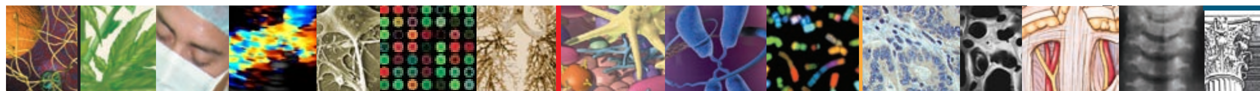

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Perspective
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Home Delivery — Bringing Primary Care to the Housebound Elderly

Susan Okie, M.D.

Nurse practitioner Gail Metcalf toted her medical bag up the steep stairway of a triple-decker house in Dorchester, a low-income neighborhood of Boston, and greeted her patient, Mrs. E, a Jamaican woman in her mid-80s. Mrs. E, who is legally blind and has chronic obstructive pulmonary disease, hypertension, neuropathy, a thoracic aneurysm, and other medical problems, sank into a lift chair and began describing her symptoms as Metcalf examined her. Her back ached and her arms burned, she said, especially at night: "That's the time when it really comes on. Sometimes, I feel life is leaving me."

Mrs. E's agitation during such episodes has often prompted family members to send her to the emergency room, where doctors, alarmed by her medical record, invariably order imaging tests. "I can't even count the number of CT scans she's had," Metcalf said. Recently, however, the nurse practitioner, who regularly visits 120 frail, elderly patients enrolled in House Calls, a program of Boston-based Urban Medical, concluded that Mrs. E's late-night attacks probably stemmed from her fear of death. She discussed her theory with the patient's sister, who proposed a solution: "When she tells me to call 911," she told Metcalf, "I'm going to read her the Bible." So far, that strategy has kept Mrs. E out of the emergency room, and thanks to home delivery of her medications, her chronic conditions remain well controlled.

House Calls, established in late 1999, provides ongoing primary care for more than 500 elderly or disabled Boston patients who can't get to the doctor's office, thereby reducing hospitalizations and emergency room visits and improving patients' quality of life. Metcalf, a calm and optimistic woman who has been doing home visits for 23 years, can expertly size up a situation and order the necessary supplies and services, from prefilled insulin syringes to special furniture to day care. Helping her patients continue to live at home as long as possible "is what gets me up in the morning," she said. "In doing this work, it's not the medicine that's the primary problem. It's the relationship building."

As baby boomers enter their 60s, their increasing medical needs (see graph) combined with a worsening shortage of primary care doctors are expected to fuel a crisis in health care for the elderly.[1] Already, many Americans

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Projected Increases in the Number of Americans 65 Years of Age or Older and in the Number of Noninstitutionalized Americans in This Age Group with Disability, 2000–2040.

Data on population are from the U.S. Census; data on disability are from the Institute of Medicine.[1]

report difficulty finding a primary care physician, and "care coordinators" — some with nursing or social work degrees and some without specific credentials — are advertising their services in states with large retiree populations. Between 2010 and 2030, the number of Americans 65 years of age or older is projected to almost double; people in this age group see their physicians and are hospitalized much more often than the rest of the population (see table). Meeting their medical needs is likely to require increasing reliance on midlevel providers (nurse practitioners and physician's assistants), as well as the use of multidisciplinary teams.

Urban Medical, founded in 1977, is a team-based practice specializing in primary care of the elderly and chronically ill; its staff — which currently includes 11 physicians and 16 midlevel providers — sees patients in rest homes, assisted living facilities, and nursing homes, as well as at home and in a medical office.[2] The average cost of primary care for a House Calls patient is approximately $150 per month, as compared with approximately $40 per month for patients seen in the office. However, an internal evaluation found that among 70 House Calls patients studied, hospital admission rates were reduced by 29% and hospital days by 34% during patients' first year in the program, as compared with the previous year. A detailed study of the program's net effect on health care spending is under way.

In late 2002, Duke University's Department of Community and Family Medicine established a similar program, Just for Us, staffed by a part-time physician and two physician's assistants, to serve several hundred housebound elderly residents of low-income or senior housing in Durham, North Carolina. A recent evaluation found that among Medicaid patients in the program, inpatient hospital expenditures during fiscal 2003–2004 were 68% lower than during the previous fiscal year, and emergency department expenditures were 41% lower; however, these and other hospital-related cost savings were more than offset by increased spending for prescription drugs, home health services, and especially services for the disabled, so that total spending increased by 23%.[3] Researchers are conducting further studies of the program's impact on enrollees' health and medical costs.

The reimbursement system makes it easier to design and test innovative programs like these in Medicare and Medicaid populations than in those covered by private insurers. However, new practice models that help to meet the mounting demand for primary care are likely to be replicated — particularly if they also reduce health care spending. JudyAnn Bigby, Massachusetts secretary of Health and Human Services, whose late father was a House Calls patient, argues that "we pay for things that people don't necessarily benefit from. If we were able to divert those expenditures to programs like this, it would be affordable, and I think it would save the entire system money while improving the quality of care."

Urban Medical was founded to test the theory that using nurse practitioners as partners with physicians to provide coordinated care for frail elderly or disabled patients could prevent unnecessary hospitalizations. The model worked, leading to changes in Massachusetts law to allow nurse practitioners to practice in settings where a physician is not physically present. But seeing patients where they live is less efficient than seeing them in an office, and its cost-effectiveness depends on their geographic concentration. Metcalf said she checks her messages each morning and first visits anyone who has called

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Use of Health Care Services by Noninstitutionalized Americans, According to Age Group, 2005.*

Variable	All Ages	65–74 Yr of Age	≥75 Yr of Age
No. of physician office visits per 100 persons	329	647	768
No. of emergency department visits per 100 persons	40	37	60
No. of days of hospital care per 100 persons	55.4	139.8	259.4
Average hospital length of stay (days)	4.8	5.3	5.7

* Data are from the Institute of Medicine.[1]

during the night to report an illness; then she sees others who live nearby, aiming to visit each of her patients about every 5 weeks. Although each nurse practitioner is paired with a physician, "most doctors and nurse practitioners don't go out on the same day," said nurse practitioner Shona Gibson. Doctors and nurse practitioners can communicate through e-mail, she said, "and we don't need to talk face-to-face."

