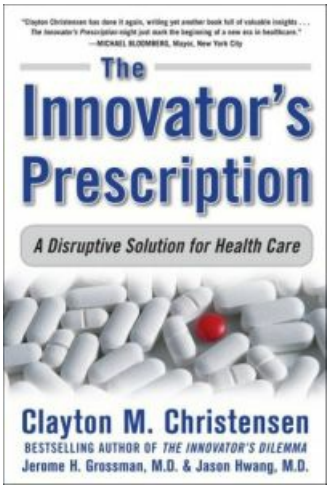

Book The Innovator's Prescription

A Disruptive Solution for Health Care

Clayton M. Christensen, Jerome H. Grossman and Jason Hwang
McGraw-Hill, 2008

Recommendation

Political fights over health care reform have generated countless pages of editorials, commentaries and polemics, and hundreds of hours of television and radio programming. However, the onslaught has included depressingly few carefully considered, thoughtfully presented proposals for holistic reform of the health care system. This book by Clayton M. Christensen, Jerome H. Grossman and Jason Hwang is one of a very small number to transcend agitprop and offer an intelligent way forward. Its thesis is that in the natural course of economic progress many changes will happen inevitably in the health care industry. The book explains that health care is not fundamentally dissimilar to other industries where "disruptive innovation" has brought efficiency, economy and quality. Since the health care industry is likely to follow, for example, the path of the computer industry, *BooksInShort* suggests this book as a must-read for health care professionals, policy makers and anyone with an interest in the future of the field. Perhaps these ideas – or even the thinking provoked by disagreeing with some of them – could help shape a robust solution to a vexing global problem, if that solution survives the legislative process (evoking the old saying that you should never watch laws or sausages being made – alas, it's too late for that).

Take-Aways

- Providing inexpensive health care is a complex challenge in the U.S. and worldwide.
- "Disruptive innovation" transformed the auto and computer industries, making their products affordable to the masses. Now, it has the power to overhaul health care, too.
- A disruptive innovation leads an industry in an entirely new direction.
- Initially, a disruptive product is not as good as existing products, but is good enough for many users and much more economical, and it improves over time.
- Disruption will come through new business models, technologies and value networks.
- Attention to business models is the first indispensable step to health care reform. The field needs a more economical business model that still achieves high quality.
- New business models where doctors delegate routine work to lesser paid technicians have the potential to create savings for the entire industry.
- Technology-based "precision medicine" must replace "intuitive medicine," which relies on a physician's experience and ability to recognize patterns of symptoms.
- A new value network of collaborative, integrated enterprises should replace the existing health care system.
- Integrating medicine saves money if providers can lower costs and maintain quality.

Summary

Health Care Crisis

Health care has more than doubled as a share of America's gross domestic product (GDP), rising from 7% in 1970 to 16% in 2007. Spending on health care has outstripped increases in overall spending by almost three percentage points. Health care is unaffordable to many Americans. Medicare expenses may overwhelm the federal budget in two decades. American businesses are losing competitive ground globally because they must shoulder health care costs. If municipal governments had to report their health care liabilities, their financial statements would clearly show them to be underwater. This is not simply an American problem. Other countries, such as Canada and the U.K., are facing health-cost related budget crises. Developing countries are in even worse shape.

> "Health care is a terminal illness for America's governments and businesses."

In America, "fee-for-service reimbursement" is a fundamental driver of the health care cost predicament. Health care providers get paid when they supply products and services. In this scenario, suppliers drive demand. Approximately half of health care spending is a result of supply push, not demand pull. Most approaches to reform focus on improving parts of today's system, but very few individuals or organizations have the authority to overhaul any of its elements. The way forward is not to help hospitals do a better job of being what they are, but to change what they are.

Precedents

The problems in health care have precedents in other industries. Telephones, cameras, planes, cars, investment management and college tuition were all once costly luxuries affordable only to the very wealthy. Computers existed exclusively in research institutions and in the data-processing centers of deep-pocketed corporations. Moreover, all these products required operators who had extensive training and specialized expertise.

> "In areas where an integrated fixed-fee provider aggressively uses disruptive business models to provide better care at lower cost, they will prosper, and overall health care costs will drop without a compromise in quality or convenience of care."

