

Balancing Evidence and Economics While Adapting Emergency Medicine to the 21st Century's Geriatric Demographic Imperative

Emergency department (ED) care for older Americans has reached a breaking point: Over 50 million U.S. adults ≥ 65 years old (“older adults”) currently account for one in five ED visits and $\sim 50\%$ of hospital admissions each year.^{1,2} The projected growth of the number of U.S. older adults³ will further strain the capacity of the U.S. health care system to meet their complex care needs (Figure 1).⁴ Several factors are fueling this growth of geriatric emergency medicine: First, the ranks of fellowship-trained geriatricians in the United States has steadily declined⁵ despite economic and population models 27 years ago predicting inadequate numbers of geriatricians by 2030.⁶ Lacking rapid access to primary care or geriatrics and accelerated by acute diseases and injuries associated with aging, ED visits for older adults will continue to increase.¹ Second, inadequate access to primary care or geriatricians drives the upward trend in potentially preventable ED visits for ambulatory care sensitive conditions as measured using the Agency for Healthcare Research and Quality Prevention Quality Indicators.⁷ National Hospital and Ambulatory Care Survey data from 2001 to 2010 demonstrate that approximately 75% of ED visits by older adults did not involve life-threatening emergencies or critical illnesses.² Third, one-third of all ED visits for older adults result in a non-intensive care unit admission independent of clinical acuity and the likelihood of admission increases with age.² Yet, 60% of potentially preventable hospital admissions involve older adults.⁸ ED visits and hospital admissions, particularly those that are potentially preventable, are associated with loss of mobility, function, and independence, beyond that expected among

comparable older adults who did not have an ED visit or a hospital stay.⁹

These factors highlight opportunities to improve patient-centered, geriatric emergency care, yet underscore the need for innovations to raise the quality of care for older adults—innovations such as the one described by Southerland et al.¹⁰ The pursuit of geriatric innovation might be viewed as two sides of a coin: The humanistic/ethical side and the economic side. While Dr. Pines explores the economic equation, our commentary will focus on the humanistic and ethical argument and most judicious approach in support of continuing the innovation and dissemination of geriatric emergency medicine:

1. *The status quo is inadequate to meet the care needs of older adults.* The traditional ED model of care often fails to meet the complex care needs of older adults: Over 90% of delirium and 94% of dementia are missed by ED providers,^{11,12} and as few as 1% of patients receive guideline-recommended vision or balance assessments following a fall.¹³ Emergency medicine has acknowledged the opportunities to improve older adult care in the past decade. For example, the endorsement of consensus geriatric ED guidelines^{14,15} and launch of the American College of Emergency Physicians (ACEP) tiered Geriatric ED Accreditation (GEDA) process for EDs (www.acep.org/geda) to catalyze, objectively qualify, and formally acknowledge improvements in care processes and outcomes for older adults in EDs of any size or resource capacity.
2. *To innovate, think/act locally with small patient-centered programs.* The particular care needs of older

The authors have no relevant financial information or potential conflicts of interest to disclose. A related article appears on page XXX.

Projections for US Adults 65 Years and Older 2010-2060:
Total Population, Emergency Department Visits and Number of Fellowship-trained Geriatricians

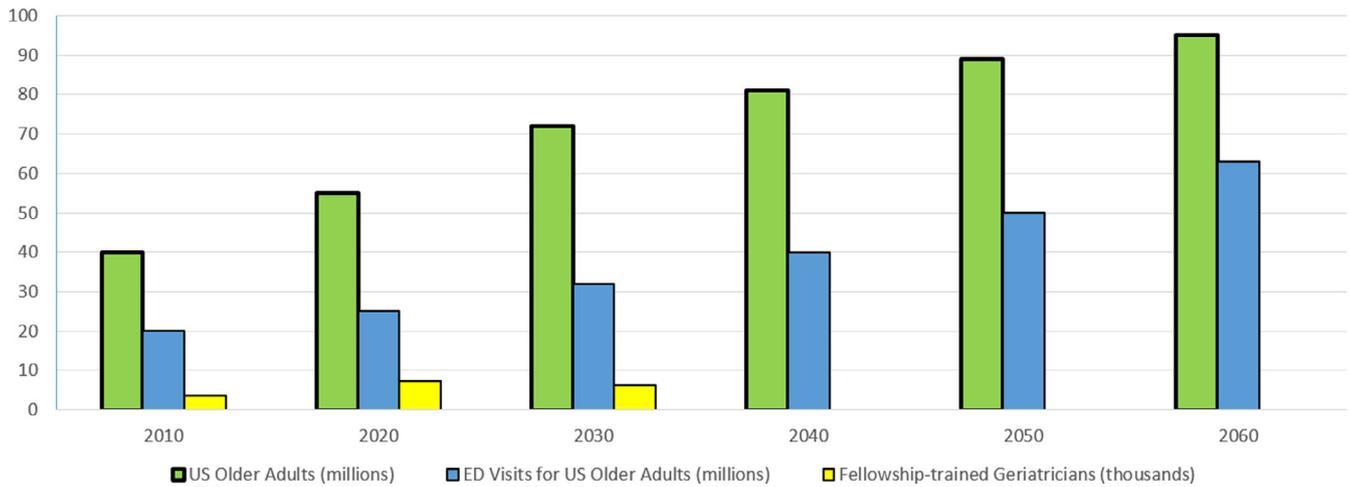


Figure 1. Projections for total U.S. population of older adults 65 years and older; the number of ED visits, and the number of fellowship-trained geriatricians 2010-2060. Data for the number of geriatricians only available through 2030. Projected total population from Vincent and Velkoff³; projected ED visits calculated from Pines et al.¹ and Lo et al.²

