



Health care beyond medicine: Meeting the demand for new forms of care

By partnering with organizations from other industries and adopting some of their innovations, health systems could provide patients with new services despite their financial constraints.

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Ongoing economic turmoil has made it clear: even wealthy countries today must control or reduce their health care spending. Yet health systems must simultaneously respond to a second challenge: several current trends are significantly changing demand for care. Population aging, for example, is increasing the need for services that can help patients cope with serious medical conditions at home. Technological advances, including online banking, smartphone applications, and social networks, are altering patients' expectations about the availability of medical information and about how and where health services should be delivered. A growing number of people now view themselves as consumers of health care, not passive recipients of medical treatment; they want easier access to care and, often, a higher level of service.

These trends present not only a challenge to health systems, but an opportunity as well. If health systems continue to focus on delivering medical services only, they will find it difficult to escape their current bind, caught between soaring costs and budget cuts. Furthermore, the market characteristics that, at present, often cause conflicts of interest between health care budget holders, treatment decision makers, and patients will continue to prevail. We therefore propose an alternative approach that modifies current market characteristics to enable health systems to offer a broader array of services more closely matched to patient demand. We believe that this approach, which we call “health care beyond medicine,” can be delivered without the need for a significant increase in health care budgets. In fact, some of the new services could help health systems reduce costs without compromising care quality.

Our approach is conceptually similar to the type of *intra-sectoral* integration that many health systems are already using to improve care. These systems are encouraging different types of health

care providers, including primary care practitioners, hospitals, and rehabilitation centers, to work more closely together (e.g., by ensuring a seamless information flow among them). The providers do not have to merge, but they do have to collaborate to provide better patient care. “Health care beyond medicine” extends this type of integration into other industry sectors, including social services, retail sales, travel, communication, life insurance, electronics manufacturing, and software development. As the examples below demonstrate, innovators in these industries have developed (on their own or in tandem with health systems) a wide range of new health-related products and services, some of which consumers are willing to pay for out of pocket. By collaborating with these innovators, health systems could align these new offerings with the classical (reimbursed) medical services they traditionally have delivered. As a result, the systems could provide patients with added products and services despite their financial constraints.

We freely admit that our proposal for *inter-sectoral* integration will not be easy for many health systems to adopt. Many systems are still struggling to establish effective intra-sectoral integration, and inter-sectoral integration could well be harder to implement. For example, regulatory changes may be required before the approach can be adopted, and in many countries new incentives may be needed to encourage all stakeholders to participate. But “health care beyond medicine” could help health systems ensure that the populations they serve have access to the products and services they want and need. It could also create attractive growth opportunities for private companies, thereby increasing a country's GDP.

New health services for the elderly

By 2050, more than 2 billion people around the world will be age 60 and older — a 171 percent rise since 2009.¹ Research has repeatedly shown that

¹United Nations data on population aging and development, 2009.

Exhibit 1

Integration with social services helps reduce health care utilization

Change in hospital admissions for patients over age 65, from pre-project to project year (%)



Source: Lyon D et al. The Castlefields integrated care model: the evidence summarised. *J Integr Care*. 2006;14:7-12

most elderly people prefer to remain in their homes as long as possible, an approach that is much less costly for health systems than providing care in institutional settings. However, demographic changes are making it increasingly difficult for older patients to rely primarily on family and friends for their at-home needs. In many countries, the number of younger people has been dropping even as the elderly population has risen. As a result, most countries will soon face a significant gap in their ability to provide at-home care for the elderly.

A variety of innovative inter-sectoral services have been developed to address this problem. By helping the elderly maintain their independence, these services reduce hospital readmission rates and thus lower demand for hospital beds, which can translate to cost savings if health systems are permitted to scale down infrastructure. The services also reduce the need for nursing homes. Even more important, they improve patients' quality of life.

The health system in Castlefields, England, for example, has integrated medical care with social services for elderly and other high-risk patients. A

district nurse works in tandem with a social worker to identify and provide supportive care for such patients. The program has reduced hospital admissions among patients age 65 and older by 14 percent, and it has significantly lowered mean length of stay among those elderly patients for whom hospitalization cannot be avoided (Exhibit 1).² Malmö, Sweden, has similarly reduced mean length of stay by integrating medical care with other municipal services for frail, elderly patients.

