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From "wartime" to "peacetime": Five stages for healthcare institutions in the battle against COVID-19

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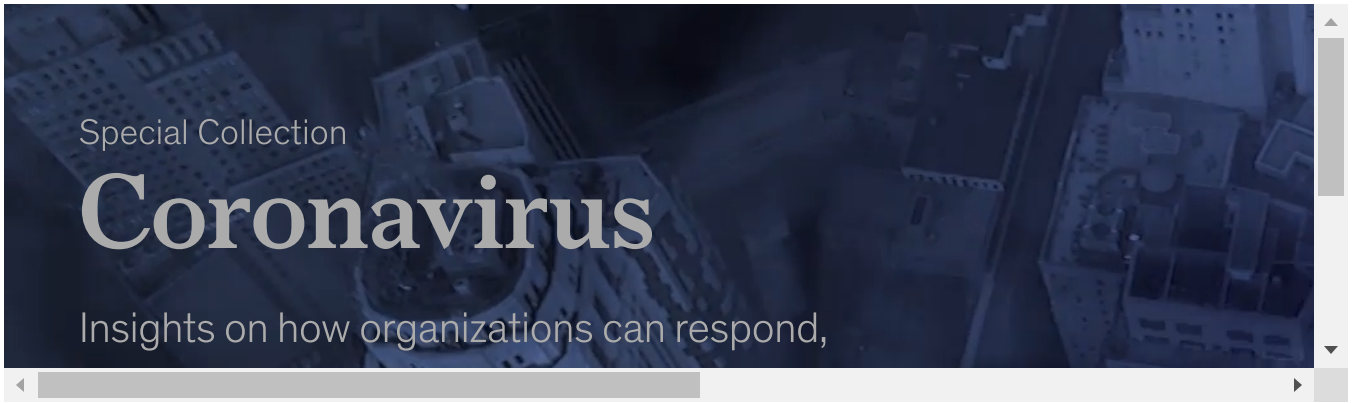
In "Beyond coronavirus: The path to the next normal," we outlined five stages that leaders must plan for: Resolve, Resilience, Return, Reimagination, and Reform.

Healthcare leaders face a multifaceted challenge: combating the healthcare crisis on the frontlines while also tackling similar issues as other industries, such as employee safety and economic challenges.

Most healthcare leaders have already assembled high-functioning teams to respond to the immediate crisis resolving to manage the immediate need to care for the surge of COVID-19 patients. They also have demonstrated the resilience required to deal with fast-moving liquidity, solvency, and economic sustainability challenges.

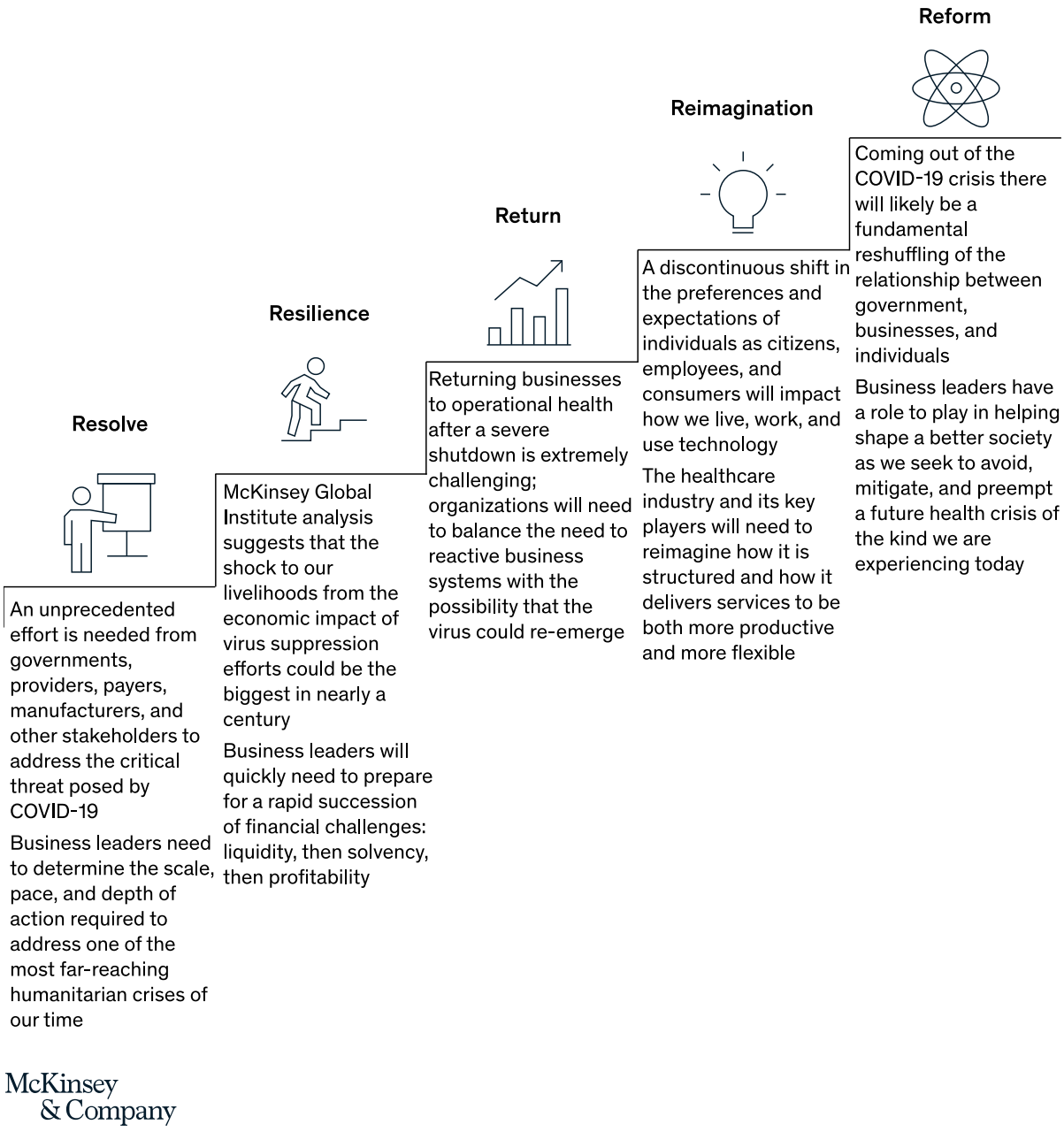
Many leaders now are beginning to recognize the importance of planning for the complicated return stage. Return from the lockdowns will not be easy—particularly as we remain vigilant against virus resurgence in the absence of a vaccine or treatment.



