ARTICLE

Innovation in a Time of Crisis:

Is Healthcare Committed?

Innovation in healthcare has generally come from the inside. Take penicillin, for example — it was discovered in a medical laboratory. We are now entering a stage of healthcare transformation where multiple external entities are the key drivers of innovation, from the outside in — which, while daunting and unsettling, will lead to the greatest advances for care delivery we have ever seen.

While major disruptive events can impede progress, they often plant the seeds for future growth. The 2008 financial crisis, for example, opened the door for companies such as Airbnb and Uber[1] to help customers save money and pool resources. In other words, a crisis created the tipping point that led the way to mass implementation of innovative technologies, products and services.

Some say that COVID-19 is the tipping point for healthcare innovation. Others point out that healthcare is already returning to pre-COVID practices. While the long-term impacts on medicine are still unknown, healthcare executives and decision-makers should be careful not to undervalue this opportunity to innovate in an industry where significant change is rarely seen.

1 https://www.entrepreneur.com/article/347669

The COVID-19 pandemic has committed the world to pause. Economies slowed, businesses shut down and routines changed. Industries were forced to immediately adapt to a new normal. Supply chains, for example, had to become more localized, with greater emphasis on reliant rail and road transportation. Retailers expanded online platforms to meet demands via operational changes changes in selling, shipping and advertising — including using their stores as satellite warehouses to fulfill online orders. Businesses that previously were reluctant to promote remote working had to temporarily close and implement work-from-home practices. Now many of these businesses are developing plans to permanently shrink in-office staff and space, given an increase in productivity and cost-savings opportunity.

Even though these industries cover multiple market segments, they all have developed distinct pre-COVID and current-state characteristics that describe where innovation has taken place.

Prior to COVID-19, it was widely accepted that healthcare was recession-proof in the world of supply and demand. In fact, medicine is often used as the prime example of a "normal" good with a consumption level that does not readily change. However, the pandemic unexpectedly resulted in hospitals across the country operating at capacity levels as low as 30 percent, due to a cessation of elective procedures to make room for COVID-19 patients and to patients choosing not to receive normal levels of care or visit emergency rooms because they consider the risk of being exposed to COVID-19 higher than their own personal healthcare needs. Patients are going as far as to forgo necessary treatments such as cancer screenings and downplay new acute symptoms that may lead to serious illness.

These new realities show that healthcare systems are now at a "tipping point" as they try to sustain patient access and high-quality care while managing through these unforeseen challenges.

How Healthcare Can Learn from Other Industries

From the beginning, the medical community has been at the forefront of the COVID-19 crisis, having to quickly respond and adapt to shortages in diagnostic tests and personal protective equipment (PPE) while implementing immediate changes in business operations to both sustain high-quality care and reduce operating costs. In looking for ways to adapt, healthcare can repurpose ideas and learn from industries that have been successful early-stage innovators.

In fact, those taking an interest in how the medical field is responding have likely already noticed the industry testing out familiar strategies, with a focus on adopting a customer-centric mindset. Drive-through clinics, for example, parallel fast-food or retail pick-ups to increase efficiency and safety. Touchless payment technologies commonly used at convenience stores and gas stations for years have now been deployed to limit healthcare staff exposure. In the same way that restaurants had to expand online ordering and coordinate limited resources for delivery, medicine is expanding telemedicine and rethinking how to meet demand via resource pooling for a more coordinated and effective use of labor. Examples include a shift to mass nurse contracting, and repurposing physician skills to meet demands across organizations and even geographic areas.

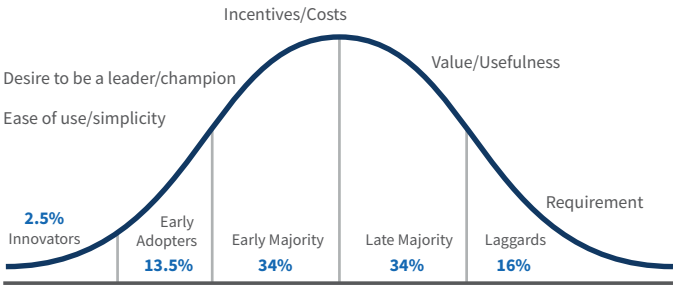
Walk-in clinics have provided convenient and cost-effective access to high-quality care for minor illnesses and injuries, vaccinations and physicals, and can also monitor chronic conditions. Now being embraced by new market entrants such as Walgreens and Walmart, these clinics present a limited menu of services with scheduling options available online. These services have been viewed by some as supplementary to traditional healthcare. However, hospitals may consider disrupting this model to expand their businesses by adding "storefront" locations both in major cities and in more remote areas.

What Makes Healthcare Different

The medical field has undoubtedly reacted and adapted to the changing demands of COVID-19. But the big question is whether medicine will fully leverage this opportunity to be an innovation leader and adopt new operations in the same way other industries have, or will

they fall on the back-end of the innovation curve as part of the "late majority" and "laggards"?

ROGERS' INNOVATION ADOPTION CURVE



Motivation and incentives are changing in potential impact as Direct achieves greater adoption.