In the United States, the Geisinger Health System has combined traditional medical services with both technological innovations provided by outside companies and customer-outreach methods commonly used in the service industry to improve outcomes in elderly patients and others with chronic conditions. Its ProvenHealth Navigator approach relies on electronic health records, an interactive voice-response surveillance system, and in-home monitoring devices to closely follow patients' health status. In addition, each patient is assigned a case manager (usually a nurse), who works with the patient's primary care physician to create a tailored intervention plan. Using these elements, Geisinger has reduced hospital admis-

²Lyon D et al. The Castlefields integrated care model: the evidence summarised. *J Integr Care*. 2006;14:7-12.

sions among enrolled patients by 18 percent, re-admissions by 36 percent, and total medical costs by 7 percent.³

Getting patients home from the hospital has been made easier by a new type of accident insurance offered by Allianz in Germany. The policies do not cover primary medical services (which are paid for by that country's mandatory health insurance), but they do pay for a wide range of other services: personal care, counseling, house cleaning, pet and garden care, help with shopping, care of other family members, and even cosmetic surgery related to the accident. This policy helps elderly patients regain independence after an accident and decreases their need to rely on family and friends (or the health system) for assistance. Although Germans must pay out of pocket for the policies, Allianz sold about 150,000 of them in the first year alone.⁴

Of course, some elderly people will eventually require institutional care, regardless of what home services are available to them. The Choice is a new US business that provides free information about nursing homes and assisted living facilities; it derives its income from referral fees paid by the institutions after a user of the service moves in. The Choice gives elderly people and their families greater insight into their options, thereby enabling them to make better decisions. Although The Choice has no effect on health system costs, it does provide an example of how a new and needed service can be delivered at no increase in those costs — and how a new business opportunity can be created in the process.

New health technology services

In most industries, the recent pace of technological advancement has been so rapid that many people are surprised to discover how little has changed in how most health services

are delivered. People accustomed to online banking, mobile phone payment options, HD (and now 3D) televisions, and cars with sophisticated electronic features find it difficult to understand why they cannot access their health records online or why technology is not being used more often to help them take care of themselves at home. The rapid spread of smartphones and social networks makes them wonder why the power of these devices and services is not being harnessed to improve people's health.

A few health systems, however, are partnering with private companies to use technological innovations to improve health care delivery. And some companies have moved forward on their own to develop devices geared directly to patients — devices that many health systems might find quite useful.

One of the areas currently under active investigation is the use of mobile devices to help patients take better care of themselves at home. As we have discussed, Geisinger is using such devices to help patients better manage chronic diseases. Similar e-health approaches are being tested in Italy, Spain, and other countries.

The largest health system currently using home e-health devices is the US Veterans Health Administration (VHA), which is utilizing them to provide better care for patients, especially those living in rural areas. In the past decade, the VHA has collaborated with multiple technology companies to conduct more than 50 pilot programs of telephone- and Internet-based devices. Not all of the devices tested by the VHA have proved effective, but the overall results have been promising.

For example, an analysis of outcomes among more than 17,000 patients showed that e-health devices reduced the need for hospitalization in a wide range of patients (Exhibit 2).⁵ Overall,

³Gilfillan RJ et al. Value and the medical home: Effects of transformed primary care. *Am J Manag Care*. 2010;16:607-614.

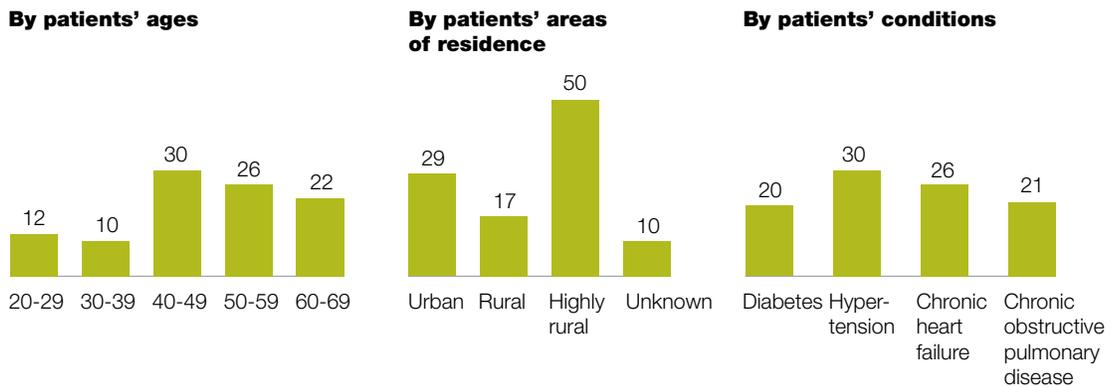
⁴Allianz website (<https://makler.allianz.de/wps/portal/tw/makler.allianz.de/sach/privat/unfall/index.html>).

⁵Darkins A et al. Care coordination/home telehealth: the systematic implementation of health informatics, home telehealth, and disease management to support the care of veteran patients with chronic conditions. *Telemed J E Health*. 2008;14:1118-1126.

Exhibit 2

The US Veterans Health Administration uses e-health devices to lower hospital utilization

Reduction in hospital utilization, from pre-project to project year (%)



Source: Darkins A et al. Care coordination/home telehealth: the systematic implementation of health informatics, home telehealth, and disease management to support the care of veteran patients with chronic conditions. *Telemed J E Health*. 2008;14:1118-1126

the devices lowered the hospital admission rate by almost 20 percent and the number of bed days needed by 25 percent. The VHA is now rolling out its e-health services to several million veterans across the United States.