For some leaders, it has been difficult to dedicate much time to reimagination and reform. The pandemic is likely to result in a series of discontinuous changes that will fundamentally reshape healthcare. These changes include:

- The expectations and needs of individuals as citizens, consumers, patients, and employees
- The combination of resilience and productivity demanded by the funders of healthcare expenditure
- The need to be able to flex up and down care capacity and shift care across modalities, including virtual health platforms
- An opportunity to unlock the promise of exponential improvement through technology and medical science

Moreover, healthcare reform often has followed major economic shocks.



While there are an extensive set of issues for healthcare leaders to consider across each stage, below are some critical items to consider. A more extensive explanation for each stage can be viewed by clicking the link in the corresponding section.

Actions now

This is the time when boards and CEOs will likely have the greatest opportunity in their careers to positively impact their organizations and the communities they serve. This opportunity should not be squandered. Boards and CEOs should prioritize creating an environment where decisions are made calmly and based on facts. Second, given the high degree of continuing uncertainty, leaders should ensure they are actively tuned into the real-time information from all levels in their organization, plus outside forces, to inform decisions. Finally, the ability to act, innovate, and execute at scale at previously unheard-of speeds likely will be critical. We have observed many examples of organizations that have accelerated projects scheduled to take months and years to a timeline of a few days and weeks.

An important aspect will be for CEOs to organize their management team to act against each of the five stages. Each organization will need to make this decision individually, but we see three guidelines for selecting accountable leaders. First, CEOs must be able to trust the accountable leader's judgment within the role's decision-making context, particularly in this speedy and uncertain climate. Second, the accountable leader should directly report to the CEO. This reporting relationship does not need to have been a preestablished one and can be created ad hoc during this crisis. Third, CEOs must ensure that accountable leaders are motivated by a deeper resolve, whether it be to address the humanitarian crisis, or to protect the team and workers within the organization.

Five Stages To Plan For

1. **Resolve: How organizations can structure a Nerve Center to combat COVID-19**
2. **Resilience: How the economic impact may affect healthcare organizations over time**
3. **Return: How organizations can begin to scale up operations once the worst of the crisis is over**
4. **Reimagine: How we can fundamentally reinvent health services given what we have learned**

5. **Reform: How will the relationship between government, businesses, and individuals change?**

Phase 1

Resolve: How organizations can structure a Nerve Center to combat COVID-19

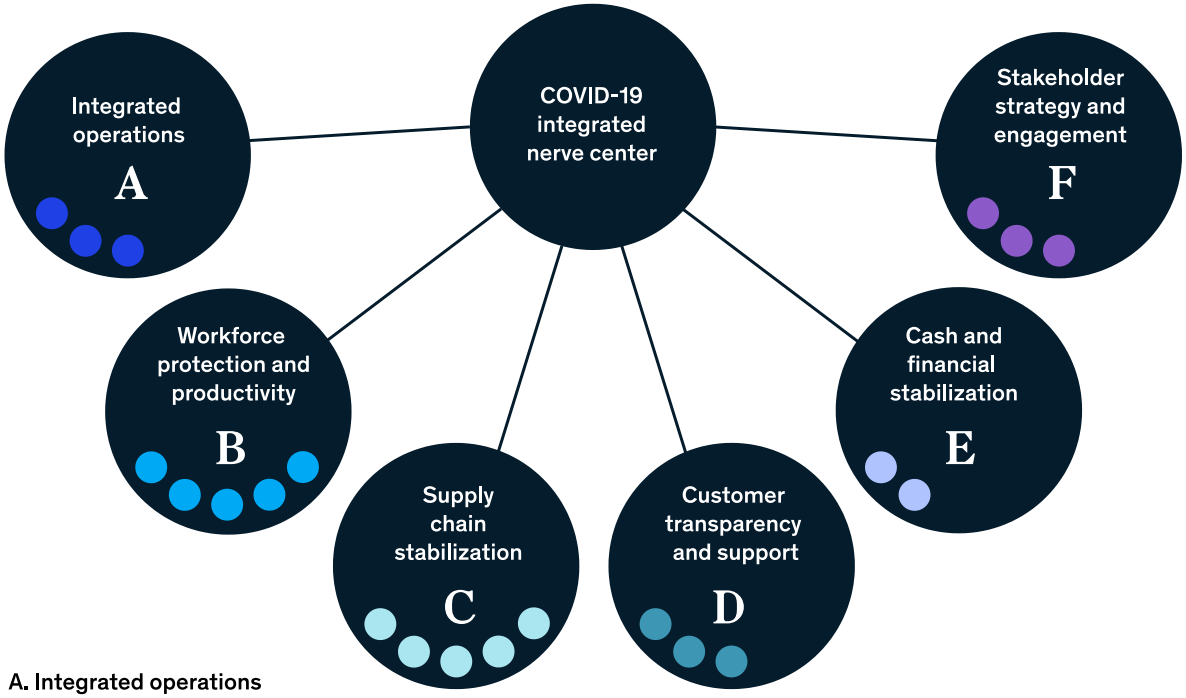
Globally, crisis response efforts are in full swing. Healthcare systems are doing everything in their power to increase capacity of beds, supplies, and trained workers. Related organizations are assisting with the consumer, technology, financing, and policy elements of the response.

Exhibit 1

PHASE 1: RESOLVE

Overview of responsibilities for the minimum viable nerve center.

