementia Patients (IA-ADAPT) https://www.healthcare.uiowa.edu/igec/iaadapt This website is designed to help clinicians, providers, and consumers better understand how to manage problem behaviors and psychosis in people with dementia using evidence-based approaches. It includes tools for assessment.</p>
<p>POGOe: Portal of Geriatric Online Education http://www.pogoe.org This site emphasizes education and training on geriatric competencies and tools for clinicians and educators.</p>