

22. Centers for Disease Control and Prevention. Public Health Dispatch: Outbreaks of Community-Associated Methicillin-Resistant *Staphylococcus aureus* Skin Infections—Los Angeles County, California, 2002-2003. *MMWR*. 2003;52:88.
23. Moran GJ, Amii RN, Abrahamian FM, et al. Methicillin-resistant *Staphylococcus aureus* in community-acquired skin infections. *Emerg Infect Dis*. 2005;11:928-930.
24. Frazee BW, Lynn J, Charlebois ED, et al. High prevalence of methicillin-resistant *Staphylococcus aureus* in emergency department skin and soft tissue infections. *Ann Emerg Med*. 2005;45:311-320.
25. Moran GJ, Talan DA. Community-associated methicillin-resistant *Staphylococcus aureus*: is it in your community and should it change practice? *Ann Emerg Med*. 2005;45:321-322.
26. Fridkin SK, Hageman JC, Morrison M, et al. Methicillin-resistant *Staphylococcus aureus* disease in three communities. *N Engl J Med*. 2005;352:1436-1444.
27. King MD, Humphrey BJ, Wang YF, et al. Emergence of community-acquired methicillin-resistant *Staphylococcus aureus* USA 300 clone as the predominant cause of skin and soft-tissue infections. *Ann Intern Med*. 2006;144:309-317.
28. Moran GJ, Krishnadasan A, Gorwitz RJ, et al. Methicillin-resistant *S. aureus* infections among patients in the emergency department. *N Engl J Med*. 2006;355:666-674.
29. Strategies for Clinical Management of MRSA in the Community: Summary of an Experts' Meeting Convened by the Centers for Disease Control and Prevention. 2006. Available at: [http://cdc.gov/ncidod/dhqp/pdf/ar/CAMRSA\\_ExpMtgStrategies.pdf](http://cdc.gov/ncidod/dhqp/pdf/ar/CAMRSA_ExpMtgStrategies.pdf). Accessed December 31, 2007.
30. Brady JM, Stemper ME, Weigel A, et al. Sporadic "transitional" community-associated methicillin-resistant *Staphylococcus aureus* strains from health care facilities in the United States. *J Clin Microbiol*. 2007;45:2654-2661.
31. Moore ZS, Jerris RC, Hilinski JA. High prevalence of inducible clindamycin resistance among *Staphylococcus aureus* isolates from patients with cystic fibrosis. *J Cyst Fibros*. 2007.
32. Moriarity R. Trimethoprim-sulfamethoxazole resistance in community-acquired methicillin resistant *staphylococcus aureus*. *Ann Emerg Med*. 2007;50:S57.
33. Miller LG, Perdreau-Remington F, Bayer AS, et al. Clinical and epidemiologic characteristics cannot distinguish community-associated methicillin-resistant *Staphylococcus aureus* infection from methicillin-susceptible *S. aureus* infection: a prospective investigation. *Clin Infect Dis*. 2007;44:471-482.
34. Meengs MR, Giles BK, Chisholm CD, et al. Hand washing frequency in an emergency department. *Ann Emerg Med*. 1994;23:1307-1312.
35. Dorsey ST, Cydulka RK, Emerman CL. Is handwashing teachable?: failure to improve handwashing behavior in an urban emergency department. *Acad Emerg Med*. 1996;3:360-365.
36. Larson EL, Albrecht S, O'Keefe M. Hand hygiene behavior in a pediatric emergency department and a pediatric intensive care unit: comparison of use of 2 dispenser systems. *Am J Crit Care*. 2005;14:304-1311; quiz 12.
37. Huang R, Mehta S, Weed D, et al. Methicillin-resistant *Staphylococcus aureus* survival on hospital fomites. *Infect Control Hosp Epidemiol*. 2006;27:1267-1269.
38. Jacobsen S. Seeking cure to staph's mystery: After firefighter dies, his wife asks: How could this happen? *Dallas Morning News*. November 18, 2007.
39. Tucker A. Spread of Rare Infection Sparks Concern. WTEN-TV Aug. 30, 2007.
40. Storch J, Jacoby JL, Heller M. Community-associated methicillin resistant *Staphylococcus aureus* in an emergency medicine resident: lessons learned. *Ann Emerg Med*. 2005;46:384-385.

# The Graying of America: The Impact of Aging Baby Boomers on Emergency Departments

by **ERIC BERGER**

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**E**mergency departments (EDs), already staggering under the load of boarded inpatients, unfunded federal mandates and the uninsured, have another challenge looming on the temporal horizon.

The leading edge baby boomers are entering their 60s and suffering all the attendant chronic illnesses and acute exacerbations that will land them in ever increasing numbers in the nation's beleaguered EDs. Senior citizens have different needs, and often place greater burdens on EDs than younger patients. The looming numbers crunch makes understanding the causes and planning for a potential doubling of elder visits to the ED by the

year 2013 all the more important, leading emergency physicians say.

