



## Perspective

### Why Health Care Is Going Home

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In Albuquerque, New Mexico, and Buffalo, New York,<sup>1</sup> acutely ill patients have been sent out of the emergency department for hospital-like care at home. In Baton Rouge, Louisiana, and Little Rock,

Arkansas, home health agencies provide chronic care management services, emphasizing care coordination and support for patients' management of their own conditions. In San Diego, California, physicians arrive at patients' homes with a new version of the black bag that includes a mobile x-ray machine and a device that can perform more than 20 laboratory tests at the point of care. Several engineering and electronics companies have developed products for monitoring health at home. Massachusetts General Hospital in Boston is experimenting with Internet videoconferencing to permit virtual visits from patients' homes.

In my Cleveland Clinic practice, I work in my patients' homes, using a cellular broadband connection to the same electronic record system used by my colleagues in offices and hospitals. I learn practical information about my patients' medications, management of chronic illnesses, and nutrition and check in on how their caregivers are coping. Patients often see the home visit as a gesture of caring, and many of my older patients express nostalgia for an era when house calls were common. Hundreds of other U.S. physicians are also emphasizing home-based care, many of them now as members of the American Academy of Home Care Physicians.

In the past century, health care became highly concentrated in hospitals, clinics, and other facilities. But I believe that the venue of care for the future is the patient's home, where clinicians can combine old-fashioned sensibilities and caring with the application of new technologies to respond to major demographic, epidemiologic, and health care trends. Five major forces are driving health care into the home: the aging of the U.S. population, epidemics of chronic diseases, technological advances, health care consumerism, and rapidly escalating health care costs.

First, by 2030, the number of people in the United States over 65 is expected to exceed 70 million. Many of these older adults will have limitations on their activities, including difficulty walking and transferring from bed to chair, that make leaving their

homes difficult. Bringing care to the home improves access for such people, especially those living in older homes with hard-to-negotiate entryways and those with limited resources for transportation. Older adults are particularly prone to complications of confinement in hospitals, such as delirium, skin conditions, and falls.<sup>2</sup> Treating people at home may be one way to avoid such complications. Older adults generally express a preference for being treated at home, and at the end of life, many say they would prefer to die at home.

Second, although the U.S. health care system has traditionally emphasized diagnosis and management of acute illness, epidemics of chronic diseases have recently begun receiving more attention. The so-called chronic illness imperative is closely related to the aging of the population, since nearly 90% of adults over the age of 65 years have at least one chronic condition, and nearly 70% have two or more coexisting conditions.<sup>3</sup> Care for patients with multiple chronic conditions accounts for the vast majority of Medicare expenditures.<sup>3</sup>

The Chronic Care Model is a well-studied approach to chronic care that is focused on supporting patients' management of their own care and tracking important variables electronically. Since patients manage their own diseases at home, teaching, support, and assessment of self-management are likely to be enhanced when professional care is provided there as well. There have been many advances in home-based tracking and monitoring technologies, including point-of-care testing devices and linkages with medical practices, which have

paved the way for increased importance of the home as a venue of care for chronic illness.

Patients with multiple chronic conditions or advanced chronic illness, in particular, often have mobility limitations that make it impractical to provide them with frequent, intense oversight in the office setting. The Independence at Home Act was included in the Affordable Care Act to empower home-based primary care teams to care for high-risk patients with multiple chronic conditions.



Since care for many patients with serious chronic illnesses must eventually shift from a curative approach to a primarily palliative approach, providing home-based hospice and palliative care can be an important way to support patients' comfort and independence at home at the end of life.

Third, advances in the miniaturization and portability of diagnostic technologies, information technologies, remote monitoring, and long-distance care have increased the viability of home-based care, even for patients with serious conditions. Aiding in this effort are other relevant technologies, such as those allowing users

of supplemental oxygen to fill portable tanks from a home-based concentrator and so-called smart-home concepts designed to enhance safety and independence for older adults. There will no doubt be further expansion of in-home diagnostic and therapeutic capabilities in the coming years.

Fourth, health care consumerism is pushing more care to more convenient locations. For example, some basic health care services are being provided in new on-site clinics at chain retail stores. There has also been growth in so-called concierge practices that offer in-home care as a luxury service. Patients and caregivers want convenience, privacy, and autonomy, and as care models are developed to bring high-quality care to the home through the front door, computer monitor, or mobile device, they may well win out over health care facilities.

Finally, our financing system, malpractice laws, and consumer culture all encourage utilization of costly services and have contributed to unsustainable increases in the cost of care. In-home care is often less costly, and since it is highly desirable for patients, it offers a potential win-win solution. For example, in-home services for rehabilitation after arthroplasty and the infusion of antibiotics or parenteral nutrition generally cost less than institutional care and can be equally effective.<sup>4,5</sup> Because facilities aggregate providers and services, they may also contribute to provider-induced demand for potentially unnecessary services. For example, in one study of a hospital-at-home approach, patients who received care at home had lower rates of consultations, procedures, and use of

devices than their hospitalized counterparts but had similar or better clinical outcomes.<sup>1</sup>

The transformation of patients' homes into central venues for health care may take years or decades, depending on how the national and institutional politics play out. New payment models are needed to cover services that haven't previously been offered at home and to realign physicians' incentives. The pace of growth of these in-home services will partially depend on the extent to which payment reforms are slowed by the self-preservation lobbying of traditional provider groups and inertia in financing bureaucracies, such as the federal Medicare program. Even as payment reforms materialize, it will take

time for a home-based workforce to be developed. More physicians, nurses, and other clinicians will need to familiarize themselves with aspects of in-home care that may not have been part of their formal training. Institutions may drag their feet because of lack of reimbursement and the fear that new in-home services could cannibalize existing core services. Such hesitancy might pay off in the short term, but ultimately, health care organizations that do not adapt to the home care imperative risk becoming irrelevant. It seems inevitable that health care is going home.

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