Toward Facilitated Self-Service in Health Care

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A visitor from another planet observing earthly efforts to improve health care might conclude that experts in the United States believe that health care can be transformed using a combination of alternative payment systems, patient-centered care, and iPads. Each of these tools is appealing: alternative payment systems diverge from the fee-for-service systems that encourage overuse; patient-centered care means designing systems around customer needs, an approach that is largely new to medicine; and iPads reflect the digital transformation that has graced so many other industries and that would have seemingly obvious benefits for health care.

So far, however, these strategies have had limited success. Recent shared-savings programs involving insurers and providers have reduced spending by only about 1%,[1] and even these effects are delayed. Patients with high-deductible insurance plans reduce their spending but don't differentially select higher-value care, which suggests that savings won't persist.[2] Better patient accommodation is welcome, but it promises little in the way of improved efficiency and often involves the use of more personnel. Information technology is changing medicine, but electronic health records (EHRs) are mostly demonized by clinicians, and the promised customer efficiencies seen in the retail, financial, entertainment, and travel industries have been largely absent in health care.

These approaches will improve with time. It's worth noting, however, that the transformations seen in other industries have followed a different path. In these cases, aligned financial incentives, better customer centricity, and technology have been motivating and enabling forces for change, but the transformations themselves came from operational changes that enhanced productivity — mostly by finding ways to use fewer people.

The movement from bank tellers to automated teller machines to cashless digital transactions has reduced effort all around. Because of easy-to-use software, fewer people now use travel agents. Yet despite increased use of EHRs by clinicians and smartphones and wireless technology by patients, the fundamental approaches to managing hypertension, diabetes, and chronic lung disease have remained the same for 50 years. The drugs are better, but the way patients engage with doctors during office visits and hospital stays is unchanged.

The physician–patient encounter is health care's choke point. So long as we continue to think of health care as a service that happens when patients connect with doctors,[3] we shackle ourselves to a system in which increased patient needs must be met with more doctors. Other industries overcame similar constraints in various ways — McDonald's pioneered a production-line approach to fast food, for example — but more recent transformations have come from facilitated self-service. Taxpayers abandoned tax preparers when TurboTax created a new pathway to what they wanted. Until we invent the TurboTax of health care, we won't achieve the kind of productivity gains needed for transformative change in quality, access, or cost.

Facilitated self-service means consumers can handle most of their needs without help, but some needs require a higher level of service. Most travel arrangements are easily made online, but occasionally you need to call the airline. Your tax-preparation software does nearly everything, but some questions require the online-chat feature or, in a real jam, an accountant. These processes reflect baseline automation with exception management.

In health care, even the first line of support is often expensive, such as an appointment with a primary care physician for a common medical problem. Indeed, many experts continue to believe that health care transformation requires getting more patients — and more physicians — into primary care. But physicians are the most expensive way of delivering primary care services, so perpetuating these approaches seems more nostalgic than innovative. Clinical pathways for common medical conditions aim to make care algorithmic — so it isn't science fiction to suggest that hypertension could be managed using a bot, with a nurse available for second-line support and a primary care physician serving as the third line. An efficient industry wouldn't lead with primary care, but would reserve it for cases for which lower levels of support haven't been enough.[4] Change

in other industries has typically started with lower-complexity services and gradually been applied to more complex services. The same considerations apply to specialty care.

What would it take to get to a point at which most of the ways we obtain health care today were shifted one or two places into the background? On a small scale, these transformations are already happening. Patient portals support prescription-refill services, clinician scheduling, and other largely administrative functions, although the extent of cost-reducing automation behind these tools varies. The "automation" in more clinical services comes largely from transferring care responsibilities from physicians to less-expensive staff — but to ensure insurance reimbursement, care still occurs in doctors' offices. The resulting efficiency gains are therefore limited and are mostly captured by clinicians.

Because so much care is or can be algorithmic, hypertension, hyperlipidemia, anticoagulation, diabetes, and other common problems might be far more efficiently managed by a bot than by individual clinicians whose practices often deviate from guidelines. Creating the rules for basic care and the handling of exceptions doesn't seem hard, but making such approaches acceptable to patients and clinicians is essential. Our sense is that creating driverless cars is a more challenging problem facing less resistance. Indeed, the challenges facing facilitated self-service are likely to be less technical than socially constructed.

First, we would need to abandon legacy payment systems based on how and where care is delivered. These systems persist despite shifts toward value-based payment because they are seen as essential to preventing overutilization. By design, they obstruct efforts to make health care easier on patients or clinicians. Services such as telemedicine are seen as too easy for customers to use, and to prevent runaway utilization, payers typically make payment conditions harder to meet. The same would probably be true of facilitated self-service. Such obstructions ration care by inconvenience,[5] and they will persist until insurers develop alternative approaches to preventing overutilization.

Our sense is that the challenges facing facilitated self-service in health care are likely to be less technical than socially constructed.

We have observed that retinal screening rates among patients with diabetes are greatly improved by using nearly self-service nonmydriatic cameras that can quickly image retinas instead of burdensome in-chair examinations and pupil dilation. But because the former is reimbursed at $16 and the latter at more than 10 times that rate, an available technology that makes high-value care easier will not take hold, and others might not be developed. Ironically, retinal exams are unlikely to be overused, and so they represent an instance in which payment incentives designed to combat overuse have been misapplied to situations in which the problem is underuse.

Second, we would need to move past state-based regulation of licensure and insurance. Such policies made sense under federalist principles and when health care was defined by face-to-face encounters. Once health care is untethered from in-person contact, efficiencies would be generated by interstate commerce. There is no legitimate interest that benefits from making it hard for a patient in Kansas to get automated care with third-level support from a physician in Ohio.

Third, we would need to expand the regulatory expertise, processes, and capacity for ensuring that self-service approaches to health care meet the safety and effectiveness standards we expect for drugs, devices, clinicians, and organizations. Existing opportunities justify considerable investment in these approaches. Hypertension alone affects one third of U.S. adults. Facilitated self-service would offer enormous benefit if it could simplify care management for even a small fraction of this group. But the population risks and benefits depend on whether automated approaches are evaluated well and quickly.

It's easy to feel deflated by the challenges ahead. Seemingly simpler organizational changes are hard enough. But transformative change in any industry requires breakthroughs in productivity — replacing encounters with accountants, travel agents, or bank tellers with the operational capac-

ity to support facilitated self-service. Productivity change seems unlikely if health care must squeeze through one-on-one encounters between patients and doctors. Value-based payment systems, customer centricity, and more strategic use of information technology are essential tools for change, but they won't enable transformation until they move past facilitating care with a doctor and move toward facilitating care without one.

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