

Dignifying dementia: Accepting the limitations of medications

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Persons older than 65 years numbered 39.6 million in 2009 representing 12.9% of the U.S. population. There will be roughly 72 million older persons by 2030, more than twice their number in 2000.¹ Babyboomers entered this category in 2011 largely accounting for this increase in the older population. This growth will have wide-ranging implications for the country including in health care management. Treatment of dementia has become a higher priority in the last 10 years as the risks compound with the aging population. Along with the aging population and better recognition of dementia, the prevalence of dementia has grown in this decade and is expected to climb between 8 and 13 million by 2050.²

The monetary cost of dementia in the United States ranges from \$157 billion to \$215 billion annually, making the disease more costly to the nation than either heart disease or cancer, according to a new RAND Corporation study.³ The greatest economic cost of dementia is associated with providing institutional and home-based long-term care rather than direct medical interventions or procedures.^{4,5}

The principal goals for dementia care are early diagnosis, identifying and treating accompanying physical illness, detecting and treating behavioral and psychological symptoms, and providing information and long-term support to caregivers. Currently, there are no medications that alter the progression of the dementia but rather manage acute symptoms and slow the decline of functional loss.

In the United States there has been a steady increase in the number of people relying on prescription medications to help manage physical and emotional symptoms.⁶ Elderly patients take about three times as many medications as younger adults.⁷ According to Medicare, the average number of prescriptions per year, including refills, is currently 28.5 per senior.⁶ These numbers include medications for the management of behavioral symptoms associated with dementia.

Elderly people are at a high risk of experiencing side effects with drug therapy due to natural physiological changes that take place as we age. The epidermis of the skin atrophies with age and due to changes in collagen and elastin the skin loses its tone and elasticity. Lean body mass declines with age primarily due to loss and atrophy of muscle cells. Cardiac output decreases, arterial

sclerosis limits blood flow to all organs, and kidney and liver mass decrease. Degenerative changes occur in many joints and this, combined with the loss of muscle mass, inhibits elderly patients' locomotion. Creatinine clearance decreases with age although the serum creatinine level remains relatively constant due to a proportionate age-related decrease in creatinine production. Altered hepatic drug metabolism is common in the elderly.⁸ Each of these physiological changes alters the pharmacodynamics and pharmacokinetics of medications introducing a different risk profile compared to the adult population.

Risks of medications should be closely scrutinized and weighed carefully in the elderly population as the risks can be exponentially greater compared to the studied adult population. Potential benefits should clearly outweigh the known risks and expectations should be discussed with the patient or family members before prescribing any medications.

While current medications do not stop the progression of dementia, they may help lessen or stabilize symptoms for a limited time. The FDA has not yet approved medications for management of a particular behavioral and psychological symptom of dementia. Instead, clinicians often rely on off label use of psychotropic medications to manage such symptoms. Consideration for the risks in an older patient and efficacy of medications (e.g., antipsychotics) for management of dementia needs to be weighed carefully when initiating and continuing for extended periods. Additionally, resources in websites can assist caregivers and providers in providing optimal care to the patients we serve. Consider:

- <https://www.healthcare.uiowa.edu/igec/IAADAPT>
- <http://nhqualitycampaign.org/>
- <http://alzfdn.org/>

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