

VIEWPOINTS

The Silver Tsunami is Coming: Will Pharmacy Be Swept Away with the Tide?

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It's been called the silver tsunami, the age wave, the geriatric imperative, among others. It is the aging baby boomers and the first of this cohort turns 65 years old in 2011. From a health care perspective, the numbers are scary. Seventy-six million boomers will enter the fragmented, under funded health care arena for older people. Today the elderly constitute 12% of the US population and use approximately 35% of all medications. Medication use will likely grow with increased use of multiple medications to treat illnesses and increase longevity. Over the next 20 years, 1 in every 5 Americans will be over 65 years of age, and even more important, the 85-plus cohort will expand to 15 million over the next 40 years—about the same length of time that our recent graduates will be in practice. This raises the question: Are our graduates able to provide excellent care to the ever increasing older population? Older people, particularly those more than 85 years old, utilize massive healthcare dollars, have the poorest outcomes from adverse drug events (ADEs), and often receive inadequate, inappropriate, or poorly managed medication therapy.

The incidence of avoidable adverse outcomes from drug therapy in older people is shameful. For example, 28% of ADEs in ambulatory geriatric patients are deemed preventable; even more shocking, 50% of the life-threatening and fatal ADEs are preventable.¹ Why aren't they being prevented? Who's responsible for prevention? The main causes of these preventable ADEs include prescribing inappropriate medications, wrong dosing, and inferior monitoring. Poor patient adherence and lack of patient education account for more than 20% of preventable ADEs¹—clearly a pharmacist intervention opportunity. In older adults the incidence of emergency department visits as a consequence of ADEs increases with age and accounts for 25% of all ADE-related emergency department visits.² Improper therapeutic monitoring is a major cause for these visits, and approximately 50% of seniors

with drug-related emergency department visits are hospitalized as a result of their ADE, highlighting the vulnerability of older people using medications.² Given these and other alarming data, what is going to happen over the next 20 years when our population is 20% geriatric? Will pharmacists be on the front lines rendering better care in the future than what is currently being provided?

The Institute of Medicine's 2008 report, *Retooling for an Aging America: Building the Health Care Workforce*, makes the case that "the geriatric competence of virtually all members of the health care workforce needs to be improved through significant enhancements in the educational curricula and training programs."³ Like most health disciplines, pharmacy education is woefully inadequate in geriatrics. Few US colleges and schools of pharmacy mandate a geriatric-focused advanced practice experience, although most schools offer this as an elective.^{4,5} In addition, few pharmacy schools have a required geriatrics course or module and integrate geriatrics into other coursework.^{4,5} The quantity and success of integration is unknown, but less than half of all schools of pharmacy have a full-time geriatric pharmacy specialist.⁵

Geriatric pharmacy practice is much more than applying pharmacokinetic principles based on age-related altered renal function. Although this is important, age-related changes in pharmacodynamics are far more important, as these changes extensively contribute to the unnecessary high rate of ADEs in older people. There are geriatric pharmacotherapy doctrines that all pharmacists must know. But other nonpharmacologic knowledge and competencies must be learned by our students, including overcoming communication barriers that are frequently encountered in geriatrics; being able to work with community-based aging networks; working within social and economic constraints; continuum of care issues; and geriatric assessment to recognize common but unusual presentations of ADEs and geriatric syndromes. Our students must develop good interpersonal skills to work with other care providers, as the practice of geriatric medicine is interdisciplinary.

Now is the time for faculties to assess their curriculum to determine whether they are adequately preparing their graduates for the silver tsunami. With the number of older

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people in the United States almost doubling to 70 million by 2030, if we don't address the shortfall in geriatric education today, pharmacists will not be part of interdisciplinary teams caring for seniors. As all health disciplines will not have sufficient numbers to care for our growing elderly population, we have an opportunity to fill a void by having pharmacists be responsible for medication therapy management in seniors. It won't be easy, as we do not have sufficient numbers of pharmacists with specialized training in geriatrics to serve as faculty. The academy must work towards funding more postdoctoral training programs and mid-career development awards and help retool practicing pharmacists to meet the demand that will soon be upon us. The profession of pharmacy will suffer greatly if we wait too long to improve geriatric pharmacy education. If we don't prepare for the silver tsunami, we will be swept away with the tide.

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