Source: Rogers, E.M. (2003) *Diffusion of Innovations* (5th edition), New York, NY, Free Press

Compared to other industries, healthcare generally is:

— slow to change;
— hesitant to commit;
— limited for time; and
— focused on immediate daily needs.

While retailers have adopted virtual showrooms almost overnight, healthcare has not reacted at the same speed. This is due in part to the fact that the healthcare industry is fundamentally different than any other industry. Change involves risk and disruption, and often the most critical changes get overlooked or passed down the line because of their complexities, challenges or administrative appearance.

Regardless of industry, errors occur. What makes healthcare different is the way in which risk and mistakes are accepted. Patients may be more willing to risk medical error from care delivered by a human physician than from a novel technology, even when the technology may have been proven to make fewer errors. This cultural and psychological mindset both accepts and rejects failure. For the same reasons, healthcare is one of the most regulated and hierarchical industries, which further differentiates healthcare and limits the ease with which meaningful change can occur.

As we start to enter the first stages of post-COVID medicine, we are noticing a shift back to how things were. Telemedicine visits, for example, are trending downward as hospitals start allowing in-person patient visits and people return to familiar habits. Telemedicine could be further impacted if reimbursement is reduced — a clear example of how regulations and government action can both positively and negatively impact change. So, the question is, has medicine reached that tipping point?

Now What?

To capitalize on a moment in which society feels willing to more readily accept change and innovation, medical executives should focus on advancing the following areas over the next 60 to 90 days.

TELEMEDICINE

Hospitals and providers have begun a different model of care that is more flexible, less time-consuming, safer, and easier to access for the patient. This has required physicians and hospitals to shift how they operate, finding ways to provide the same quality service without seeing a patient in person. Care methods can expand beyond virtual visits to include other innovations such as apps, online chat rooms and online sources of information.

While telemedicine use surged following COVID-19, the ratio of virtual to in-person visits is shifting back toward pre-pandemic numbers. In order to prevent a setback in any progress made, decision makers will need the analytical tools to identify and direct resources to patients best suited for virtual visits. This may involve disrupting standard schedules and adding virtual visits to an MD's day, shifting nurse practitioner (NP) and physician assistant (PA) roles to appropriately align licensure with level of care, or even re-evaluating the visit flow to make visits more streamlined.

REMOTE MONITORING

The ability to monitor a patient outside of a hospital or physician office can have a profound impact on patient health and has been of increased importance during COVID-19.

To truly capture the full benefit of remote monitoring advancement, hospitals and providers will need to work with payers to create new codes and reimbursement agreements. Decision-makers will need to determine how to purchase equipment, distribute it to patients, and ensure the upkeep of service and maintenance. Enacting a value-based model in which MedTech manufacturers, hospital systems and health plans share in both investment and return may provide the right incentives to foster this type of innovation.

PERSONALIZED MEDICINE

There is a great deal of discussion among medical professionals regarding the benefit of tailoring a treatment to an individual's genetic profile and personal preference, especially during a time when one-size-fits-all public health measures are being used to address COIVD-19.

The term "personalized medicine" has evolved from compounding a specific medication into a dosage form and strength that meets a specific patient's needs, to now include the application of pharmacogenetics in drug therapy. However, what if "personalized medicine" were to also include a holistic way to manage each patient's overall health and wellness via mass personalization?

Just as Amazon knows what individual purchase recommendations to make when you are browsing its site or Spotify curates personal playlists to align with your musical preferences, healthcare should integrate with a person's genetic, environmental, cultural and spiritual aspects to empower them to lead their life in the way they want.

In addition to a person's genetic information, there is an abundance of collected patient data focused on medical and family history, health and wellness (from fitness and other digital health devices) and clinical records that can be analyzed to identify or detect health risks early. Even the type and amount of food and drink consumption can now be easily recorded and monitored in mobile apps. This data can present a holistic view of the patient and can then be evaluated by medical professionals to determine the best course of action highly personalized to that patient — and it can be done on a massive population level.

Some medical companies, such as Story MD, are taking strides toward this personalized medicine mindset to empower patients to make holistic, informed decisions that relate directly toward their own health story, needs and preferences in order to provide a personal experience and high level of care.

When looking to build out personalized medicine, a multidisciplinary team would need to cohesively work to understand the particularities of a patient's genetics, history, medical needs, family history, health and eating habits, and personal goals to lead to a path of care. Providers would have to consider how individualizing medicine would impact reimbursement, workflows and the continuum of care. This multidisciplinary team needs to encompass expertise with respect to the personal, professional and societal goals for the individual.

Can Healthcare Commit to Innovation?

Some may think that COVID-19 created necessity, which, as the adage says, is "the mother of invention." While COVID-19 may have helped get healthcare to a potential tipping point, medicine shouldn't need pandemics to advance. In the world of healthcare, common sense should be the mother of innovation.

After understanding the many ways in which medicine can use COVID-19 to progress, the inevitable question that comes to mind is why providers would be willing to commit to innovate now, given adverse historical trends. Some present the argument that healthcare is too critical and too big to fail, even if innovation does not take place. COVID-19 showed us that healthcare is not recession-proof. While the form of receiving it may change, people will always need healthcare, and governments acting in the best interest of the community will ensure it is not lost.