The latest warning of this rising senior tide comes from an analysis of National Hospital Ambulatory Medical Care Survey data by George Washington University researchers Roberts, McKay and Shaffer.<sup>1</sup> Their work, published in this journal, found that visit rates for pre-boomer patients aged 65 to 74 years increased 34% between 1993 and 2003. The increase for blacks, up 93% to 77 visits per 100 population, was higher than that for whites, which rose 26% to 36 visits per 100.

The baby boom, roughly defined as births from 1946 to 1964, has yet to have its full impact. If the trends continue, the researchers say, the number of senior visitors to the ED could rise from 6.4 million to 11.7 million by 2013.

The effects on ED and hospital crowding, they write, "could be catastrophic," citing the urgent need for planning now. Officials at the American College of Emergency Physicians (ACEP) agree.

“As the study indicates, the number of visits by the elderly to the emergency department are expected to nearly double as few as 5 years from now—a truly alarming projection, given that emergency departments today are already pushed to the limit, with patients boarding in hallways, sometimes for days,” said Linda Lawrence, MD, ACEP’s president.

“We can’t wait until the system totally collapses to address the confluence of factors—including an aging baby boom population that is placing greater demands on the entire health care system, and shortages of doctors, nurses and inpatient beds—which combined are contributing to the burden being placed on the nation’s emergency departments.”

The new study makes a few tentative guesses as to why these trends—both the near doubling in blacks as well as the overall rise in senior use—may be occurring.

The racial differences, the authors say, may be due to differing disease rates. Furthermore, because more blacks than whites lack health insurance before the age of 65, they may have more severe illnesses later in life and require more ED visits. The authors do not believe race is a marker for socioeconomic status as the study population was largely insured.

As for the overall trend, McKay said the increase could reflect changing attitudes in the older population toward using the ED. The parents of today’s seniors might have been less willing to use the ED, she said, feeling that it was to be used only as a last resort, for example, if a bone were broken or a person was about to die. Today, the generation now becoming senior citizens seems to have a greater willingness to use the ED for a broader array of problems, she said.

“But I don’t think you can really get too deeply into that question in this data set,” said study co-author Mary Pat McKay, an associate professor in the Department of Emergency Medicine at the GWU Medical Center. “You have to ask older people, in a clinical study with real patients, to get at why they’re coming to the ED.”

## OLDER AND MORE ILL

The study authors were able to determine that the increase in senior citizen ED use was not due to frivolous visits. The admission rate per ED visit

remained constant during the decade-long study period, and the number of visits in which 3 or more medications were administered increased more rapidly than did visits with 0 to 2 medications administered. Despite some confusion about exactly why elderly usage has increased, the message for hospital administrators is the same, she said.

“Maybe it gives people some leverage with their system administrators, that it’s going to get worse faster than you thought,” McKay said. “Take your population aged 50 to 65, and do the math on who is moving up, and you can get some idea of the additional number of emergency department visits to expect.”

Interviews with emergency physicians and others who serve the geriatric population revealed other opinions about why seniors are coming to the ED more often.

Mark Langdorf, MD, chief of emergency medicine at University of California, Irvine Medical Center, said the widespread penetration of managed care probably contributes to the problem. In California, office physicians must typically treat patients within about 15 minutes for their practices to remain profitable. That’s barely enough time to treat a patient’s chronic conditions, let alone make a new diagnosis, Langdorf said. With their access to laboratories and other diagnostic equipment, EDs are becoming diagnosis centers for difficult cases.

That’s also true for patients in the growing number of nursing homes, where a physician may only make rounds once a month and can’t easily monitor changes in their patients’ status. As a result, when a problem arises, the common response is to send a patient to the ED for evaluation, Langdorf said.

## WHY THEY MAY DELAY

There are a lot of reasons that elderly patients on their own may delay care long enough that they can only be seen by emergency physicians, said Carmel Bitondo Dyer, MD, a geriatrician and director of the Geriatric Medicine Division at The University of Texas Medical School at Houston. She listed the following factors: many physicians now don’t take Medicare, making it difficult for an older patient to find a local doctor;

it is more difficult for a senior to travel to the doctor; or they may simply not recognize a symptom and unwittingly put off addressing a health care need until it is an emergency.

Also, as older patients take multiple medications, they are more prone to adverse drug events, which comprise about 20% of Medicare hospital admissions, Dyer said. As patients age they metabolize drugs differently, but their physicians may still prescribe the same dose as a younger adult, leading to complications.

Whatever the cause of the increasing numbers, the graying of the ED patient population will have profound and broad effects on hospitals. Lynne Grief, who holds a PhD in Nursing and directs Emergency Services at Sarasota Memorial Healthcare System in Sarasota, FL, can offer a glimpse into the future, “on the front lines” of the retirement Mecca, she said.

