Organizational Innovation in Health Care

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There is tremendous anxiety within provider systems about the need to develop new models for health care delivery. The fiscal outlook in Washington promises escalating cuts to Medicare, Medicaid, and the National Institutes of Health; and both health care reform and global economic pressures will cause imminent changes in the private health insurance market. It is clear that business strategies and revenue sources that made provider organizations successful in previous market environments are unlikely to lead to future success.

The need to respond to market change is the norm in business. What is abnormal for the health sector is that providers have relied on settled business models for such an extended period. Care remains administered through in-person visits in expensive facilities, professional training adheres to traditional paradigms, and centers for care remain entombed in legacy buildings. In addition, providers continue to rely on obsolete fee-for-service revenue streams from third-party payers that impose little fiscal discipline. The sustainability of these organizational structures is questionable, yet they have persisted throughout periods in which other industries have undergone deep reorganization.

The health sector's relative stability, or ossification, has meant it has avoided what the business literature describes as organizational innovation—transformations in how firms create and deliver goods and services. Organizational innovation can be unsettling, but firms that successfully pursue new organizational strategies are able to achieve significant advantages in cost and quality over time.

Lost Potential From Organizational Innovation in Health Care

Much of America's most dramatic innovation—from mainframes to laptops, from inperson to online banking, from land lines to cell phones—has involved structural reorganizations within firms and across industries that enabled the introduction of more affordable, higher-quality products and services. While many of these innovations involve new technologies, business scholarship shows that new organizational models are central in unleashing the potential from those technologies. Organizational innovation, perhaps even more than technological innovation, has been the force behind dramatic cost reductions and value creation. Since cost reduction and quality improvement are the holy grail of health care reform, scholars are now promoting—with growing urgency—organizational innovation as a key component of health policy. 5-7

Precisely because health care delivery has changed so little over the decades, it offers a screaming opportunity for organizational innovation. Tragically, too much of the health reform debate focuses on the variable costs of individual units of service, rather than revisiting the fixed costs inherited from outdated business models. For example, even though most health care is delivered on an outpatient basis, health care services often revolve around hospitals and hospital management teams. Rather than rethinking how to deliver outpatient care independently or devising mechanisms in which these organizational forms will compete, debate surrounding the Patient Protection and Affordable Care Act (PPACA) was instead directed at joining outpatient services with hospital systems. In this context, primary care services are seen as a means of capturing patients for a hospital rather than as a means of keeping patients out of the hospital. Likewise, rather than embrace new communications technology as a means to improve care, feefor-service medicine often treats patient connectivity as a threat to the core business.

The lack of organizational innovation in health care does not stem from a lack of individual imagination. Entrepreneurial physicians and nonphysicians alike have many ideas that could fuel this desperate need to reorganize health care delivery. To illustrate, we recently asked

executive students in our health sector management courses to identify opportunities for organizational innovations that would provide high-quality health services at lower costs. Drawing on their experience here and abroad, they suggested a staggering array of high-potential, ready-to-implement proposals: Using hotel services to coordinate care for patients with chronic illness; electronic monitoring that would reduce the need for in-hospital stays; data aggregation intermediaries to manage patient data and promote clinical guidelines; online health information services by information technology firms that can overcome 60 years of failed efforts to create integrated medical records; partnerships between device manufacturers and health care providers; and creative accountable care organizations in which health care purchasers—especially insurers—can use foreign and domestic providers to build networks of high-quality, low-cost services. These innovations are feasible as either start-up ventures or as new business opportunities for incumbent firms, and they are available to both health sector firms and firms operating in adjacent industries ranging from information technology to retail.

With such an abundance of entrepreneurial ideas for reducing costs and improving quality—and offering rewards to innovators and innovative firms—why are these transformative ideas failing to revolutionize U.S. health care? This is the essential dilemma for provider organizations in the United States.

