Vulnerabilities of Cognitively Impaired Patients in Acute and Post-Acute Care Settings

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By Karen L. Gilbert, DNP, MS, RN, CDP

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There is little question that any patient, when ill or injured, is vulnerable to a variety of complications while receiving care in the acute care hospital and post-discharge, in skilled rehabilitation or other health-care settings. For patients with Alzheimer's disease (AD) or a related neurocognitive disorder, the risks are greater, and the consequences of adverse medical events are often more dire. However, there are interventions that can mitigate these risks.

The 2019 Alzheimer's Disease Facts and Figures report (2019, pp. 349-350) describes the incidence of acute and post-acute care experiences of patients with Alzheimer's disease and related neurocognitive disorders (ADRD) and compares these statistics to those for patients in the same age group who do *not* have neurocognitive disorders.

The report identifies 266 hospitalizations per one thousand patients age sixty-five or older *without* ADRD versus 538 annual hospitalizations for every one thousand patients *with* ADRD, or more than double the number. Patients with neurocognitive disease spend a considerably longer time in the hospital and/or a skilled rehabilitation facility following discharge and receive more home health agency visits than those without ADRD, according to the report, which also cites higher emergency room utilization (p. 350) and higher rates of potentially avoidable hospitalizations with consequent higher health-care costs (pp. 357-358) for patients with ADRD.

Dementia Risks

These statistics reveal substantial differences in the acute care experiences of patients with cognitive impairment versus those without, and suggest that a neurocognitive disorder contributes to complications not experienced by cognitively intact patients. This is significant when identifying the unique vulnerabilities of patients with Alzheimer's disease (AD) or a related disorder when they require care in acute and post-acute settings.

AD is the most common pathology for those with irreversible, progressive neurocognitive decline; the vast majority of those with AD manifest age-related AD, i.e. they are older than sixty-five. This population

is the primary focus of this review, addressing the following concerns for which the cognitively impaired patient is at greater risk:

- falls

- adverse medication events, including side effects, interactions, the effects of multiple new medications

- malnutrition and/or dehydration

- increasing disorientation and/or anxiety, agitation, or delirium

- repeated hospital readmission

Education

The frequency of hospitalization and subsequent transfer to post-acute settings (either skilled rehabilitation or home care) underscore the importance of education and training for health professionals caring for the patient with a neurocognitive disorder. In spite of the need, this education and training is notably lacking (Butcher, 2018, p. 358, Pinkert et al., 2017, p. 163; Surr & Gates, 2017, p. 3).

Until recently, there was not one state in the U.S. with a continuing education requirement for physicians or nurses caring for patients with ADRD. The State Alzheimer's Disease Plans: Training (2017) consists of outlines for training in forty-four states, Puerto Rico, and the District of Columbia. Each of the plans differs in its focus as to which professionals should be trained and whether training is *recommended* or proposed for legislative mandate. However, at this time only two states (Massachusetts and Connecticut) have initiated any substantive action, and only for a narrow sector of health-care providers.

Noting concern for the 130,000 residents with AD in Massachusetts, the Mass Alzheimer's and Dementia Act was signed into law in August 2018 (Bill H4116, n.d.). This legislation mandates training for "protective services caseworkers" and describes continuing education requirements for physicians, nurses, and physician assistants that include aspects of diagnosis, treatment, and care. In thirteen other states, the population of patients with ADRD is notably larger than that of Massachusetts, ranging from 140,000 in Arizona to 670,000 in California (2019 Alzheimer's disease facts and figures, 2019, p. 333). Nevertheless, these states have no mandate for continuing education on ADRD. In July 2019, Connecticut, with an estimated 78,000 patients, passed legislation mandating this education for physicians and nurse practitioners beginning January 2020 (An act concerning Alzheimer's disease and dementia training and best practices, 2019).

Florida Statutes illustrate how training requirements can differ significantly among provider types. Although requirements for assisted living facilities and specialized Alzheimer's adult day centers are the same (and extensive), training for social adult day centers, skilled nursing facilities, hospice providers, and home health agencies differ and are not nearly as comprehensive. Arguably, all of these providers may care for patients with ADRD in the course of the disease process. The disparities in educational requirements are considerable and troubling. Further, Florida statutes have no mandated training for hospital staff.

Undue decline in health (morbidity) is the consequence when health-care staff are not knowledgeable in the dynamics of ADRD or the specific approaches beneficial for these uniquely vulnerable adults. This additional morbidity often results from the falls, adverse drug events, malnutrition and/or dehydration, disorientation, anxiety, agitation or delirium, and avoidable readmissions mentioned earlier, and is likely to be exacerbated when the patient is discharged to the next level of care.