If you compare health care to these industries, it looks very similar. Most people can afford quality health care only with government or corporate support. Providing quality health care requires professional "operators" called doctors, whose training is lengthy, costly and specialized. Why is it that telephones, computers and other products that used to be expensive and rare are now cheap and ubiquitous? "Disruptive innovation." This pattern has three elements:

1. Technology that simplifies, standardizes and structures solutions.
2. Business models that deliver simple solutions affordably, accessibly and profitably.
3. A value network of companies that reinforce each other and form the infrastructure.

> "The solution to the cost problem in hospitals...is not efficiency within that business model."

In the computer industry, for example, the know-how to design and operate mainframe computers was rare and costly in 1970. The manufacturing and marketing overhead burden was so great that companies required fat gross margins – on the order of 60% – just to stay in business. Then new technology – the microprocessor – made cheap personal computers possible. However, without the right business model, the technology might not have made any headway. Digital Equipment Corporation (DEC) tried to use its existing business model as a vehicle for personal computers, but its approach was uneconomical for products costing less than $50,000. IBM pioneered a new business model in Florida, geographically and commercially remote from its pre-existing operations, allowing it to run with "low margins, low overhead costs and high unit volumes." IBM succeeded where DEC failed. A new value network emerged to provide the infrastructure that the personal computing industry needed. It replaced the old computer industry's supply chains and distribution networks.

Disruptive Innovation in Health Care

Can something similar happen in health care? Most assuredly. The health care industry is amenable to disruptive innovation because the technologies, business models and potential value networks capable of driving that innovation are already in place.

> "Significant improvement will come only through the creation of fundamentally focused business models that...are highly disruptive to the present profit formulas of general hospitals."

Old-fashioned medicine relied on the intuition of costly specialists who had extensive training and lengthy experience, enabling them to recognize patterns and intuitively arrive at diagnoses. However, new technologies now make it possible to pinpoint the causes of a disease through imaging, molecular biology and other diagnostic approaches, thus replacing "intuitive medicine" with "precision medicine." In the past, treating diseases was a more profitable business for pharmaceutical companies and health care providers than diagnosing them. In the future, that could very well change. Diagnostics probably will come to the fore.

> "If today's hospitals set up focused hospitals to disrupt themselves...the evolution can be profitable rather than painful, because the holding company can realize the systemic benefits."

Some of the new machinery that enables high-quality, low-cost health care already exists, but health care remains costly and, for many, inaccessible. The reason: anachronistic business models. The hospitals' and doctors' fee-for-service business model dates from the 19th century, long before diagnostic imaging and biochemical testing became matters of routine. Protective regulatory barriers erected since that time have blocked innovation in health care business models. For example, the physicians' trade associations determine who will receive licenses to practice medicine, and then the government reimburses care only when the doctors who dispense it have those licenses. Physicians have little incentive to hand off their routine work to less trained, less well-paid practitioners, because the physicians benefit financially only when they do the work themselves. But if, for example, with the help of new technology, less-costly technicians could perform much of the work that once required doctors, the system could save money with new business models that encourage such handoffs. Business models come in three varieties:

1. **"Solution shops"** – In this model, buyers pay for tailored solutions to one-of-a-kind problems. The provider adds value by supplying the intuitive, analytical and diagnostic skills of highly trained, deeply experienced experts. Top consulting firms, like Bain and Company, fit this mold and charge for their services on a piece-rate basis. Very rarely, they may agree to be paid for results instead. But, because many other factors may block success besides the accuracy of their diagnosis and the quality of their advice, fee-for-service prevails.
2. **"Value-adding process businesses"** – These businesses, such as car manufacturers, retailers and fast-food restaurants, use standardized processes that allow them to predict costs and prices on the basis of output, not input. They can even offer warranties and guarantees. Some health care businesses now use this model. For example, MinuteClinic displays the prices of procedures like items on a restaurant menu. Geisinger Health System charges "insurers a flat rate for elective heart bypass surgeries, effectively providing a 90-day warranty for its work." Johnson & Johnson has offered European governments a money-back guarantee on one of its drugs.
3. **"Facilitated networks"** – Think of eBay and other networked businesses. Members of the network provide goods and services to each other, often paying a

user or membership fee. The company that operates or facilitates the network makes money. Medicine has some such networks. For instance, WebMD provides medical office administration, communication capabilities and data about medical conditions. Such networks succeed by helping customers stay well and providing professional services, while solution shops and value-added process businesses only really make money when people are unwell.

"Regulations always benefit someone, and democracy provides myriad levers that these entities with a lot at stake can pull...to block change."