Based on discussions with health and risk professionals



A. Integrated operations

Issue map & management	Single source of truth for issue resolution and tapping surge resources where needed
Porfolio of actions	Trigger-based portfolio of actions
Leadership alignment	Align leaders on scenarios | Roundtable exercises

B. Workforce protection and productivity

Policy & management	Policies | Portfolio of actions including prevention | Escalation criteria and process
Two-way communication	Multichannel communications | Confidential reporting mechanisms | Source of truth
Personnel & contractors	Tiering (all/some/no WFH) | WFH infrastructure setup (VPN, telephony) | Contractor incentives
Facility & onsite norms	Staggering work shifts/times | Prevention (eg, physical distancing) | Closures
Health & govt engagement	Local and federal regulators and public health officials

C. Supply chain stabilization

Supplier engagement	Cross-tier risk transparency | Supplier restart | Order management | New supplier qualifications
Inventory management	Critical part identification | Parts rationing | Location optimization
Production & operations	Operational impact assessment | Production capacity optimization
Demand management	S&OP SKU-level demand signal estimates by macro scenario | Production and sourcing plans
Logistics	Ports | Logistics capacity pre-booking | Route optimization

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D. Customer transparency and support

B2B transparency	Comms to B2B customers (eg, microsite) | Scenario-based risk comms
Customer protection	Prevention interventions across customer journey | Customer team training | Execution monitoring
Customer outreach	Customer comms re: COVID-practices | Fact-based reports on issues | Situation comms

E. Cash & financial stabilization

Scenario definition	Relevant scenarios based on latest epidemiological and economic outlooks
Financial stress tests	Financials in different scenarios, especially working capital requirements

F. Stakeholder strategy and engagement

Member protection	Protective interventions across member journey | Execution monitoring | Access to care/testing
Demand responsiveness	Reaction to member's demand signals | Flexible product and service forecasting
Provider support	Comms re: COVID-practices | Fact-based reports on issues | Situation comms

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At this stage, all organizations should have a fully operational nerve center focused on major areas of operational continuity. There are several themes that are relevant across geographies:

First, assess and expand supply & care capacity[1] —Immediately expanding access to care (for example, ICU beds), medical equipment (such as PPE, ventilators, oxygen, testing equipment), and an appropriately trained workforce (for example, ICU nurses) are imperative to meet the critical care demand surge. Addressing supply and demand mismatch is paramount. Freeing up critical care capacity (for example, deferring elective procedures, moving non-COVID-19 patients to alternate sites), building alternate capacity (such as converting ambulatory surgery centers, unstaffed floors, physical therapy space, outpatient facilities, and non-healthcare facilities), plus delivering appropriate care in nonacute settings (for example, home care and telehealth) are all important.

Fortifying the supply chain also is critical. Usage of certain supplies has grown exponentially. For example, PPE usage has grown in terms of volume of users, moving beyond healthcare workers to include transport workers and police. The settings also have expanded, with those in areas such as hospital waiting rooms using PPE. Organizations should prepare a list of key

supplies, equipment, tests, and drugs, understand usage rates, and establish supply conservation protocols. Organizations should consider sourcing directly from manufacturers, in-house production, and protocols for supplies sterilization and reuse.

Second, adapt care delivery models—Ensure clinical protocols are rapidly established based on emerging data and experience. These new protocols could include expansion of home-based services, engaging patients with chronic conditions using technology, creating dedicated COVID-19 treatment/triage sites of care (for example, offsite ambulatory/drive-through testing), and rescheduling nonemergent procedures.

Third, lower financial barriers where they exist—Consider eliminating out-of-pocket payment for COVID-19 patients. This may involve extending government funding for testing and treatment in countries without broad health insurance coverage. It also may include elimination of cost sharing and out-of-network restrictions for testing and treatment within health insurance.

Fourth, provide COVID-19-specific guidance—Develop new guidelines to ensure access across different sites of care for both diagnostic testing and treatment of COVID-19. Communicate these new guidelines through multiple distribution channels, such as responding to inquiries at call centers, to ensure individuals are aware of guidelines and are actively seeking appropriate care.

Fifth, provide guidance for non-COVID-19 healthcare—Minimize barriers for non-COVID-19 acute and chronic care. This may include ensuring all patients who need care can receive it quickly without needing to navigate complex pre-approval processes and ensuring prescriptions can be refilled through automated delivery services. Encourage alternative and remote care options (for example, telemedicine, home-based monitoring) to preserve system capacity for COVID-19 patients.

Phase 2

Resilience: How the economic impact may affect healthcare organizations over time

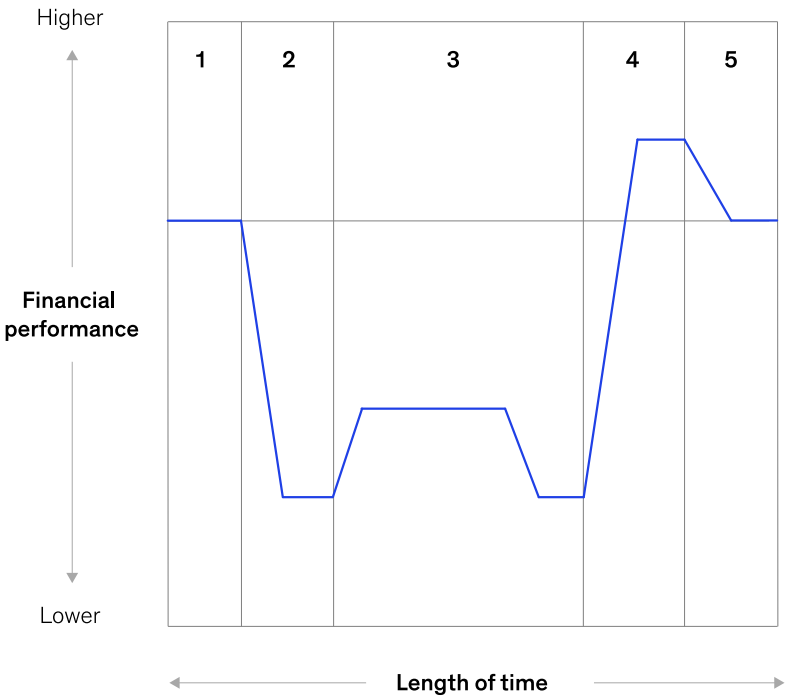
Recent McKinsey Global Institute analysis suggests that the shock to our livelihoods from the economic impact of virus suppression efforts could be the biggest in nearly a century.[2] We see three distinct but overlapping sets of issues for which healthcare leaders will need to prepare as the crisis unfolds: maintain liquidity, address solvency, and grow for sustainability.