Falls

In the absence of a standard and routine process for cognitive assessment in the acute care setting, the patient's ability to make his or her needs known cannot be reliably determined. This fact alone puts the cognitively impaired patient at greater risk for falls. For example, adult patients are expected to understand and remember that they have a call bell to use when assistance is needed. ADRD patients may not recall needing assistance to safely get out of bed or go to the bathroom. These patients may also be unable to *anticipate* the need to toilet and alert staff; when the need becomes urgent, patients attempt to go to the bathroom unaided, often resulting in a fall.

Approximately one million patients fall while in the hospital in the U.S. each year (Healey, 2016). Falls substantially drive morbidity, compromise quality of life, and can dramatically increase health-care costs. According to Christy (2017, p. 1), 30 percent of those adults who fall while in the hospital sustain mobility-limiting injuries. Limited mobility puts the patient at higher risk for pressure wounds, pain, another fall, incontinence and/or constipation, urinary tract infection, anxiety, and/or depression. Zhao et al. (2018, p. 20) report that falls with injury can result in hospitalization increasing by up to twelve days. In

addition to the obvious increase in health-care costs, the longer inpatient stay exposes the patient to additional morbidity and may necessitate discharge to another skilled setting (instead of to home), where the patient is again vulnerable to the same risks.

Strategies to reduce fall risk for the cognitively impaired adult patient first involve identification of the cognitive impairment; thus, the basis for advocating for standard, routine cognitive screening. Staff must understand that the patient's ability to retain new information, such as instructions for using the call bell and waiting for assistance, may be compromised. Short-term memory failure is a hallmark of AD. Staff must apply critical thinking in establishing a care plan that addresses these deficits.

A *toileting schedule* and systematic "rounding" to check on patients and assist when the patient attempts to transfer or ambulate without assistance can prevent a fall. These are simple nursing interventions representing a *proactive* approach.

Despite the rather widespread use of bed alarms over the past twenty to thirty years in many skilled nursing facilities, alarms are not effective in preventing falls in older patients (Crogan & Dupler, 2017, p. 60). The alarm may only serve to signal that a patient has already fallen after getting out of bed unassisted.

Medications

The hospitalized patient and those in post-discharge settings with ADRD are vulnerable to the addition of multiple new medications. Although there is no single definition of "polypharmacy" (Parsons, 2016), the term commonly refers to prescribing four, five, or more medications to the same patient for one or more medical conditions. Polypharmacy may also be associated with *inappropriate* medication prescribing based on an increased risk of adverse side effects in patients with ADRD (pp. 31-32). The Beers List (American Geriatrics Society, 2019; Potentially harmful drugs in the elderly: Beers list, 2019), first published by Dr. Mark Beers and colleagues in 1991 to address medication vulnerabilities of long-term care residents, is now applied to both inpatient and outpatient settings and identifies medications to be avoided or used with caution in patients age sixty-five and older.

Strategies to reduce the risk of adverse drug events may include an evaluation of the medications the patient was taking prior to the acute episode. The family caregiver or allied professional assisting the patient can bring the patient's medications to the hospital. This may mitigate the prescribing of multiple *new* medications and decrease the possibility that the patient will experience new side effects or adverse drug interactions.

Adherence to the recommendations in the Beers List can reduce the risk of adverse drug events. Prescribing psychotropic drugs (that may affect behavior and emotions) is common for patients with ADRD, though these medications are contraindicated for this population and noted for increasing the risk of falls (Barclay, Frassetto, Robb, & Mandel, 2018, p. 40). Further, antipsychotics such as Risperdal and Seroquel bear "black box warnings" relative to the increased risk of severe side effects or death in patients over sixty-five with ADRD.

Malnutrition and Dehydration

Patients who are malnourished are "twice as likely to develop pressure ulcers" (Avelino-Silva & Jaluul, 2017, p. 56). The presence of a pressure wound places the patient at risk for infection, longer inpatient stay, and increased need for skilled care after discharge. The authors specifically identify that hospitals must recognize and address the need for assistance with eating. Alzahrani and Alamri (2017) identify "cognitive changes such as dementia" (p. 4) as well as polypharmacy as potential compromises to adequate nutrition.

We begin to appreciate how the vulnerabilities of the patient with ADRD may compound, leading to a cascade of complications with a demonstrably negative impact on quality of life and health-care costs.

Strategies to optimize nutrition and hydration include a nursing plan of care that directs staff assistance with meals, encourages the participation of family or friends, and honors the patient's food preferences to the greatest degree possible (Avelino-Silva & Jaluul, pp. 58-59).

Disorientation, Anxiety, Agitation, Delirium

Reality orientation is based upon continually reorienting the patient to the here and now. This involves repeatedly reminding the patient of the current month, day, time, location, and reason for the patient being in the hospital, or any other current information, and may be of value to those whose cognitive impairment is of a temporary nature due to severe illness or injury. However, the patient with an irreversible, progressive neurocognitive disorder beyond its earliest stage lacks the capacity to retain new information; repeatedly reorienting is not likely to be effective.