A range of different e-health devices are currently available. Some of them can take blood pressure and blood glucose readings – even electrocardiographic tracings – remotely and then send results wirelessly to providers (on their own or through modems or smartphones). Others use GPS technology to check whether frail patients have fallen or dementia patients have wandered away. Some devices query patients about their health and enable them to input data from other monitoring equipment.

For example, the Health Buddy, one of the devices being used by the VHA, includes a light that flashes daily to remind patients to answer a series of condition-specific questions; it can also upload data from other equipment. If any

of the results exceed pre-defined limits, an alert is sent that intervention is needed; a case manager then contacts the patient. Physicians are able to review a log of their patients' daily results at any time via the Internet.

Other than the VHA, however, few health systems are using e-health devices extensively. In part, this reflects the current cost of most of the devices (which makes them uneconomical to use except in high-risk patients) and the legitimate need to assess their impact on health outcomes and overall costs. However, physician resistance has also slowed their uptake in some places, and reimbursement can be problematic because the devices do not fall within the bounds of traditional medical care.

Some innovative technology companies are trying to circumvent these issues by offering e-health services directly to patients, either through specific devices or as smartphone applications. These services help patients

monitor their health, maintain their own health records, and engage in preventive health efforts. One of the most intriguing new services is VueMe, an app designed to run on an iPhone, iPad, or iPod Touch. Unlike the recently shut-down Google Health and similar health record systems, VueMe does not require patients to laboriously enter information into a database. Instead, the service enables patients to upload their diagnostic images, including CT and PET scans, to an online server; the images can then be shared with health professionals anywhere in the world. The app and its image storage solution can be offered to patients very inexpensively because they take advantage of an online platform originally built to help medical professionals examine diagnostic images when not in their offices or hospitals. Both the patient app and the online platform are currently available only in the United States. However, they demonstrate an intriguing way through which a health system could offer patients a valuable new service at little cost to itself.

A large number of smartphone and social networking apps are also available to help patients exercise more, control their calorie (or alcohol) intake, reduce stress, quit smoking, and improve other health habits. Few, if any, of these apps have been proved as yet to improve health outcomes, and some of the patient education materials they include do not provide evidence-based advice. Nevertheless, the potential for benefit that smartphone and social networking apps offer is high, given their ease of use and low development costs.

Health systems should anticipate that an increasing number of people will want to take advantage of these services and thus should seek out ways to partner with technology companies to create them. By working with software developers, for example, health systems could improve the quality of information offered by the apps and

then deliver that information to patients inexpensively. By working with device manufacturers, they could help patients take better control of their health. In some cases, they might even lower costs in the process.

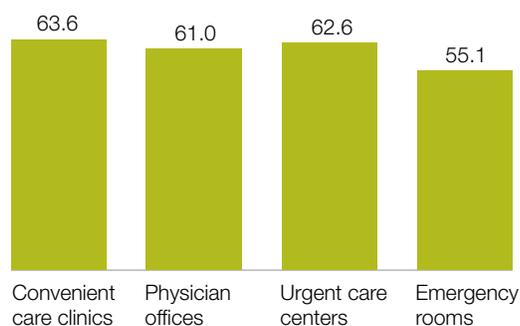
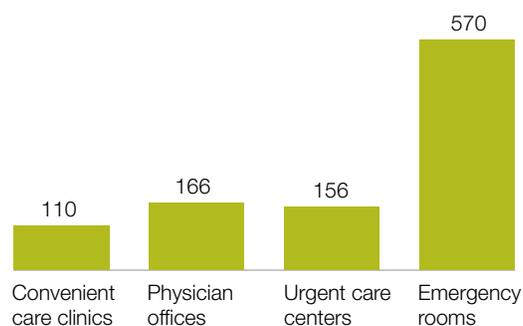
New consumer-oriented health services

As part of their efforts to control costs, many countries are imposing significant co-payments for health care or raising the co-payments already required. However, co-payments are not the only reason many patients are beginning to think of themselves as consumers. In developed countries and even in many developing ones, most people now take for granted the ability to get easy access to a wide range of consumer products and to select the level of service they are willing to pay for. They wonder why health care should be different — especially if they must pay part of the cost of care themselves.

A variety of innovative care delivery models have been developed in response to increased consumerism. Some focus on making health care more convenient; others differentiate themselves based on service levels (premium offerings for affluent patients willing to self-pay versus “no-frills” options for those seeking lower out-of-pocket payments). What many of these innovations share is the use of standardized processes and economies of scale to deliver good outcomes at reduced cost.