Previously she worked in Canada, where the average age of ED patients was 28. In her current environment, those digits might be reversed. Little things become a big deal when working regularly with older patients. A physician or nurse can simply hand a younger patient a gown and point them to a stretcher, and return in 5 minutes. That doesn’t work with older patients, she said. Asking simple questions can become difficult, too. Most adults can easily cite their medications, if any. A senior citizen might have a purse full of them.

“When the bulk of your patients are elderly, it’s just a lot more time consuming,” Grief said. “It’s definitely much more labor intensive.”

Studies such as one by Aminzadeh and Dalziel highlight the difference.<sup>2</sup> They not only require greater resources, but they have distinct care needs that often don’t fit easily within the disease- and episode-oriented models followed by most EDs. The authors suggested more research to determine effective screening and intervention strategies for elderly patients.

Another recent study, by George, Jell, and Todd,<sup>3</sup> reviewed the effect of an aging population on British EDs. Between 1990 and 2004 they found that the ED population aged 70 and older increased 198%, nearly 4 times faster than the

general population. Older patients occupied 9.8 times more emergency bed days than younger patients, and the overall rise in seniors contributed to a decline in ED performance, they concluded.

## HIGHER INDEX OF SUSPICION

Physicians generally must take more time with senior patients, said Matthew Lewin, MD, PhD, an assistant professor of emergency medicine at the University of California, San Francisco, because the consequences of a missed diagnosis are often higher. An emergency physician might think nothing of telling a younger patient with moderate stomach pain to come back if it gets worse. But an older patient could have a potentially catastrophic illness such as an ischemic bowel. Likewise, lower back pain could be nothing serious in a younger patient, but might be a gangrenous gall bladder in an older patient.

"If a patient with certain symptoms is younger there are fewer possibilities of what's going on inside them, and especially fewer catastrophic conditions," Lewin said. "But you're not going to be as risk tolerant in an elderly person. Serious diseases in the elderly tend to be more subtle, and symptoms aren't as accurately described or localized, so you're guessing more, and you need to order more tests to sort out the problem. So your resource utilization per patient is greater."

## ADMITTING THE PROBLEM

So if they're coming, and their needs are great, what can be done about it?

The first step, some policy experts say, is to recognize the full scope of the problem, and call attention to it.

"Emergency departments should not be relied upon as substitutes for primary care, but very often they are," said AARP Policy Director John Rother. "The trends underscore the need to make sure emergency departments can meet the demand for care by older people, but we also need a better understanding of why emergency room use by older people is on the rise and why these patients may not be getting care from their personal physicians. Our elected leaders should heed the warnings of this new survey and recognize that our health care system needs to deliver quality, affordable care in the most appropriate, cost-effective setting."

The problem hasn't always been recognized, even within the field of emergency medicine. The landmark Institute of Medicine report titled "The Future of Emergency Care in the United States Health System," published in 2006, was criticized by some emergency physicians for lacking a section devoted specifically to geriatric needs.

Now that the full scope of the problem is emerging, Lawrence, of ACEP, stressed the need for policy fixes. Congress, she said, should correct the flawed Medicare payment formula. Without it Medicare physician payments will be cut more than \$250 billion over the next 7 years, threatening the ability of physicians to care for the elderly and for EDs to remain open. Second, she noted that ACEP is calling for passage of the *Access to Emergency Medical Services Act of 2007* (H.R. 882/S. 1003), proposed legislation that would provide funding and other resources that hospitals and physicians will need to address the mounting challenges facing emergency care, including the escalating influx of elderly patients.

Yet the senior issue won't be solved with money alone, some experts say.

As elderly populations in EDs increase, physicians will need to change their policies. Dyer, the geriatrics specialist, said EDs will have to develop new protocols that recognize the way they handle older patients. Even discharges pose challenges. Elderly patients are more likely to arrive in an ambulance and may not have a ride home.

There remains time to prepare, but only a little, McKay said.

"I hope the powers that be begin to realize and act proactively about this problem," she said. "Essentially the issue of emergency department overcrowding is very predictably going to get worse, and it's going to get a lot worse quickly."

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## REFERENCES

1. Roberts DC, McKay M, Shaffer A. Increasing rates of emergency department visits for elderly patients in the United States, 1993 to 2003. *Ann Emerg Med*. 2008. In press.
2. Aminzadeh F, Dalziel WB. Older adults in the emergency department: A systematic review of patterns of use, adverse outcomes, and effectiveness of interventions. *Ann Emerg Med*. 2002;39:238-247.
3. George G, Jell C, Todd BS. Effect of population ageing on emergency department speed and efficiency: a historical perspective from a district general hospital in the UK. *Emerg Med J*. 2006;23:379-383.