Exhibit 2

PHASE 2: RESILIENCE

Long-term impact of COVID on a typical health system's operating margin.

Financial performance over time (provider example)



1. Pre-COVID-19 performance

2. Elective, ED, and AMB volume decline, prior to COVID-19 ramp-up

3. COVID-19 impact: Ramp-up, plateau, and decline, with continued elective volume loss

4. Elective recapture following COVID-19 resolution

5. Elective volume stabilization following support of COVID-19 pent-up demand

Keys to resilience

Maintain liquidity

- Providers face immediate threats to their cash position, being harmed from multiple, compounding angles
- Payers face a distinct but similarly challenging position to their liquidity
- Services firms will face a variety of competing forces that impact cash position

Address solvency

- Businesses will need to take aggressive action to remain solvent—must be careful not to over-index on debt covenants tied to liquidity, missing those tied to solvency
- For payers it is not difficult to imagine a sequence of events leading to insolvency
- Other types of healthcare organizations may face a similar set of solvency issues that result from a combination of declining asset values and increasing expenses and liabilities

Grow for sustainability

Organizations that survive the liquidity and solvency issues will have an opportunity to reshape the healthcare system. While strategies vary, themes emerge:

- Acquiring strategic assets, partnering to create/fortify ecosystem, responding to coverage shifts, capitalizing on moves toward digital therapies and care delivery, tightening relationships with public-sector agencies, embedding advanced analytics in operations *(In the United States, government assistance has focused on boosting providers' resiliency)*

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Maintain liquidity

All businesses need cash flow models to identify when their "cash crunch" is coming. Addressing this cash crunch will take different forms among different healthcare institutions:

Providers face immediate threats to their cash position, facing headwinds from multiple, compounding angles. The pandemic already has caused providers to be severely impacted. In response to regulators' guidance, many hospitals eliminated scheduled (often described as "elective") procedures—which tend to be prepaid and sources of predictable cash flow—to make capacity available for an anticipated surge of COVID-19 cases. As a result, net service revenue has declined as much as 50 percent for hospitals in communities that have not yet seen a surge in COVID-19. At the same time, many hospitals have faced increasing costs in the form of labor, such as overtime, and other external spend (for example, off-contract PPE purchases). Physician practices, both independent and those employed by health systems, have faced a significant reduction in volume as patients practice physical distancing. Hospitals also report that emergency room volumes for conditions such as stroke, chest pain, and appendicitis have declined as well, with cases appearing later in the course of illness that are more serious. These forces, combined with the possibility that consumers and payers may delay or default on payments due to their own cash flow constraints, result in significant pressure on provider liquidity.

Payers are experiencing a temporary reduction in claims spend, with growing challenges around cash management. Deferment of nonemergent utilization, such as joint replacements, and elimination of certain emergent spend, such as trauma cases, is creating a temporary but strong reduction in medical claims spend. This short-term boost in cash flow is being offset by reduced access to credit, a decrease in market-to-market value of investment portfolios, and impairment from other balance sheet liabilities. Shocks to provider economics could further create need for advance payments, bridge loans, or other cash flow acceleration requirements to assist providers. In addition, many payers are facing delays or reductions in premium payments (for example, "premium relief") as a result of government intervention, customer negotiation, or self-driven interventions for community support. Further, in the event that self-insured customers go into bankruptcy, payers may be required to backstop unpaid provider payments.

Services firms face large variation in volume and cash flow. Many services firms will be impacted by shifts in enrollment across traditional payer segments. Those in the United States that play in Medicaid and Individual markets are expected to see additional volume. Those focused on traditional commercial group segments likely will see a reduction in demand. Service firms will likely be squeezed by cash-constrained purchasers seeking to renegotiate contracts and move to lower tiers of service. Companies with payments tied to value delivery may face longer-lasting liquidity issues: healthcare delivery is not expected to return to normal volumes and mix until long after COVID-19 has been stemmed.

Address solvency

Following or concurrent with liquidity challenges, businesses should consider aggressive action to remain solvent. While these actions sometimes involve addressing a set of issues similar to those described regarding maintaining liquidity, there are additional distinct challenges. For example, while an organization may have sufficient cash, it likely will need to address declining operating performance, diminished investment portfolio valuation, and degradation of the balance sheet that results in rating agency actions. The latter could then trigger debt covenants and penalties that undermine the organization's solvency.

For smaller providers, addressing solvency can be particularly challenging. The uncertainty of the length of the COVID-19 crisis and magnitude of supplemental funding (such as those funds connected to the Coronavirus Aid, Relief, and Economic Security (CARES) Act) makes planning extremely difficult for independent physician practices, home health agencies, and ancillary healthcare providers, such as dentists and optometrists. While these challenges will exist for larger providers, stronger balance sheets often make them more able to weather the impact.

For payers, it is not difficult to imagine a sequence of events that challenge solvency. For example, during an economic downturn it is expected that members will shift from self-insured segments to fully insured segments (for example, from administrative services only (ASO) to fully insured group, Individual, and Medicaid). These new fully insured members require greater capital reserves compared to self-insured members. At the same time, during an economic downturn the value of the payer's reserves, to the extent they are connected to equities or other markets, will likely decline in value. These effects combine to significantly

reduce the payer's capital reserve ratio (such as "risk-based capital" in the United States). All of these factors together can trigger debt covenants and penalties that leave the payer underwater.

To address these solvency challenges, organizations of all types may seek to make efforts to offset the impact on operating performance while simultaneously strengthening the balance sheet. First, organizations should seek to materially improve productivity and efficiency. We have previously assessed that $1.2 trillion to $2.3 trillion could be saved over the next decade if healthcare delivery were to move to a productivity-driven growth model. This assessment suggests there are ample opportunities to improve productivity and efficiency.[3] At the same time, organizations may consider revisiting and recalibrating their capital plans in light of the current crisis to ensure investments strike the appropriate balance between directly responding to COVID-19, addressing the aforementioned solvency concerns, and growing for sustainability.