Coping With Natural Barriers to Organizational Innovation

As a general matter, mature firms resist change. As firms develop, they build information filters that facilitate productive business practices but typically reduce maneuverability. ⁴ A firm's existing design supports current operations and revenue sources, and managers whose responsibilities and careers depend on sustaining current revenues resist efforts that threaten these core business processes. Even when management recognizes the need for change, managers struggle with institutions and behaviors that sustain the life of the current business model even when these actions cripple the ability for a new business model to take hold.

Because truly innovative ideas—such as those suggested by our students—require new organizational designs, they would require a significant remodeling of incumbent organizations. For example, capitalizing on dramatic innovations often requires implementing new reporting structures, new research-and-development processes, new incentive systems, new marketing mechanisms, and new performance metrics. Oftentimes it also requires new capital, either as an investment or for transformation of existing business processes. Established firms have difficulty breaking their routines and implementing these unfamiliar organizational designs, and financial managers similarly are resistant to building new infrastructure that they think is duplicative or that threatens the core business model.

For these reasons, new organizational forms are generally introduced by industry entrants, rather than incumbents. In what has been called the "attacker's advantage," scholars have observed that when technologies require new organizational forms, even when the underlying technologies are well-known and widely available, young developing firms are able to capture the emerging market better than their larger, better-endowed competitors. For example, established U.S. steel companies missed opportunities that newcomers such as Nucor and Chaparral Steel seized with very different organizational strategies. Apple's MP3 business model with iTunes transformed the music business in a way that eluded established firms in the music industry. Entrants pose challenges that either force established firms to undertake major organizational changes in order to compete or serve to replace them in the market.

Famously, some legacy firms have shown the capacity to develop new organizational forms and maintain industry leadership by transforming themselves. IBM, for example, was able to develop the PC even while its then-profitable mainframe business proved unable to produce an affordable and marketable PC. Similarly, Motorola developed advanced cellular technology despite being leaders of bulkier 400 MHz products in the 1970s, and Hewlett-Packard famously developed the ink jet printer as a competitor to its laser jet technology.

These success stories reveal a menu of business strategies that can enable a firm to pursue organizational innovation. The first approach is to build dedicated new product development efforts, such as innovation groups or skunk works. These groups often have different reporting structures and different investment time horizons than operational business units. A second approach is corporate venture capital, through which firms "prospect" for new business models or explore the implementation of new technology. Acquisition and partnerships offers a third model for organizational innovation. These strategies offer a firm the opportunity to acquire new business models and new organizational competencies. A fourth approach has firms use their organizational structure strategically, to use organizational redesign to deliberately create new business units around new products or services. Finally, restructuring allows fundamental changes in organizational relationships and structure, including enabling new asset allocation schemes, introducing new business models and business processes, and eliminating underperforming business units. In the most extreme cases, restructuring may involve formal bankruptcy proceedings to address unsustainable financial or contractual obligations, as was the case with American Airlines and General Motors.

Ultimately, organizational innovation is a process of creative destruction, eliminating legacy business models that are no longer viable and building new business structures for a new market environment.

Health Sector Exceptionalism

For a variety of reasons, health care organizations are more resistant to change than other technology-sensitive industries. Accordingly, health providers have particular difficulty implementing the normally painful changes that have transformed other industries.

Historically, one obvious barrier to organizational innovation is the central role played by medical professionals in the health care system. Because physicians and other specialists must adhere to professional standards and guidelines, professional conduct is naturally constrained toward conventions. Deviations from customary practices can encounter deep skepticism. Professionals also adhere to insular occupational cultures that make members attentive to professional colleagues but resistant to influence from outsiders. Predictably, physicians have been quick to accept and pursue certain innovations—like new drug regimens or medical devices—that are developed by fellow physicians yet do not require significant changes in work routines. While this culture has shaped the practice of medicine, the organizational structure of medical practice is more fluid, with a dramatic shift to an employed physician model in recent years.

