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The Health System of the Future

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"Neither a wise man nor a brave man lies down on the tracks of history to wait for the train of the future to run over him."

—Dwight D. Eisenhower

Some health systems are enjoying a financial respite in the moment—reaping the benefits of scale and years of process improvement. However, social, technologic, and regulatory forces that will fundamentally challenge and create new imperatives for these enterprises have boarded and are riding inexorably toward them on Eisenhower's metaphorical train.

While clinical technologies have constantly evolved, business and care delivery models in organized systems of care have been more or less unchanged for a half-century. If you are a little sick, you see a doctor in a small box for a short period of time and generate some money for the provider organization. If you are a lot sick, you see many of doctors in a larger box for a longer period of time and generate more money for the provider organization.

Many new realities will result from the upcoming industry changes, and this article explores a few worthy of specific mention: the empowerment of the individual by digital technology, the imperative of population health management, the financial reconfiguration of complex specialty care as cost, and blurring of lines of competition for healthcare market share.

Empowerment of the Individual by Digital Technology

The digital revolution has created tools we could not have even conceptualized a short time ago. Examples of the empowerment occurring now or in the near future as a result include the portability of medical records and data, the ability to compare providers and healthcare organizations on the basis of various (increasingly less surrogate and more "real") outcomes, and the ability for patients to access healthcare in new ways.

These are positive developments, but unfortunately, all of them increase the possibility of an individual moving to a competitor.

Patient retention is paramount in the moment as health systems are still largely fee-for-service, and will be paramount in the future as they are exclusively rewarded for medically and financially managed populations. Systems will collect as much data as possible, and create ongoing analytic insights to drive prevention and individualized treatment outcomes, as well as lower the costs created when these insights are not available.

Health systems will also have much more sophisticated individualized relationship management platforms, similar to the retail and hospitality industries. In addition to a comprehensive healthcare record, individual preferences and habits within and at times peripheral to the acquisition of care will be understood and leveraged. Movement of patients within individual systems will become more seamless and more directed, and systems will provide appropriate redundancy of services and providers, so patients will still have "choice."

Digital tools and delivery structures that provide a spectrum of access to care opportunities will be deployed—from online completely inanimate diagnostic and treatment algorithms to in-person care, and all things in between. There is a "long tail" of preference when it comes to how individuals want to access care, depending on a number of factors such as age, discretionary time, and medical condition.

Development of "self-care" platforms for individuals will occur as the democratization of information and technology will make this increasingly possible. The use of these tools (not limited to "wellness," but extending well into diagnosis and treatment) could have a dramatic impact on both the cost of care delivery, as well as the reawakening of the concept that individuals are ultimately responsible for their own health.

If this sounds unlikely, contemplate how often women currently walk into an Ob-Gyn office to make a diagnosis of "pregnant."

Technical, informational, and moral authority are all eroding in healthcare, and that will be recognized and accepted. Technologies will be increasingly placed in the hands of patients, as well as the information

needed, to manage many more aspects of their own health and healthcare. When considering moral authority, while there is a role for paternalism in medicine, partnerships are more desirable and will encourage more active collaboration rather than simple "receipt" of care.

There is a downside to the democratization of medical information; however, as impediments to misinformation will be increasingly few. The health system of the future will be the unquestioned source of medical truth, and a watchdog for medical misinformation.

The Imperative of Population Health Management

Regulation, incentives, and more importantly, public opinion will continue to require health systems to pay much more attention to the overall health of populations, rather than focusing the vast majority of efforts on acute care triage and management.

More sophisticated individual health and wellness engagement platforms will be deployed—perhaps capitalizing on recent findings in network theory and lessons from researchers like Alex Pentland at MIT to make these more effective.[1] As noted above, a full spectrum of access options will be available to meet the needs of the care access preference "long tail." To more effectively manage the costs of the population outside the acute care setting, higher quality and more creatively administered fully integrated post-acute and transitional care facilities (such as home care, rehabilitative, and long-term care) will be essential components.

