

Pharmaceuticals & Medical Products Practice

Healthcare innovation: Building on gains made through the crisis

Leaders should consider the lessons and achievements of the COVID-19 crisis in forging new innovation aspirations—and the mechanisms needed to execute them.

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Medicine is a living science that prides itself on continual discovery. In recent years, healthcare innovators have brought us artificial-intelligence algorithms that arguably read chest X-rays as well as or better than radiologists, inexpensive genomic sequencing that can guide personalized cancer treatments, and vast improvements in population health management through big data and analytics, to name just a few examples.

While the COVID-19 pandemic has placed unparalleled demands on modern healthcare systems, the industry's response has vividly demonstrated its resilience and ability to bring innovations to market quickly. But the crisis is likely far from over and the sector's innovation capabilities must continue to rise to the challenges presented both by COVID-19 and the economic fallout from its spread. While many industries are facing unprecedented disruption, medicine and healthcare are uniquely affected given the nature of this crisis. For example, pharmaceutical companies racing to develop vaccines must also manage complex supply chains, new models for engagement with healthcare professionals, a largely remote workforce, and disruption to many clinical trials. Similarly, hospitals are caring for COVID-19 patients with evolving

protocols while maintaining continuity of care for others, often against the backdrop of vulnerable staff, supply and equipment shortages, and, for some, accelerating financial headwinds.

The effects of the pandemic on the industry continue to be profound. The shifts in consumer behavior, an acceleration of established trends,¹ and the likely deep and lasting economic impact will potentially affect healthcare companies no less—and quite possibly more—than those in other sectors. Around the world, more than 90 percent of executives we polled believe COVID-19 will fundamentally change their businesses, and 85 percent predict lasting changes in customers' preferences.² Among healthcare leaders, two-thirds expect this period to be the most challenging in their careers.³

To meet both the humanitarian challenge and the obligation to their stakeholders, leaders of healthcare organizations need to meet the innovation imperative. History tells us that organizations that invest in innovation during a crisis outperform their peers in the recovery (exhibit).⁴ What's more, a crisis can create an urgency that rallies collaborative effort, breaks through organizational silos, and overcomes institutional inertia.

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¹ Chris Bradley, Martin Hirt, Sara Hudson, Nicholas Northcote, and Sven Smit, "The great acceleration," July 2020, McKinsey.com.

² McKinsey Innovation Through Crisis Survey, April 2020.

³ McKinsey Healthcare Innovation Through Crisis Survey, June 2020.

⁴ "The great acceleration," July 2020.

Exhibit

History suggests that companies that invest in innovation through a crisis outperform peers during the recovery.

Normalized market capitalization, index (Q1 2007 = 100)



¹Identified as companies on the *Fast Company* World's 50 Most Innovative Companies list for ≥ 2 years through a crisis, normalized to 2007.

During the course of this year, the healthcare industry has produced inspiring examples of innovation in products, services, processes, and business and delivery models, often in partnership with other sectors. For example, Sheba Medical Center in Israel is working with TytoCare to keep COVID-19 patients in their homes by supplying them with special stethoscopes that both listen to their hearts and transmit images of their lungs to a care team that can intervene as appropriate.⁵ In the United States, Zipline, which specializes in delivering medical supplies to remote areas, quickly formed a partnership with Novant Health in North Carolina to distribute supplies to hospitals via drones.⁶ The adoption of telehealth has exploded, from 11 percent of consumers using it in 2019 to 46 percent in April 2020, and well more than half of healthcare providers polled indicate higher comfort with this care-delivery method than before.⁷

Given the speed of recent changes, it is likely that parts of the healthcare ecosystem will operate in different ways in the coming years. To keep pace with the industry's evolution, healthcare leaders should consider assessing their organizations' readiness to innovate at scale and whether the needed capabilities are in place. Our past research shows that successful innovation in large organizations stems from a commitment to eight principles and practices: aspire, choose, discover, evolve, accelerate, scale, extend, and mobilize. These eight essentials of innovation, when applied as a group, enable businesses to innovate more successfully and outperform their peers.⁸ Here is how healthcare players can consider applying them to their unique context at this extraordinary time.