Grow for sustainability

Organizations that maintain liquidity and address solvency may be more equipped to shape a healthcare system that better serves individuals and their healthcare needs, while preparing the organization's own position in future crises. While specific strategies may vary, growing sustainably often will touch on similar themes:

- **Address shifts in volume and economics.** Organizations may consider actively rebalancing their portfolio and capital allocation decisions to take advantage of anticipated changes to coverage and how services are delivered. For example, providers and services firms in the United States may need to dedicate resources to developing new models for serving Medicaid patients (given an anticipated influx of individuals with Medicaid coverage) where historically the economics have been challenging.
- **Respond to shifts in care delivery model.** The COVID-19 pandemic likely will lead to lasting changes to how care is delivered. Individuals may be more receptive to remote or technology-enabled models, including digital therapies and telehealth. Payers,

providers, and service organizations that develop or acquire capabilities to better serve their customers with remote models likely will be well positioned for future growth.

- **Shore up capabilities in digital and analytics.** There remains a tremendous untapped opportunity in healthcare to deploy digital technology and advanced analytic capabilities to improve operations and effectively orchestrate care delivery. For example, payers that have more sophisticated product, pricing, and underwriting models powered by advanced analytics may be better able to retain customers during a downturn and grow new business coming out of a downturn.

Phase 3

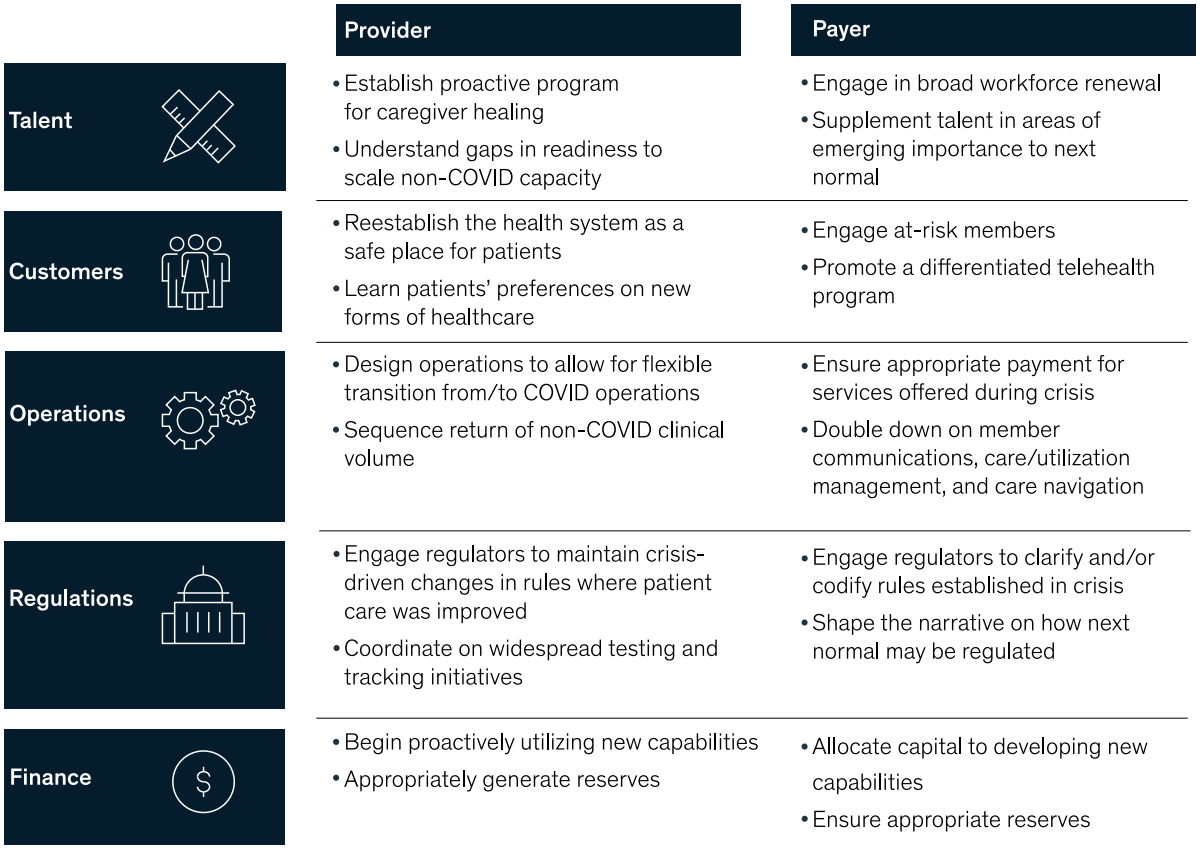
Return: How organizations can begin to scale up operations once the worst of the crisis is over

Many industries will face the challenge of returning business to normal as the COVID-19 crisis subsides, but for healthcare organizations it will be even more complex. Given the possibility of subsequent waves of coronavirus, organizations will need to define new ways of working to prevent, identify, report, and contain future flareups.

Exhibit 3

PHASE 3: RETURN

Providers and payers can take steps across their organization to reactivate non-COVID capacity.



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Providers will need to continuously rebalance the retention of capacity for ongoing COVID-19 volume. This requires maintenance of excess demand/flexibility in case of a COVID-19 resurgence and capacity for addressing pent-up demand for non-COVID-19 services. Providers should ask themselves:

1. What should my testing/tracing/isolation strategy be and how do I effectively collaborate with payer and government partners?
2. How much capacity do I need in reserve for various resurgence scenarios?

3. How do I maintain resurgence capacity and what does that look like?

4. How do I revert to managing non-COVID-19 care?

Testing, tracing, and isolation strategies should be scaled based on demand modeling, recognizing that there is still significant uncertainty around any demand estimate. Approaches should then be standardized via clear protocols. The most effective protocols will start the "funnel" at the patient's home. Providers, in collaboration with their payer partners, could use member education channels and have detailed plans for using telehealth and remote monitoring capabilities, along with home care. After testing, the handoff between stakeholders and transition from testing to tracing is critical. Providers may need to coordinate tightly with government agencies to share information that allows for rapid and effective tracing, subject to relevant privacy laws and norms. Simultaneously, providers will need to send and receive a constant flow of information from government agencies on tracing progress, while ensuring appropriate privacy safeguards. This will let them understand the current state of the epidemic, refine testing strategies, and inform plans to ramp up non-COVID-19 volume.