Attention to business models is and must be the first indispensable step to health care reform. One or two pioneering business models will not be enough to solve the problem. As in the computer industry, a new value network (consisting of disruptive enterprises that have to collaborate and reinforce each other) must disrupt and replace the existing network, and bring the full power of disruptive innovation to bear. Integration will be one of the most crucial elements of the solution.

The Importance of Integration

Today's fragmented health care infrastructure will need to integrate if it is to achieve the benefits of disruptive innovation. The current model of separating physicians' offices from hospitals, and hospitals from insurance, makes fee-for-service all but inevitable. If someone other than a doctor can use technology to make a diagnosis and supply a routine, standard medication or therapy, the physician suffers a loss of revenue, but the health care system saves that cost and more.

"A government-controlled single-payer system...[is] a one-way street heading in the wrong direction."

Imagine the savings that might occur if health care enterprises looked more like the American Automobile Association (AAA). Such organizations would charge members a fixed fee and, in return, provide whatever care a member required. The organizations would have an incentive to pursue economies. They would not only employ physicians and nurses, but might even train them. They would own hospitals and clinics, but could structure business models that achieve a better match of costs and revenues, while delivering quality service effectively and profitably.

"Until a powerful player with sufficient scale and scope journeys up the waterway to create a new value network in which the disruptive entities can combine to form a new system, health care will remain expensive for all, and inaccessible to many."

Some major companies have taken internal steps toward such integration. Employers win when their workers are healthy and productive. If employers were to integrate health care delivery, you might see companies directly hiring doctors and nurses, or outsourcing medical services from a third party. They might contract with clinics or hospitals, and with networks whose objective is maintaining health and well-being. They could reward workers for behaviors conducive to health.

"The care of chronic disease needs to be divided into two different businesses. The first is the business of diagnosis and prescription; the second is a type of business that can help patients adhere to the prescribed therapy."

This is not a dream. Quad/Graphics, a Wisconsin-based printing company, set up its first clinic in 1990 to provide free primary medical care to its employees and their dependents. The self-insured company, which now has four medical centers and 12,000 employees, contracts with third-party providers for special needs. It has achieved significant economies, with average annual per capita health expenditures of $6,500 in a region where most firms spend an average of $9,000. Other companies have turned to Quad/Graphics to manage clinics for their employees.

Priorities for Regulation

Regulators should address these eight categories:

1. Change the structure of the National Institutes of Health to fund scientific work at the boundaries of disciplines, where it is more likely to yield innovative revelations, instead of conducting research in specialized silos.
2. Reorganize reimbursement practices to encourage pricing that reflects cost and value. At present, for example, the reimbursement policies at the Centers for Medicare and Medicaid Services discourage discounting.
3. Replace standardized pricing with the lowest available price point based on independent negotiation of prices with health care plans and providers.
4. Require everyone to purchase health insurance and eliminate the mandate for providers to offer care without compensation to those who cannot pay.
5. Orient clinical trials to work with definitions rather than symptoms, and reform U.S. Food and Drug Administration (FDA) rules governing such trials.
6. Re-examine licensing regulations and consider, at least, offering accreditation to less-costly personnel for processes with standardized diagnoses and therapies.
7. Bring an understanding of disruptive innovation into policy making, and ensure that regulators encourage disruptive innovation to achieve economy and accessibility.
8. Allow employers to give employees incentives for behaviors that are conducive to health.

"Maintaining health is a job that only a minority of people prioritize in their lives. For the rest, becoming healthy only becomes a priority job after they become sick."

Products and services are often unaffordable and inaccessible because of high overhead costs and inadequately integrated business models. In many instances, health care is low quality, costly and hard to obtain because of business models that can turn a profit only when people are sick. Appropriately integrated business models can go a long way toward building a health care system that encourages wellness. In the process, that could make health care affordable and accessible for most people, perhaps even all of them.

About the Authors

Clayton M. Christensen, also the author of *The Innovator's Dilemma*, *The Innovator's Solution* and *Disrupting Class*, is a professor at the Harvard Business School. The late **Jerome H. Grossman**, M.D., headed the Harvard Kennedy School Health Care Delivery Policy Program. **Jason Hwang,** M.D., is the co-founder and Executive Director, Health Care of Innosight Institute, a not-for-profit think tank devoted to applying the theories of disruptive innovation to problems in the social

sector.