⁵ *Health Affairs Blog*, "Opportunities to expand telehealth use amid the coronavirus pandemic," blog entry by Jared Augenstein, March 16, 2020, [healthaffairs.org](https://www.healthaffairs.org).

⁶ Riley de Léon, "Zipline, Novant Health launch the first long-distance emergency drone operation in U.S. to deliver PPE and medical supplies," *CNBC*, May 27, 2020, [cnbc.com](https://www.cnbc.com).

⁷ Oleg Bestsenyy, Greg Gilbert, Alex Harris, and Jennifer Rost, "Telehealth: A quarter-trillion-dollar post-COVID-19 reality?," May 2020, [McKinsey.com](https://www.mckinsey.com).

⁸ Daniel Cohen, Brian Quinn, and Erik Roth, "The innovation commitment," *McKinsey Quarterly*, October 2019, [McKinsey.com](https://www.mckinsey.com).

Aspire and choose

Setting a bold but plausible aspiration—both during this crisis and for the period after—and cascading it to all relevant stakeholders is considered critical to driving innovation. At the beginning of the pandemic, that aspiration was clear: flatten the curve. Healthcare systems quantified it locally based on available hospital and ICU beds and communicated it to the public so everyone, from epidemiologists to policy makers to citizens, understood the objective. That aspiration then fundamentally changed how we worked, shopped, and socialized.

As the crisis evolves in many parts of the world, organizations need to consider creating their own new innovation goals. For the aspiration to be effective, it needs to be time-bound and measurable. Back in January, before the full implications of the new virus were clear, the CEO of the Coalition for Epidemic Preparedness Innovations (CEPI) announced the objective of seeking to find a vaccine faster than ever before by moving “from gene sequence to clinical testing in 16 weeks.”⁹ That focused effort and set a time bar. As it turned out, the first vaccine candidate entered a Phase I clinical trial less than ten weeks after the genetic sequences were released, with others following shortly thereafter.¹⁰

To achieve their aspiration, leaders need to choose which initiatives in their innovation portfolios to prioritize, and then allocate adequate resources to their pursuit. The understanding of COVID-19 is advancing rapidly and may require healthcare executives to be nimble in their decisions and actions when managing their portfolio of initiatives. In the coming years, cost pressures on healthcare systems will likely increase due to both growing health demands and macroeconomic challenges,

requiring thoughtful prioritization and balancing of initiatives across the short and longer term.¹¹

Discover

Adapting to the “next normal” once the pandemic is under control will likely require organizations to rediscover their patients’ and customers’ needs, many of which have been reshaped by the crisis. Our consumer research highlights an ongoing evolution on the human side of the COVID-19 pandemic.¹² To better understand these changes, some companies—which are finding in-person shadowing to conduct ethnographies difficult—are turning to techniques such as surveys, interviews, or “virtual shadowing,” such as by equipping patients with smart glasses and cellphone headsets. New tools are also emerging, such as McKinsey’s Emotion Archive, which looks at people’s comments about health, family, finances, and work to analyze emotions across different geographies and demographics.¹³ Looking ahead, such techniques may enable healthcare providers to gain a deeper understanding of unmet needs than they had before.

Understanding shifts in customer behavior can allow organizations to rapidly adapt their business models and processes or develop new ones. For example, given that most pharmaceutical companies have partially or completely pulled their reps out of the field, these companies are changing their customer-engagement approaches, including building suites of virtual interaction models.¹⁴ In China, approximately 70 percent of medical technology companies are considering permanently moving to hybrid online–offline sales mechanisms for reps.¹⁵ Determining the right engagement model both during the pandemic and for the postcrisis period will likely rely on staying closely connected to customers to adapt to their evolving needs.

⁹ “CEPI to fund three programmes to develop vaccines against the novel coronavirus, nCoV-2019,” Coalition for Epidemic Preparedness Innovations, January 23, 2020, cepi.net.

¹⁰ Nicole Lurie et al., “Developing COVID-19 vaccines at pandemic speed,” *New England Journal of Medicine*, May 2020, Volume 382, Number 21, pp. 1969–73, nejm.org.