Staying prepared for resurgence scenarios would start with a multi-scenario modeling exercise, likely first with a broader industry model, but then localized to each community. Localized modeling should consider the prior experiences of similar communities. It would need to be developed collaboratively with local authorities who may already be creating isolation protocols in a resurgence scenario. Resurgence scenarios may loop back into testing, tracing, and isolation strategies.

Maintaining resurgence capacity will, in many localities, look much like solidification of existing capacity. Talent teams should quickly launch retention, renewal, and recruiting strategies. These strategies may include "readiness/burnout" testing to proactive "caregiver healing" offerings (for example, onsite child care). One possibility is that regulators allow crisis-driven rule changes that created capacity flexibility (for example, telehealth reimbursement parity). Providers, with regulator engagement, may consider exploring keeping alternative sites (such as field hospitals) without creating undue cost/workforce pressure. Other localities less affected by the first COVID-19 wave should prepare by replicating many of these new ways of working.

Reverting to non-COVID-19 care will require extensive planning and market testing. This starts with prioritizing services for non-COVID-19 patients based on health impact, urgency, staff and bed capacity and recognizing that some patients may prefer to receive care remotely. Providers will need to work closely with public- and private-sector payers in addressing pent-up demand while avoiding financial harm to individual organizations.

Payers will need to answer similar questions:

a. What steps are required to reinforce and align providers against best-practices for testing, tracing, and isolation?

b. What do resurgence scenarios look like?

c. What policies should be adopted to reinforce provider capacity and quality of care delivery in case of a resurgence?

d. How should I prepare for incoming volume of non-COVID-19 care and shifts in payer coverage?

Payers will have a major role to play in reinforcing and aligning providers with practices for testing, tracing, and isolation. First, payers need to create appropriate reimbursement policies and incentives for providers to build the capabilities that allow for starting the testing/tracing/isolation “funnel” at the patient’s home. Further, by acting as a conduit for knowledge sharing between providers, payers can cascade best practices and create shared guidelines. These guidelines should feed customer engagement channels in order to reinforce communications from providers regarding preventive care tactics and when and how patients should seek testing. Payers should consider means of further incentivizing proper member behavior, as well as directly engaging at-risk members. Finally, payers may consider acting as advocates and conveners to help establish key partnerships (for example, group purchasing organizations for test kits).

When modeling resurgence scenarios, payers should work with local providers to share data and analytics resources. These relationships are important as providers can share more real-time data and qualitative inputs, while payers can bring a broader data set (for example, by coordinating across providers) and analytics talent. Modeling outputs will inform both provider and payer capacity and financial planning.

In addition to enabling provider capacity, payers may seek to incentivize ways to ensure quality of care delivery in the event of a COVID-19 resurgence. These practices will start with establishing appropriate documentation, adjudication, and payment protocols for procedures conducted during the crisis. Establishing new reimbursement rules for alternative sites and alternative staffing for services will serve to reinforce best practices that providers should pursue in capacity maintenance. Finally, payers can engage and educate regulators on new standards and lessons, such as with digital therapeutics.

A return to normal for payers will not only involve preparing for non-COVID-19 care volume, but also adapting to expected shifts in payer coverage, depending on geography. Payers will have a key role in ensuring the sustainability of the healthcare ecosystem and eliminating bottlenecks to minimize patient harm. Financial modeling will need to consider pent-up volume, possible increases in medical costs resulting from delayed non-COVID-19 treatments and procedures, changes in reimbursement based on (potentially new) coverage, and next normal procedures and volumes (for example, telemedicine and greater mail-order pharmacy volumes).

Modeling insights should cascade into actions to (1) enhance internal operations to reduce bottlenecks in the system, (2) create data-sharing protocols, and (3) engage regulators to curb unintended risks to the system at-large. First, payer talent teams should engage in broader workforce renewal similar to providers, while also reskilling and restaffing for new spikes from pent-up demand. For example, clinical staff involved in prior authorizations will need to be trained/redirected to an expected increase in at-home care delivery. Next, changes to a member's insurer or coverage will require new data-sharing pipes internally and externally. These actions will ensure member information continues to be integrated into care and does not cause breaks in payer and provider workflows. Finally, payers may seek to actively monitor risk-of-care access, cost, and quality at the system level against unintended consequences. For example, payers could help regulators identify risks of pent-up volume going to low quality sites of care, curbing these trends proactively.

Phase 4

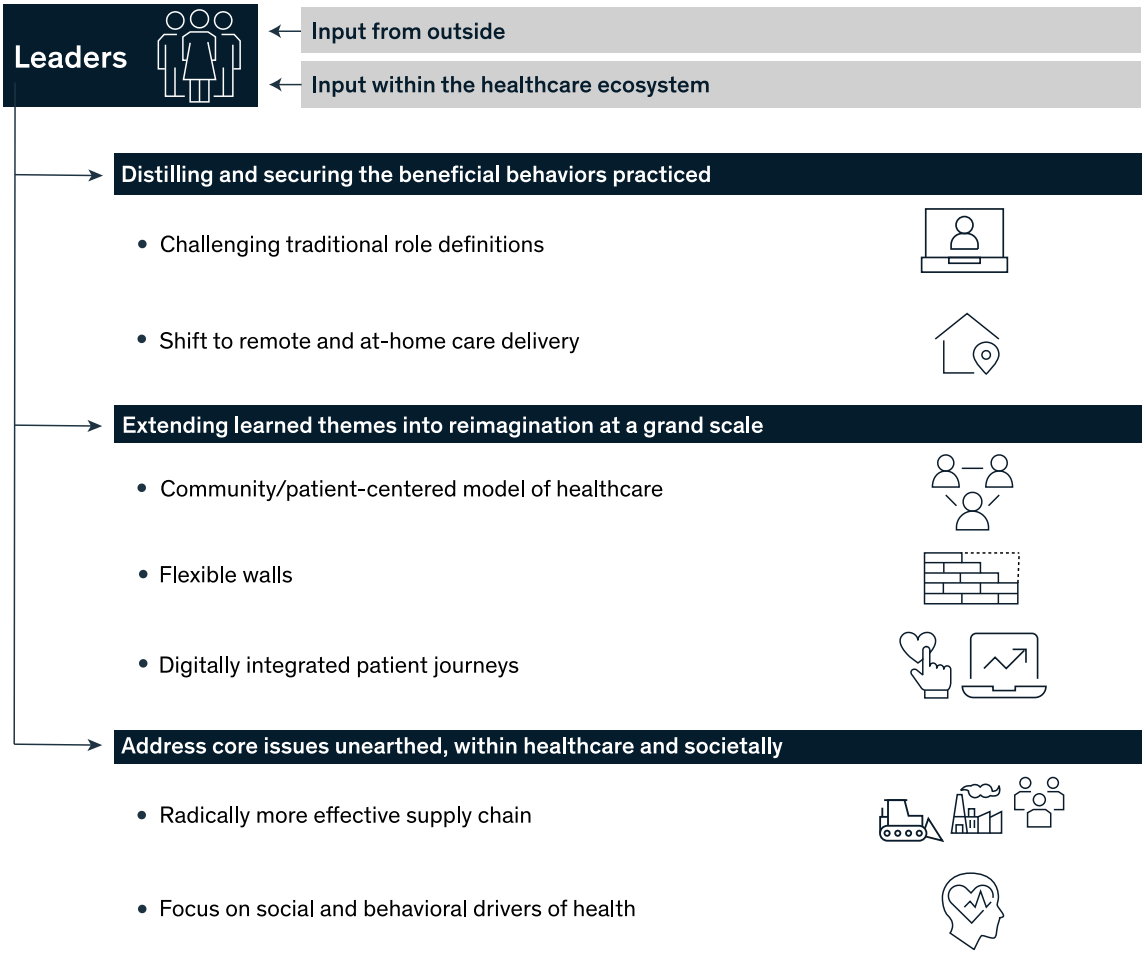
Reimagine: How we can fundamentally reinvent health services given what we have learned