ED patients will vary from one community to another, as will the available clinical expertise and resources. For example, an ED in a community with a higher proportion of falls may want to prioritize physical therapy in their program, while another hospital where poor access to care predominates might emphasize the role of an ED social worker. Conversely, an ED with an embedded ED pharmacist may wish to focus on prioritizing polypharmacy. By leveraging Ohio State's resources, Southerland et al. provide a model of this philosophy. A comparison of the GEDA accreditation levels demonstrates a higher ranking for institutions (e.g., gold vs. silver) with increased number of roles for their interdisciplinary geriatric assessment team, a higher number of policies, guidelines or procedures from the ED model of care, and a higher number of quality improvement components. Applicant institutions may interpret these tiered accreditation criteria as an endorsement that "more is better." An alternative perspective is that "something is better than nothing" and less resourced sites could strive for bronze accreditation to improve the process and outcomes of older adult care. From an economic standpoint, it would also cost less to implement one intervention than to try to simultaneously implement 20. Institutions should not adopt the philosophy of not applying for GEDA accreditation if they are unable

to achieve the gold-level accreditation, because even incremental improvements might benefit subsets of their patient population and provide proof-of-concept for more ambitious protocols in the future. Thus far, hospitals seem to be starting small in accordance with this approach. Among 137 U.S. EDs that have gained GEDA accreditation (www.acep.org/geda accessed April 15, 2020), only 10 of 137 (7%) are designated gold level.

3. *Successful care innovations have been adopted, sustained, and beneficial, despite having no clearly demonstrated favorable cost-benefit profile.* Pediatric emergency medicine developed in response to increasing ED visits by children, inappropriate ED utilization, and unmet complexities of these visits that underscored the need for specialized emergency care for children.¹⁶ Pediatric EDs thrive despite the limited data on the cost-effectiveness of pediatric emergency medicine.¹⁷
4. *Innovations help to advance the science.* One barrier to more widespread acceptance of geriatric ED guidelines and care innovations is the nascent evidence base.¹⁸ The majority of evidence from U.S. programs have come from observational studies^{2,9,11,12,19} and data from large U.S.-based multi-site randomized controlled trials are lacking. To advance the science, we need new ideas, trials, and errors and a culture of innovation to drive this forward. These steps may not generate any revenue in

the short term and often require an up-front financial investment. However, innovations that are informed by preexisting research and clinical intuition will be crucial to future care improvements. Pragmatically, EDs and health care leaders cannot await completion of future planned robust studies before taking any geriatric quality improvement steps. It takes on average 17 years for high-quality, practice-ready research evidence to achieve widespread implementation in clinical practice,²⁰ and the rapidly expanding older adult population provides a high level of urgency. Evaluating GED effectiveness will definitely be impeded without the support of more targeted geriatric emergency care research mechanisms, so the federal government can accelerate knowledge acquisition by ensuring a sustainable funding stream committed to outcomes-based geriatric emergency care. The exigency for GED innovation is further accentuated by the anticipated insolvency of Medicare in 2026 (<https://www.nytimes.com/2019/04/22/us/politics/social-security-medicare-insolvency.html>). The alternative would be to tamely accept the status quo, an option that is neither fiscally prudent nor intellectually appealing.

5. *ED is the front porch to health care.* The GED is a critical and unique health care locale from which to implement interventions aiming to safely and equitably reduce unnecessary hospital admissions and to optimize care transitions back to the hands of community providers. Successful programs such as Southerland's have already navigated those details and can serve as conceptual leaders in the secondary development of similar programs at appropriate sites. This hub-and-spoke collaborative partnership model, is exemplified by the Geriatric Emergency Department Collaborative (GEDC; <https://gedcollaborative.com>), which mentors local opinion leaders and supports the development of older adult quality improvement for member ED. Currently, GEDC membership and resources are available to any ED worldwide at no cost.

In summary, improving emergency care for older adults has demographic, pragmatic, ethical, and economic imperatives to proceed. Although Southerland's economic analysis may not resonate with all institutions, her work nonetheless serves as an example of how one ED marshaled resources to improve care quality for their older patient population and created

an effective model within their care environment. While their exact program may not be easily replicated, their principles can be. We recommend following Southerland's steps: Know your patient population and understand the limits of your institution's support, assess your patients' greatest needs, identify one or two innovations that may create a meaningful change in the patients' outcome, and develop a modest program that not only is economically palatable to your institution but also one where you more likely to demonstrate success. As society strives to improve geriatric emergency care for older adults, remember the mantra that doing something small and well is often better than doing nothing at all when suboptimal outcomes are being identified. Emergency medicine must do all it can—now and in the future—to ensure that routine emergency care provides patient-centered, geriatric-sensitive, high-quality, and appropriately cost-conscious care to older adults.

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Supervising Editor: Jeffrey A. Kline, MD

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