In the United States, for example, MinuteClinics and similar convenient care centers are changing the way many people receive routine primary care. These for-profit clinics operate in supermarkets and other retail environments, are open seven days a week, and rely on IT-supported protocols to ensure care quality. No appointments are needed, and patients typically wait no more than a few minutes. Although the clinics are staffed by nurse practitioners rather than physi-

Exhibit 3

Convenient care clinics offer comparable quality of care at lower cost**Aggregate quality score* (%)****Average cost per visit (\$)**

*Aggregate quality score was based on how often care delivered matched recommended care for 14 different quality indicators. Source: Mehrotra A et al. The cost and quality of care for three common illnesses at retail clinics as compared to other medical settings. *Ann Intern Med.* 2009;151:321-328

cians, the quality of care offered is comparable to that offered in traditional medical settings, but at considerably lower cost (Exhibit 3).⁶

The Singapore Medical Group has pushed the idea of convenient care delivery even further. Most of the company's medical centers, which are located in shopping malls, are staffed by physician employees and have long opening hours. However, the Singapore Medical Group offers patients a choice: they can receive no-frills services at comparatively low cost, or they can opt for more expensive premium services in a luxury setting. The company's success with this approach has encouraged it to expand internationally.

Patients' willingness to pay for premium services is also being tested at The Cradle, a new facility in Melbourne, Australia, that offers one-stop luxury maternity care for affluent mothers-to-be. Obstetricians, pediatricians, midwives, and other health professionals are available around the clock to maximize maternal and infant safety. During their delivery, women stay in private suites with the amenities offered by a five-star hotel, includ-

ing double beds, flat screen televisions, Internet access, and gourmet meals. However, the facility also has state-of-the-art equipment available on site to handle obstetric emergencies.

In some countries, entrepreneurs have managed to build completely new markets by integrating luxury services with health care. For example, Chinese women traditionally stay at home for one month after giving birth. The Shanghai-based CareBay Maternity Care Services now offers them an alternative: luxury post-partum care in a five-star hotel that includes on-site beauty and spa treatments as well as medical services, nannies, gym facilities, yoga classes, and nutritional counseling.

As these examples illustrate, health care has become an enticing business opportunity in many countries. But whether for-profit consumer-oriented services such as these can help hold down a health system's costs will vary, depending on how extensively the new services reduce patient volumes at nearby public facilities and, in particular, whether a health system is able to scale down its infrastructure as a consequence.

⁶Mehrotra A et al. The cost and quality of care for three common illnesses at retail clinics as compared to other medical settings. *Ann Intern Med.* 2009;151:321-328.

An interesting question for health systems to consider is whether it would be worthwhile for them to adopt some of these consumer-oriented services by partnering with private providers. By doing so, they could make care more accessible and give patients a choice about the type of services they receive. In some circumstances, these innovations might even enable a health system to increase revenues.

How to make it work

We freely admit that many health systems, especially those in developed countries, would find it difficult today to implement the types of inter-sectoral integration just discussed. That is not to say, however, that implementation is impossible.

The first hurdle health systems would have to overcome is determining how to evaluate the new services. Data-driven approaches are needed to test the new services, monitor the outcomes they achieve, and calculate their cost-effectiveness. No new idea should be adopted by a health system if it harms patients or drives up costs without providing a strong clinical advantage. In many countries, existing regulatory restrictions would have to be revised to expand the pool of providers that are permitted to provide certain services and to ensure that the new providers can be reimbursed for the services they deliver. Regulatory restrictions might also have to be revised to allow patients to self-pay for luxury services.

Another hurdle that may need to be overcome is restrictions on scaling back infrastructure. To take full advantage of potential cost savings from the introduction of new private or joint public-private services, public providers must be allowed to reduce their number of hospital beds, lower their staffing levels, and even close facilities.

A variety of new services are making it possible to provide care to patients cost-effectively at home

and reduce hospitalization rates. But unless a health system is capacity-constrained, the provision of these services will provide little economic benefit if hospital capacity is left unchanged – the hospitals will instead be left with a strong incentive to fill up the empty beds with new patients.

In addition, the incentives used when the new services are implemented must be thought through carefully. Although inter-sectoral integration is capable of generating a significant upside for a health system as a whole, it may not be economically attractive for all stakeholders within the system. Therefore, it is crucial that the health system establish specific incentives that distribute the benefits gained from inter-sectoral integration equitably among all stakeholders. The incentives could include adjusted reimbursement schemes, direct subsidies, and pilot projects directly run and governed by the regulator.



Patients' expectations are changing rapidly, and health systems must be prepared to respond. Not all of the innovations we describe may prove, in the long run, to be clinically valuable or economically viable. Some of them, though, have already been shown to improve outcomes while controlling costs. Health systems that are willing to consider inter-sectoral integration should find themselves better able to provide the services patients now want — despite their budget limitations. ○

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