This is particularly true of AD with its early assault on the hippocampus, the structure of the brain that processes new information and forms short-term memories. Cognitively impaired patients may spend much of their time in the realm of long-term memory,

speaking as though they are decades younger. The 90-year-old patient may ask for her mother. Another may say that he has to get to work, though he long ago retired. Yet another may say he wants to go home, with no current awareness of the need to remain in the skilled setting. Patients may become anxious, agitated, or even combative if health-care staff, family, or friends repeatedly correct or argue with them.

Strategies for therapeutic communication with the patient with ADRD rely upon **validation.** This approach was developed and advanced by Naomi Feil (Validation Therapy, n.d.). To validate, do not correct or argue. Work within the patient's reality; meeting the patient where he or she is, and *affirm*.

The potentially negative outcome of reality orientation is illustrated in the following example provided by Butcher (2018), in which a moderately cognitively impaired 82-year-old female patient was hospitalized following a fall. In the course of a seven-week hospital stay, the patient physically declined with increasing confusion; she was prescribed benzodiazepine medications and experienced new health issues including incontinence, weight loss, and a pressure wound. There was no evaluation of her cognition, nor care plan approaches to specifically address her cognitive deficits.

Butcher adds commentary to the following note entered by one of the patient's physicians and which illustrates the importance of validation:

> "*Mrs. M is very tearful and upset because she hasn't seen her mother today. I reassured her that her mother would have died quite some time ago.*" The word 'reassured' in this context was a paradox. There appeared to be no understanding of Mrs. M's reality and how best to communicate with her empathetically. Rather, there was the expectation that a person with impaired cognition, in an emotional state, should somehow accept a disturbing revelation, forcing them in to a reality within which they are unable to function nor understand (p. 359).

One can envision how Mrs. M may have benefitted if simply asked *about* her mother, recognizing her need to *feel the sense and security of mother* rather than literally trying to *see* her mother.

The nursing care plan for the patient with ADRD should include validation instead of reality orientation. The interventions are simple: affirm the patient's reality, never correct, never argue. Health-care staff must be provided with training as to the rationale and the simple ways in which to validate, rather than attempting to have patients accept a reality that they can neither process nor retain. Family and professional caregivers familiar with the patient's cognition must advocate for this consistent approach.

Delirium is a sudden onset of increased confusion and may result in hyperactive, combative behavior or in the alternative, unusually withdrawn behavior. Delirium has multiple contributing factors, including, but not limited to, those addressed in this review. Validation of the patient is a recognized strategy for reducing this risk (Delirium prevention strategies, 2016).

Repeated Hospital Readmissions

The rate of hospital readmission within thirty days of discharge for Medicare beneficiaries is estimated at 20 percent and costs the health-care system an estimated $17 billion per year (Al-Amin, 2016, p. 682). The Centers for Medicare and Medicaid Services (CMS) initiated the Readmissions Reduction Program (Hospital Readmissions Reduction Program [HRRP], 2019) in 2012. This legislation reduces payments to hospitals for avoidable readmissions for patients with several common diagnoses. Cognitive impairment is not considered as a specific risk factor for these events; however, this review has identified the vulnerabilities of cognitively impaired patients that contribute to clinical decline (regardless of primary medical diagnosis), and lead to repeated hospitalizations.

Strategies to minimize risk of readmission are logically rooted in assessing the patient's cognition and abiding by individualized plans of care that maximize inpatient safety and foster secure transitions to the next level of care.

Improving care transitions by identifying and conveying the patient's cognitive status to the next level of care was cited (Gilmore-Bykovskyi et al., 2016) in a study of the perceptions of forty nurses in a skilled nursing facility in Wisconsin. These nurses found that poor transitions from the hospital to a skilled facility created high risk for transfers back to the hospital, noting behavioral challenges secondary to cognitive impairment that were neither addressed during hospitalization nor communicated to the skilled facility.

Hospitals and post-acute settings can learn much from the family caregiver and other health and social service professionals caring for the patient. The patient's *usual* physical abilities (prior to acute illness or injury), *usual* appetite, *usual* demeanor and behavior, *usual* degree of orientation to the "here and now," and *usual* ability to make his or her needs known are all critical to identifying a change. The change should *never* be dismissed as "dementia" or simply due to advanced age, nor necessarily be addressed with medications. A change from baseline should be evaluated for

its root cause, which may relate to very basic needs: toileting, hunger, thirst, fear and anxiety, pain, etc.

Initiatives to identify cognitive impairment; institute appropriate, individualized care plans; structure appropriate, safe discharge plans; communicate cognitive status to the next level of care; and involve family and professional caregivers to a greater degree in the patient's care can reduce the risk of adverse events and hospital readmission, improving quality of life and reducing health-care costs.

All clinical and non-clinical professionals caring for patients with ADRD share a responsibility to advocate for basic protections and best practices in addressing patients' needs. At the same time, we can also support efforts to standardize professional education in ADRD, promoting a foundation for proactive, preventive care. •CSA

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