Another barrier is the health sector's regulatory environment that both limits entry by new actors and constrains the possibilities of new business models. Regulatory barriers that deter organizational transformation span virtually all areas of the law and can preclude the organizational diversity and competitive pressure necessary to spur sources of innovation. These regulatory barriers include health and safety requirements which bar unproven and unfamiliar services; licensure and accreditation systems that only permit familiar services and structures

into the marketplace; and state certificate-of-need regulations, which bar new entrants altogether, such as specialty hospitals that might introduce innovative business models.

Even well-informed regulators can have difficulty envisioning the impact of regulations on the market environment. Moreover, incumbents often use these regulatory debates to build barriers around current business models in the name of quality or safety. Thus, the heavily regulated structure of health care often precludes entry of the most innovative business models, start-up firms which may lack the resources or access to navigate this challenging regulatory landscape. Regulations may also preclude investment by established firms concerned about the impact of the regulatory environment on investment timing and return due to uncertainty in the regulatory pathway.

Formal regulatory structures are not the only administrative barriers to organizational change. Common law malpractice standards, which typically require all practices deemed "medically necessary," can preclude innovative delivery that offers alternative forms of care. Insurance mandates, including state "any willing provider" regulations and the PPACA's "essential health benefits" and maximum out-of-pocket limits can ensure steady reimbursement to high-cost providers that offer little or no quality advantage over lower-cost alternatives. And federal Medicare reimbursement rules promise repayment for established medical services while casting revenue uncertainty over unfamiliar practices. Moreover, well-meaning public and philanthropic efforts inadvertently protect high-cost and failing business models, thereby insulating providers from pressures to transform.

Telemedicine is a stark example of a potentially transformative technology in the health sector that has repeatedly encountered regulatory barriers. Verizon recently announced an intent to use its telecommunications network to connect providers to patients in underserved regions, but the company quickly learned that multiple laws impede this potentially disruptive innovation. State licensure and certification requirements prevent providers in one state from providing advice to patients in another. Malpractice laws impose definitions of physician-patient encounters that presuppose in-person visits, and federal reimbursement rules are based on service concepts that depend on location and customary practice standards. Comprehensive reforms to both state and federal laws appear to be a prerequisite to unleashing telemedicine's disruptive potential.

Despite these enormous obstacles, the health sector has nonetheless seen some cases of organizational innovation. One example is the "Minute Clinic" that CVS created within its pharmacies, which offer an alternative way of organizing delivery and expanding access to certain primary care services at affordable prices. ¹⁰ Other examples in health care include free-standing ambulatory surgery centers or freestanding urgent care centers. However, these last two innovations often come with significant organizational overhead if they are sponsored by or acquired by hospitals.

Given the enormity of the changes required for provider organizations to remain competitive, both industry and regulatory barriers must be pierced to achieve the destructive creativity the health sector so sorely needs. Successful firms will be defined by their senior leadership's ability to adopt transformative business models and initiate transformational business processes. Managers of health care organizations will need to engage personnel throughout the organization across clinical and non-clinical management structures and pierce traditional paradigms. More broadly, policymakers need to reconceptualize the regulation of the health care understanding the need to foster organizational innovation and organizational change

through changes in regulatory approach and enforcement, or through the generous adoption of safe harbors fto allow the introductions of novel business models by innovators.

Challenges Ahead

In sum, the looming fiscal pressures on the health care industry will catalyze the search for organizational innovation in the health sector. Capitalizing on the potential for organizational innovation as a solution to the cost and quality problems within health care will require both creative energies from the private sector and policy reforms to support that energy.