Reimagining healthcare systems and services will require the imagination of many. The innovation and resourcefulness of healthcare organizations in the immediate response to this crisis is inspiring. This crisis has revealed not just vulnerabilities in our systems, but also transformative opportunities to improve healthcare. During this crisis, leaders have had to reexamine their understanding of how and where care can be provided, of how and where professional boundaries are truly fixed versus flexible, of which costs are truly fixed versus variable, which resources are nice to have versus required.

Exhibit 4

PHASE 4: REIMAGINE

How can we fundamentally reinvent health services in a different way?



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Many of the changes in healthcare delivery adopted during the coronavirus crisis will also result in more productive healthcare services—something much needed in many healthcare systems globally.[4] Going forward, systems must find ways to (1) create a system capable of rapidly flexing up critical care capacity, (2) strengthen resiliency across all parts of the healthcare system, and (3) improve productivity.

To reimagine healthcare, we would suggest healthcare leaders focus on three emerging themes.

Distilling and securing the beneficial behaviors practiced

Challenging traditional role definitions. Healthcare productivity remains restricted by shortages of appropriately trained clinical staff and the continued prevalence of inefficient and highly manual activities. It is imperative to improve efficiency by giving nonclinical staff the capabilities to take on basic but critical activities and unlock clinician capacity for more advanced functions. The crisis has also shown that as demand for services in many specialties declined, the overall demand for clinicians increased and ability to redeploy across specialties has been an important unlock.

Shift to remote and at-home care delivery. Over the past few weeks we have observed a rapid adoption of remote consultations and telehealth. Constraints, either regulatory or consumer/clinician willingness to try, have relaxed and may be sustained. Similar trends can be seen across digital therapies, remote monitoring, and select at-home hospital procedures.

Permanently embed speed of decision making and execution. Most organizations have found that decisions that took weeks or months were now taking a matter of days. Cross-organizational collaboration has been easier. Stakeholders have benefited from the clarity of focus on the mission. Distilling the learning from the crisis to permanently adopt new ways of working will be important. The scale of change unleashed by the crisis will restructure healthcare over many months and years.

Extending learned themes into reimagination at a grand scale

Community/patient-centered model of healthcare. As traditional roles in healthcare delivery are shifting, so too should the care models. The current crisis has highlighted how challenging it can be for individuals to interact with the healthcare system and receive consistent, personalized guidance and understand care alternatives. The solution could be reorientation around community and patient needs. Healthcare organizations can facilitate this change in many ways, primarily by shifting focus away from traditional sites of care and departments and onto integrated care settings and hub-and-spoke models that address patients' needs.

Data sharing. There is a crucial need for real-time data on patients presenting with symptoms of coronavirus, hospital admissions and use of critical care is crucial to monitoring the spread of the virus and demands for healthcare services. This will continue to be important as isolation measures are lifted to identify emerging resurgences as well as to identify the degree to which non COVID-19 care can be safely provided.

Flexible walls. The challenge of traditional roles can be extended to traditional definitions of facilities and clinics. Despite the range of geographical variation in hospital utilization,[5] recent weeks have demonstrated that capacity remains a global constraint in times of crisis. There is an opportunity to redesign the healthcare system by redefining the boundaries of traditional care settings to enable flexibility across sites of care. Facilities should be able to dynamically scale up or scale down capacity at different acuity levels to respond to changing needs. To facilitate this rapid scaling, health systems should pre-identify alternative sites of care with clear protocols, partnerships (if applicable), and tiers of escalation to respond rapidly in times of crisis.

Digitally integrated patient journeys. The rapid adoption of digital care delivery and remote monitoring has reduced skepticism and shortened adoption curves for care pathways and analytics-based, personalized patient journeys that benefit the patient, staff, and organizations. "Consumerism" sentiment may yet extend further into an expectation of such digitally integrated care.

Addressing core issues unearthed, within healthcare and societally

Radically more resilient, transparent, and efficient supply chain. Existing healthcare supply chains failed to adequately respond to the world's surge in need for critical medical supplies. There is a critical need to redefine models that enable scalable, agile production and optimized distribution based on both actual and anticipated needs. Alternative suppliers are being leveraged today, but this is not yet fundamental supply chain reimagination. Future steps could include governments rewarding producers for being able to scale up production of critical inputs to patient care in a time of crisis, providers and governments maintaining greater minimum levels of critical items (such as ventilators and PPE), as well as requirements to build intentional redundancy into supply sources to reduce concentration in any one geography. The consumer retail supply chain was redesigned in the 1990s to be able to provide transparency of inventory from the retail store shelves to the factory floor and everything in between. The medical supply chain, lacking such transparency, has been shown to have significant challenges in dynamically adjusting to demand or supply shocks.