The catch, of course, is the creation of these structures and programs are largely unfunded mandates, and most of the financial responsibility for acquiring and successfully implementing them will be placed squarely on the shoulders of the systems themselves. Therefore, a fundamental component of the delivery system of the future will be managing risk; the incentives quickly align for investments to be made in the foregoing areas if the fruits of actual "health management" (premium dollars not spent at the end of the year by healthy, or more efficient, care-consuming patients) can be reaped by the manager. Health systems will move from managing risk in only their employee base and perhaps government (Medicaid and Medicare) programs to full-risk commercial type plans. Systems will choose to either fully administer these or work with third-party administrative partners, but the imperative is clear.

[1] See Alex Pentland, *Social Physics: How Good Ideas Spread—Lessons from New Science*, Penguin Press, January 2014.

Financial Reconfiguration of Complex Specialty Care as Cost

It is no secret that as providers take on risk, specialty and complex care will increasingly be viewed as loss leaders. While efforts to make the population "healthier" will help, behaviors change on generational timelines. In addition, the aging demographic means we will not see a dramatic drop in the incidence of oncologic and cardiovascular disease and further dramatic drops in inpatient beds will be unlikely over the next two decades. Finally, modern clinical outcomes, as well as other quality and individual satisfaction comparisons, will not allow for 1990s-style care rationing to offset these costs, and other ways to control costs will need to be sought.

The overall cost of care in both primary and specialty settings, leveraged across a large system, will be attenuated by using digital technologies that manage patients with fewer providers and "boxes" and will lower fixed costs. A continued focus on supply chain efficiencies and vendor product performance will yield some additional value, and digital technologies will assist with these efforts as well.

The largest opportunity for cost reduction for many growing systems; however, will be thoughtfully regionalizing specialty care. While a heart surgery program may break even at a volume of 50–60 cases, it will make no sense to manage the overhead costs of that program with a 2,000 case unit within driving distance for patients. This exercise will be repeated for all complex care across large systems. Those most effective will understand succinctly what is acceptable both socially and medically in the populations they serve, and work diligently to re-educate populations regarding the critical difference between convenience, experience, and outcomes. There is an undeniable positive relationship between quality, cost, and volume in specialty care, but in the interest of protecting market share, this has not been made clear to the general public.

Hospitals themselves will increasingly be structured in a multi-modular fashion around disease-oriented "focused-factory" concepts to improve clinical outcomes and increase efficiency, but will be designed to feel more like "home," and less like the term "factory" implies.

Blurring of Lines of Competition

The healthcare delivery system structure is not likely to be "disrupted" any time soon by technology, but technology will allow competitors to eat away at the edges of delivery systems, and eventually into vital areas, unless they execute on the foregoing. It does not take much of an imagination to conceptualize national self, virtual, and convenient care platforms that could leverage the segments of the population

with no need to interface with "boxes and doctors." In an unlikely worst-case scenario, this could eventually force delivery systems, trapped by sunk costs in infrastructure, into contracted complex care arrangements where they compete with one another to provide commoditized inpatient care.

Some General Comments

The go-to-market strategies of health systems will obviously change, and over time will take on more of a "solutions company" approach—segmenting not only their populations by medical diagnosis and severity of illness, but also on the basis of age, overall health, how they choose to access care, and risk coverage preferences. This will allow the provision of products and bundled services attractive to everyone in the population.

Complexity theory teaches us as endeavors become more complex and less predictable, they should become less hierarchical and more heterarchical (self-organizing). The future of healthcare includes more perfect real-time data sharing and insight generation between individuals themselves, individuals and systems, and finally, between healthcare organizations. In time, this will take place on a global scale for the foreseeable future; the health system will be the most reliable, appropriately incentivized coordinator of these efforts.

Social, technologic, and regulatory forces are in play that will change the nature of healthcare and require health systems to change as well. Experience suggests tempting fate is folly—that lying down on the tracks to see if the train of the future is coming or trying to beat that locomotive across the tracks (waiting until the last moment to move out of the way) are both bad ideas. The train has objectively left the station, and those that recognize, embrace, and leverage these forces of change will be the leaders of the future.

The Governance Institute thanks W. Roy Smythe, M.D., Chief Medical Officer at Valence Health, for contributing this article. He can be reached at rsmythe@valencehealth.com.

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