First, policymakers need to recognize how state and federal laws impede potentially valuable innovations to healthcare delivery. In recognizing that competition for healthcare services is becoming increasingly national, Congress might consider imposing federal standards on rules that currently vary state-by-state. In addition, policymakers should try to use public institutions to foster and encourage organizational change. In this sense, certain elements of PPACA present extraordinary opportunities to revisit old paradigms and experiment with new organizational forms. For example, the PPACA's encouragement of accountable care organizations (ACOs) might offer possibilities for organizational reform. Rather than emphasize hospital-centered solutions that rely on "bricks and mortar" vertical integration, which is arguably obsolete due to advances in information technology, ACOs could spur providers to build advanced care delivery concepts around multispecialty physician practices or independent physician associations. Such arrangements could lower overhead costs and build upon technology trends in this era of ambulatory care and consumerism. Regulators have an additional opportunity in PPACA's establishing the Center for Medicare and Medicaid Innovation (CMMI), which could experiment with changes in federal policies, cajole state regulatory changes, and incentivize firms to undertake experiments that both reduce costs and increase quality while divesting obsolete management structures. CMMI can promote regulatory safe harbors for organizational change, or even provide funds for organizational restructuring.

Second, despite professional and industrial resistance to change, healthcare leaders must play a meaningful role in introducing new business models. Organizational innovation is a survival strategy that could enable visionary leaders to adapt in response to an imminently changing market environment. Challenging traditional paradigms and discarding outmoded concepts is usually a painful process, and many "sacred cows" within organization leadership, structure, and institutional power will have to be abandoned in order to bring about new business models, reduce overhead and legacy costs within firms, and establish new value propositions for patients. Further, many firms that attempt such a transformation are likely to fail given their lack of skill in navigating this type of change. Nonetheless, these firms most likely will fail if they refuse to prepare themselves for coming market environment in health care, and healthcare providers with charismatic leaders and skilled management that develop new organizational forms have the greatest chance to navigate their institutions through difficult change will be positioned to prosper in the years to come.

And finally, educational institutions need to reconceptualize the primary skills they impress upon their graduates. Medical schools should train their students not just to be technocratic scientists but creative innovators who can profit from bringing efficiencies to the health delivery system. Business schools, rather than imparting traditional financing models or well-worn business plans, need to train health sector managers who can navigate uncertainty, engage in high risk-reward enterprises, and foster innovative processes. And policy schools need to press beyond standard principles of regulatory economics and instead encourage future

policymakers to be partners in change. Because a combination of regulatory, professional, and industry forces are responsible for the health sector's stagnancy, cooperation among regulators, professionals, and industry leaders will be required to offer the nation the best chance for unleashing an innovative health care marketplace.

References

- Patient Protection and Affordable Care Act §3022 and §10307, Pub. L. No. 111-148, 124
 Stat. 119.
- 2. Macher JT, Richman BD. Organisational responses to discontinuous innovation: a case study approach. International Journal of Innovation Management 2004;8:87-114.
- Karim, S, Mitchell W. Path-dependent and path-breaking change: Reconfiguring business resources following acquisitions in the U.S. medical sector, 1978-1995, Strategic Management Journal, Special Issue on the Evolution of Business Capabilities 2000;21:1061-81.
- 4. Christensen CM. The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail. Boston, Mass.: Harvard Business School Press, 1997.
- 5. Porter ME, Teisberg EO. Redefining Health Care: Creating Value-Based Competition on Results. Boston, Mass.: Harvard Business School Press, 2006.
- 6. Herzlinger RE. Consumer-Driven Health Care: Implications for Providers, Payers, and Policy-Makers. San Francisco, Calif.: Jossey-Bass, 2004.
- 7. Kidder T. The Soul of a New Machine. Thorndike, Me.: Thordike Press, 1981.
- 8. Capron L, Mitchell W. Build, Borrow, or Buy: Solving the Growth Dilemma. Boston,
 Mass.: Harvard Business Review, 2012.
- 9. Curtis LH, Schulman KA. Overregulation of health care: musings on disruptive innovation theory. Law Contemp Probl 2006;69:195-206.
- Poulsen G. Improving Quality, Lowering Costs: The Role of Health Care Delivery System Reform. http://www.help.senate.gov/imo/media/doc/Poulsen.pdf. Accessed February 28, 2012.