Focus on holistic drivers of health. Addressing social needs (for example, affordable nutritious food, safe housing, social support[6]) and behavioral health (including mental health and substance use) needs[7] has proven meaningful in improving health even before COVID-19. This is all the more important in times of crisis, when latent demand and increased societal stressors exacerbate social and behavioral health needs.[8] The current healthcare system focuses on physical health and often does not adequately address social and behavioral health needs. Mental distress also is shown to exacerbate physical health symptoms, further increasing underlying risk. Furthermore, obesity has been shown to increase risk and severity of exacerbations from viral respiratory infections (and well understood to result in a variety of health issues). Helping patients holistically manage their health and well-being with interventions to address physical, behavioral, and social health should be prioritized with renewed vigor. Enhancing the productivity and resiliency of our communities requires explicit collaboration between payers, providers, local community agencies, and private, non-healthcare enterprises. Practically, this will mean reimagining the scope of what we define as "healthcare," blending-in models oriented around behavioral health and social needs such as social support, food security, housing, and wellness.

Even as we describe the above emerging themes, many unknowns remain on ways in which healthcare will be fundamentally reshaped post-COVID. As such, the successful "reimaginers" may share a few traits:

- The ability to continually develop ahead of the market insight and foresight into the changing needs and preferences of individuals—as citizens, workers, and consumers—will shift under COVID-19. Steve Jobs, the late Apple CEO, was able to see that consumers would build an inseparable relationship with smartphones well before consumers knew they wanted one.
- The skill to translate how broad societal expectations will manifest themselves in government regulations.
- An innovation engine to translate these insights into changes in their current business models, creating entirely new businesses and altering business models of adjacent businesses.
- Superior execution capabilities to bring innovations to market and scale them faster than anyone else.

Phase 5

Reform: How will the relationship between government, businesses, and individuals change?

In most geographies, the basic structure of the healthcare system has only marginally changed since World War II. The COVID-19 crisis highlights the need to determine how to meet a rapid surge in patient volume while managing seamlessly across in-person and virtual care. Public health approaches, in an interconnected and highly mobile world, must rethink the speed and global coordination with which they need to react. Policies on critical healthcare infrastructure, strategic reserves of key supplies, and contingency production facilities for critical medical equipment will need to be addressed.

Coming out of this crisis, the relationship between government, businesses, and individuals will be reshuffled in a fundamental way—especially in the context of health and wellness. Healthcare leaders need to anticipate changes to policies and regulations as society seeks to avoid, mitigate, and preempt a future health crisis.

Exhibit 5

PHASE 5: REFORM

How will the relationship between government, businesses, and individuals change?

There are several actions many governments may pursue to be prepared for a future crisis:

A handful of reforms have already been enacted that may result in longer-term structural changes to the industry:

- Allowing the permanent, direct hire of National Disaster Medical System healthcare
- Limiting out-of-pocket cost-sharing for COVID testing
- Adjusting CMS regulations to permit use of telehealth

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Given this context, governments may pursue several actions to prepare for a future crisis:

Acceptance of new monitoring techniques. The variation in responses and outcomes across countries, combined with the significant humanitarian impact from COVID-19, will likely make monitoring techniques, such as digital applications specifically for pandemics and temperature taking, more accepted and ubiquitous to prevent and mitigate future pandemics.

Data interoperability as a renewed priority. Similar to greater acceptance of new monitoring techniques, a reinvigorated focus will be placed on data interoperability and reduced latency that improves responsiveness for drug and vaccine development, and the creation and rollout of treatment protocols.

Strategic reserve of supplies and agile manufacturing.[9] The shortage of PPE during the COVID-19 crisis likely will lead to new efforts to build large reserves of necessary supplies for a variety of pandemic scenarios as well as regulation and incentives to enable manufacturing to quickly ramp up production.

Emergency medical force.[ ] Shortages of clinicians could result in governments creating something akin to a "Medical National Guard" that can help fill critical labor shortages in times of extreme need; widespread basic training of nonclinical staff and lay people could free clinicians to perform more advanced procedures.

Multilayer coordination in response efforts. The challenges coordinating across multiple layers of government (local, state/provincial, federal, global health) will cause governments to rethink how crises are managed to enable faster, more consistent decision making. Governments may need to establish protocols to pool clinical resources in times of crisis.

Standardization of currently fragmented medical systems. Difficulty in executing a consistent response across health systems of varying sizes and capabilities may result in a push to standardize health systems on multiple fronts (for example, clinician licensing, data sharing, procedure cost and reimbursement).

Heightened expectations of financial protection. Emergency government action to shield patients from COVID-related costs may spark broader healthcare reform to make healthcare more affordable in countries such as the United States. Providers will similarly expect new protections to reduce focus on liquidity and solvency in times of crises. In addition to these important but relatively modest reforms, the likelihood of transformational government reform of the healthcare system has become more probable. For many years, a broad range of

stakeholders has been paying into a system that, while inefficient and expensive, was presumed to be able to deliver top quality care. When the immediate COVID-19 crisis has resolved itself, providers may face a public discouraged with the healthcare system.

Furthermore, it is likely, if not certain, that an economic downturn will result from the physical distancing measures and shutdown of economies that have been deployed to contain the spread of coronavirus. Over the last 50 years in the United States, nearly every economic downturn was subsequently followed by significant regulatory change in the healthcare industry. For example, the dot-com bust of 2001 was quickly followed by the enactment of Medicare Advantage. The 2008–09 Great Recession was followed by the Affordable Care Act in 2010. This combination of dissatisfaction with the healthcare system's ability to respond in the current crisis and an economic downturn could be leading indicators of significant reform to come.

As we consider the scale of change that the coronavirus has engendered—and will continue to create in the weeks and months ahead—we feel compelled to reflect not just on a health crisis of immense proportion but also on an imminent restructuring of the healthcare industry in the future. The five stages described here offer healthcare leaders a path to begin navigating to the next normal—a normal that looks unlike any in the years preceding COVID-19, the pandemic that changed everything.

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