Observing Gibson as she visited patients one morning, I saw examples of proactive care that may well have headed off the need for hospitalization. In an assisted-living facility, she discovered a tender paronychia on the toe of an elderly man with diabetes and instituted a regimen of warm soaks and antibiotic ointment. Concerned about a woman with dementia whose home health aide insisted she was "just not right," she sweet-talked an aide into helping her obtain a fresh urine sample for culture. In a nursing home, she checked on a retired pastor whose arthritis and early Alzheimer's disease had recently forced him and his family to acknowledge that he could no longer live independently. Gibson and coworkers had engineered a seamless transfer to the nursing home from his apartment at an assisted-living facility. "With a lot of people who are at home, it's not really a mystery why they're failing," Gibson said. "The normal thing would be to wait for something bad to happen and ship them to the emergency room. It's a lot more work to make that not happen."

Keeping the practice economically viable despite all that extra work has always involved getting grants and fund-raising, and managers said it is particularly challenging in the current fee-for-service environment. "Because of the level of chronic illness and frailty of our patients, one 20-minute visit generates 40 minutes of care coordination," said Emily DuHamel Brower, the group's chief operating officer. To compensate primary care providers for such work, which saves money for the health care system as a whole, experts such as Allan Goroll of Massachusetts General Hospital have proposed piloting a system of "risk-adjusted primary care capitation," in which a practice would be paid a specific amount for the care of each patient, with higher payments for those with multiple chronic illnesses.

One such experiment is already under way. The Senior Care Options (SCO) program is a health plan created under a Massachusetts demonstration project, open to state Medicaid recipients 65 years of age or older, most of whom are also covered by Medicare. Enrollees are placed in risk-adjusted categories, and Urban Medical, under a contract with one of the SCO payers, receives monthly capitated payments that are higher for sicker patients with more complicated conditions. It costs Urban Medical an estimated $370 per patient per month to deliver primary care to the highest-risk group, chronically ill elderly patients who are eligible for nursing home care but are still living at home. SCO's capitated payment covers that cost and also enables providers to pay for the services needed to keep the patient at home. "There's built-in payment for care coordination," said Brower. "The medical decision making is done by the medical team, as opposed to somebody in the insurance office."

Despite Urban Medical's reputation for innovation, recruiting new practitioners has gotten much harder in recent years. Fewer medical school graduates are entering primary care, and competition to hire general internists, family practitioners, and midlevel practitioners is fierce. But managers said the practice still attracts idealistic, commit-

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ted physicians. "It was founded by really visionary people," said Holly Norrod, a general internist who joined the group this past summer. She said recruitment advertisements she received from other practices focused on nearby recreational or cultural opportunities. Urban Medical's ad "really stuck out," said Norrod, "because it was the only one I got that said anything about taking care of people."

At Duke, faculty in the Department of Community and Family Medicine are using Just for Us and other community-based primary care programs as a way both to reach underserved patients and to teach residents and medical students how to practice as part of a multidisciplinary team. The patients in Just for Us have office-based primary care doctors but need frequent monitoring and can't easily get to medical appointments. "We think of ourselves as the outreach arm" for the patients' primary physicians, said J. Lloyd Michener, chairman of the Department of Community and Family Medicine. "A doc cannot do it all."

Michener said the program and various school- and neighborhood-based clinics are also used as educational settings for Duke's newly redesigned family medicine residency. "We can't tell if it's a reignited interest in family medicine or just the approach we have," he said, "but we have more applications to the program than we've had in the last 20 years."

A few years ago, resident Robin Ali agreed to become the primary physician for a panel of elderly members of Just for Us and soon realized that she loved the job. Now the program's part-time medical director, she hopes to combine patient care with research on health disparities. She said many of her students and residents are attracted to primary care but decide against it for financial reasons. "A lot of people have said, 'I'd love to do what you're doing, but how do you get paid?'" she said. "It is a sacrifice. But it's a fantastically rewarding experience."

No potential conflict of interest relevant to this article was reported.

Dr. Okie is a national correspondent for the *Journal*.

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Circumcision — A Surgical Strategy for HIV Prevention in Africa

Ingrid T. Katz, M.D., M.H.S., and Alexi A. Wright, M.D.

In a radical departure from earlier strategies, public health officials are now arguing that circumcision of men should be a key weapon in the fight against infection with the human immunodeficiency virus (HIV) in Africa. Recent studies have shown that circumcision reduces infection rates by 50 to 60% among heterosexual African men. Experts estimate that more than 3 million lives could be saved in sub-Saharan Africa alone if the procedure becomes widely used. But skeptics argue that efforts to "scale-up" circumcision programs on the continent that has the fewest physicians per capita may draw funds away from other necessary public health programs, ultimately threatening already tenuous health care systems.

How circumcision prevents HIV transmission is not completely understood, but scientists believe that the foreskin acts as a reservoir for HIV-containing secretions, increasing the contact time between the virus and target cells lining the foreskin's inner mucosa. Early evidence of circumcision's protective effect dates back to the late 1980s. Researchers working in Africa and Asia noticed that HIV-prevalence rates differed dramatically among neighboring regions and were often lowest in areas where circumcision was practiced. More than 40 observational studies followed, but most researchers

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