¹¹ Giles Colclough, Penelope Dash, and Lieven Van der Veken, “Understanding and managing the hidden health crisis of COVID-19 in Europe,” June 2020, McKinsey.com.

¹² Jenny Cordina, Eric Levin, and Andrew Ramish, “Helping US healthcare stakeholders understand the human side of the COVID-19 crisis: McKinsey Consumer Healthcare Insights,” September 2020, McKinsey.com.

¹³ The Emotion Archive, McKinsey.com.

¹⁴ Ortal Cohen, Brian Fox, Nicholas Mills, and Peter Wright, “COVID-19 and commercial pharma: Navigating an uneven recovery,” April 2020, McKinsey.com.

¹⁵ Sizhe Chen, Franck Le Deu, Florian Then, and Kevin Wu, “How COVID-19 is reshaping China’s medtech industry,” May 2020, McKinsey.com.

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Evolve

Given the economic, societal, and operational ramifications of the COVID-19 pandemic, healthcare leaders should consider which aspects of their business models are resilient and which will face challenges as value pools shift. For example, the Centers for Medicare & Medicaid Services, the US agency that administers Medicare, has granted emergency waivers, including temporary approval of more than 80 new services through telemedicine, and similar new codes and reimbursement models have emerged in Germany and other countries.¹⁶ If the trend continues, about 20 percent of all outpatient, medical office, and home health spending in the United States—equivalent to as much as \$250 billion—could shift to digital channels, creating opportunities for entirely new business models.¹⁷ There are also shifts underway in the interactions between payers and providers, such as Blue Shield of California offering providers up to \$200 million to furnish financial guarantees, streamline their preauthorization processes, and restructure their contracts, including new value-based payment arrangements, all as efforts to help support providers during the challenges of COVID-19 disruptions.¹⁸ In order to address such shifts, organizations will likely need to evolve their business models. Critically, that may mean capturing opportunities for collaboration and shared success with other stakeholders in the healthcare system.

For example, as of September, there are more than 275 COVID-19 vaccine candidates being pursued with more than 40 in clinical studies and another 20 or so poised to enter human trials before year-end. Many of these efforts are new partnerships and collaborations. The lines between competitors and allies may also be blurring with new partnerships forming to develop treatments, such as between Pfizer and BioNTech, and manufacture them (GlaxoSmithKline, for example). These new collaborations may augur well for the continued development of creative partnerships and new business models, as well as the future of medical R&D in general.

Accelerate and scale

The high human and economic costs associated with COVID-19 make it more important than ever to rapidly accelerate and scale medical innovations. Healthcare leaders should consider providing the tools, processes, and capabilities their teams will likely need to move quickly while ensuring that patient safety and quality of care remain central. In addition, organizations should consider the groundwork needed to be able to quickly scale the development of promising solutions internally and their distribution throughout health systems and across regions. That will likely include making investments at risk—that is, making investments

¹⁶ "Enforcement policy for digital health devices for treating psychiatric disorders during the coronavirus disease 2019 (COVID-19) public health emergency: Guidance for industry and Food and Drug Administration staff," US Food & Drug Administration, April 2020, [fda.gov](https://www.fda.gov); Cornelius Kalenzi, "Telemedicine can be a COVID-19 game-changer. Here's how," World Economic Forum, May 13, 2020, [weforum.org](https://www.weforum.org).

¹⁷ "Telehealth: A quarter-trillion-dollar post-COVID-19 reality?," May 2020.

¹⁸ Kelsey Waddill, "Payers, providers under fiscal strain rally to combat COVID-19," *HealthPayerIntelligence*, April 6, 2020, [healthpayerintelligence.com](https://www.healthpayerintelligence.com); Paige Minemyer, "Inside Blue Shield of California's new Health Reimagined initiative," *FierceHealthcare*, June 19, 2020, [fiercehealthcare.com](https://www.fiercehealthcare.com); Susan Morse, "Blue Shield of California is offering providers up to \$200 million during COVID-19 crisis," *Healthcare Finance*, April 7, 2020, [healthcarefinancenews.com](https://www.healthcarefinancenews.com).