Looking at the innovation we have seen so far, the pandemic has played a large role but is not the full story. We may see changes in provider commitment due to:

COVID-19 Pandemic: This brought to light hospital bed capacity limitations and responsiveness, revealing vulnerabilities in current operational systems that need to be addressed.

Patient Access: New care models, advances in telemedicine, a push for home care, and increased capabilities in remote monitoring are resulting in inevitable changes related to where, how, when and by whom patients need to be seen, and are forcing providers to adapt. People are becoming more informed about the different care models that are available, and many are taking advantage of lower-cost or more time-efficient options. Some patients, for example, have already started to explore telemedicine, and others are learning to differentiate the cost-benefit of point-of-care options such as ER versus urgent care or primary care physician.

Affordability: Payers are listening to consumers and are constantly seeking ways to align healthcare outcomes with value. It's no coincidence that consumers are driving changes in care-delivery channels, with retail storefronts and virtual care driving rapid growth. Each year, a larger percentage of healthcare costs are paid for out-of-pocket by consumers, and despite some push for "single payer" healthcare, the consumerism trend is only accelerating. Aligning member and payer financial interests by making consumers highly accountable for healthcare choices in the form of a high-deductible health plan is a payer-led innovation that helps control costs. Examples in the market today include plans that use low-cost, very narrow networks and plans that allow consumers to specifically purchase specialty coverage for high-cost optional items like knee transplants.

Value-based Agreements: There are opportunities for providers to innovate include entering value-based, bundled care or managed care agreements and participating directly in the reimbursement stream coming from payers. The design of value-based agreements can vary, but the lines between payer and provider are blurring, which can have benefits. For providers and healthcare systems, they can receive a steady monthly revenue stream to care for a patient population, or they can benefit from becoming a preferred provider and receiving a steady patient flow. This requires new analytics and a shift in mindset from the traditional fee-for-service mentality.

Pharmaceutical and medical device companies have been engaging in risk-sharing, outcomes-based contracts with payers as an innovative payment model. These contracts tie reimbursements to how well medical products achieve defined goals. Patients benefit from improved access to medicines and treatments, especially new therapies and devices, and reduced costs. Manufacturers also see the benefit to demonstrating the effectiveness of their products and differentiating themselves from competitors. Payers have reduced risk in clinical value and performance and financial impact. However, for these payment models to continue to grow, there must be transparency to ensure they do not violate anti-kickback laws and clarification concerning federal and state programs.

Regulatory Reform and Reimbursement: Major changes in regulation and reimbursement models require medicine to find innovative ways to continue to provide quality care. In response to COVID-19, a series of regulations were put in place to better provide care to a population not leaving their homes. These included modifications to HIPAA, adjusted telehealth regulations, and allowing physicians to practice across state lines. Whether or not these temporary regulation changes become permanent will impact the level of change seen post-COVID-19. Medicine should push to continue evolving regulation in order to maintain the progress that has been made.

When it comes to healthcare innovation, medicine needs to be able to commit to both clinical and non-clinical progress. Oftentimes the more administrative or process-improvement innovations have the largest impact but are given the least amount of attention. Simply freeing up OR bottlenecks can save a hospital hundreds of thousands of dollars that can be allocated to make improvements elsewhere, increase the number of patients seen, and enhance provider satisfaction. In order to truly embrace innovation and maximize its impact, medicine needs to break the paradigm that innovation only consists of cutting-edge medical technology or buzzwords and focus on the tremendous impact innovation can have behind the scenes.

Big Picture

The landscape of medicine will change after COVID-19. As both patients and companies see the potential benefits from alternative and innovative care options, new market entrants such as CVS, Amazon and Walmart will find advantages and cater to new patient preferences. Advanced collection methods, such as virtual vital recordings and online tracking of patient history, will enable data collection and analyses to expand, opening the door for an entirely new understanding of population health.

While often on the back end of innovation, recent events may have created a tipping point in the healthcare space, or "that magic moment when an idea, trend or social behavior crosses a threshold, tips, and spreads like wildfire."[2] COVID-19 has certainly pushed medicine towards a tipping point for changes in healthcare, but it remains to be seen if organizations will continue to innovate once the immediate urgency of the pandemic slows, or if they will cling to the normalcy of the past.

Charles Darwin stated that "…the species that survives is the one that is able best to adapt and adjust to the changing environment in which it finds itself." Indeed, it is not a matter of intellectual or physical fitness, but a matter of being fit for change. As our world changes beyond expectation, healthcare must now prove its fitness for change; to evolve, for everyone's better selves.

While potential areas of innovation for medicine are wide-ranging and cover just about every aspect of hospital operations and management from linen ordering to patient throughput, two major areas of innovation stand out: artificial intelligence in medicine, and workforce development. Upcoming articles will expand on these areas and discuss in depth how they can change the face of medicine.

2 https://www.thoughtco.com/malcolm-gladwell-tipping-point-theory-3026765

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