without knowing that the solutions will work. More funding has flowed into the development of a COVID-19 vaccine (by our estimate, at least \$6.7 billion, as of September 2020) than any other before, including significant investments into ramping up manufacturing. Making such financial commitments, despite the unknowns ahead on which vaccines will be effective against COVID-19, is necessary so the treatments can be delivered quickly once they are proven effective.¹⁹

Healthcare providers have already shown how rapidly they can expand their capacity to care for the sick. In February, China opened two prefabricated hospitals in just over a week,²⁰ and the United Kingdom's National Health Service opened London's Nightingale hospital in nine days.²¹ Shanghai launched 11 online hospitals affiliated with offline facilities during the outbreak, with 14,000 visits to these internet hospitals in just two months.²² Many manufacturers have also successfully reconfigured assembly lines to produce medical products.²³ These examples highlight just how much acceleration may be possible when timelines are urgent and aspirations are clear. Healthcare players could consider adopting some of the flexible

approaches introduced at the height of the crisis to areas that have traditionally followed slow, gated processes, such as the construction of hospitals.

Extend and mobilize

As they pursue promising innovations on short timelines, healthcare organizations will likely face gaps in capabilities and capacity. To address them, they should consider extending their efforts beyond their own walls to external partners. Conquering COVID-19 is now a central priority not just for healthcare companies but also for public and academic institutions and nontraditional players such as technology businesses. But such networks should consider coherent strategies to guide them.

During common crises, coalitions often thrive. As we mentioned above, traditional competitors are becoming collaborators in the race to develop therapeutics that can help manage COVID-19. Collaboration has also taken root in the academic and institutional sphere. Johns Hopkins, Harvard, McGill, and the Swiss Data Science Center have formed the COVID-19 Collaboration Platform to share randomized clinical trial protocols with the aim

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¹⁹ Gaurav Agrawal, Michael Conway, Jennifer Heller, Adam Sabow, and Gila Tolub, "On pins and needles: Will COVID-19 vaccines 'save the world'?", July 2020, McKinsey.com.

²⁰ Taylor Umlauf, Jessica Wang, and Ellie Zhu, "How China built two coronavirus hospitals in just over a week," *Wall Street Journal*, February 6, 2020, wsj.com.

²¹ "Coronavirus: How NHS Nightingale was built in just nine days," BBC, April 17, 2020, bbc.co.uk.

²² "How COVID-19 is reshaping China's medtech industry," May 2020.

²³ "First General Motors-Ventec critical care V+Pro ventilators ready for delivery," General Motors, April 14, 2020, gm.com.

of speeding up such trials and raising their accuracy. Such platforms can enable researchers to not only better address the COVID-19 pandemic but future global health emergencies.²⁴

Lastly, organizations' leaders should consider ways to mobilize their teams toward action. At a time when many employees face deep personal and professional challenges, supporting, empowering, and inspiring is considered a key item on the innovation agenda. Healthcare organizations should also consider development opportunities for their employees to learn new tools and skills, as well as to help train the unemployed or underemployed. When unemployment climbed above 10 percent in the United States, for example, many states sought to retrain people as contact tracers, leveraging tools such as an online course collaboration between Johns Hopkins and Coursera.²⁵

The pandemic is considered to have accelerated innovation trends in several sectors, and as the central player in managing the crisis, healthcare stands near the top of the list. It is important, however, that leaders consider balancing short-term needs with longer-term vision and also consider how innovation can not only address the COVID-19 crisis but also build a more effective, efficient, and equitable healthcare system. Healthcare leaders are considered ahead of their peers in other industries because they are serving on the front lines and innovating while many others are reported to be cutting back. The same concerted innovation effort will likely be critical to recovery. For an industry that thrives through constant discovery, the COVID-19 crisis is both the challenge of a lifetime and a potential catalyst to reaching new heights of achievement.

²⁴ Elizabeth L. Ogburn et al., "Aggregating data from COVID-19 trials," *Science*, June 2020, Volume 368, Number 6496, pp. 1198–9, sciencemag.org.

²⁵ Katie Pearce, "Johns Hopkins launches online course to train army of contact tracers to slow spread of COVID-19," John Hopkins University, May 11, 2020, jhu.edu.

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