



BEST PRACTICE GUIDE

5 steps to responding to a crisis

Healthcare

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COVID-19's impact on healthcare

Setting a smart emergency preparedness strategy for healthcare organizations

Overnight, COVID-19 dramatically changed the way we live, work, and interact with each other. As various parts of the country have slowly reopened, the continued spread of COVID-19 requires hospitals to be “on the ready” across much of the United States. This guide provides five steps hospitals and health systems can take to respond to the current crisis while laying the groundwork for the “new normal” and support for the next crises that could arise.

As COVID-19 emerged, hospitals and health systems temporarily shut down or suspended elective procedures. While many of us were asked to shelter-in-place or practice social distancing for extended periods, essential employees could not. Provider organizations needed to not only respond, but also plan for any eventuality.

“ Many organizations are now actively dealing with the delay phase [of COVID-19], the realities of increased demands on and reprioritization of services. In addition, critical supply chains, staffing pools and reimbursement models are being tested and disrupted as a result of the wider impact on people, business and society.”

GARTNER

Healthcare Providers and COVID-19: Resources CIOs Can Use Right Now, March 2020.

Executive summary

In recent years, health systems have largely focused on improving clinical operations, yet what has come to light during the COVID-19 pandemic is that business engines also play a pivotal role in keeping systems running smoothly. Consider, though, a model for the future that combines next-gen clinical and business platforms that complement each other to optimize enterprise-wide value. When business systems are aligned with existing clinical investments they build and enhance organizational performance, accountability, and sustainability. In the process, they become the trusted source of financial management and support for timely decision-making.



Healthcare business platforms need to account for these functions:

- Staff scheduling
- Monitoring time and attendance
- Developing new skills for employees for future career paths
- Managing enterprise facilities
- Locating people, assets, and supplies
- Determining financial viability
- Meeting regulatory interoperability requirements
- Supporting diverse supply management models

With the onset of COVID-19, hospitals and health systems quickly faced an alarming set of challenges, and the impact on different organizations varied. While some hospitals and health systems had no infections, precautions still needed to be taken with changes to logistics to prevent the potential spread of COVID-19.

Some saw a rapid shift toward caring for those infected, and a need quickly developed to ramp up alternative offerings, such as telehealth for non-acute care. That, coupled with the daunting reality of lost revenue because of a temporary hold and decrease in elective procedures, created complicated business and clinical environments. For health systems that saw a rapid influx of patients, the challenge was managing potentially overwhelming costs and risks associated with caring for them.

Personal protective equipment (PPE) became scarce, sending alarm bells through the supply chain, creating waves of frustration and fear for everyone, from executives, to staff and patients. Along with health concerns for caregivers, apprehension over stress levels from patient overload and equipment shortages, anxiety over furloughs and layoffs, and ongoing worries of caregivers passing infection along to their own families became top of mind for leadership.

See the big healthcare picture

The numbers tell a clear picture that outlines what is happening within the healthcare landscape. Here are some examples:

\$1.9 billion to \$2.7 billion

Monthly revenue losses from reduction of knee and hip replacement procedures alone¹

\$130 billion

Paid to hospitals from a \$2 trillion stimulus bill²

60%

Decrease in ambulatory care visits among 50,000 providers³

63%

Physicians using some form of telehealth⁴

\$15 million

Awarded to 159 providers for telehealth training and expanded services⁵

21%

Increase in prescription use for anti-anxiety, depression, and sleeplessness prescriptions⁶

1.4 million

Healthcare workers who have lost their jobs during the pandemic⁷

17%

Drop in healthcare spending January-March 2020⁸

Setting a smart emergency preparedness strategy for healthcare organizations

Step 1: Source and manage supplies

As manufacturers scramble to ramp up production of items deemed most critical, there are still issues with the ability of hospitals and health systems to find and source limited products and supplies. Competing utilization has prompted a growing need to ensure only necessary, appropriate supplies and equipment are being used for the most urgent needs.

Just as they did pre-pandemic, healthcare supply chains continued to acquire, store, and manage available products. However, these organizations soon discovered that they also needed to rapidly adjust focus away from just-in-time (JIT) or lowest-unit-of-measure (LUM) operations to keep more equipment and supplies, such as PPE and ventilators, on hand and ready to use.⁹ Upstream visibility into supply chain distributors and manufacturers needed to pinpoint where products were in the ordering and fulfillment cycle, especially for critical supply items that are used to care for patients and keep caregivers safe.

Healthcare executives also quickly realized challenges with monitoring price increases, gouging, and counterfeit products. In some instances, pricing still has not rebounded to pre-pandemic levels—and it likely will not. Evolving clinical practices and protocols further complicated the demands on supply chains, as well as sourcing alternative supplies. There was a growing need to diversify product contracts to better meet current needs, and to store and manage supplies in sequestration to rebuild volumes.¹⁰

To mitigate these challenges healthcare supply chain managers rapidly adapted their review processes to change distribution and logistics strategies on the fly to predict and manage product use while evaluating patient case-mix.

The healthcare supply chain has imparted critical lessons during this crisis. It's more apparent than ever that healthcare organizations need to integrate their supply chains to help lower costs and improve outcomes. By connecting the ERP system to the EHR, supply chain management processes can be standardized, streamlined, and automated.

Recommended actions

Provider organizations would be well positioned to consider the implications of rushed supply and product approvals during any type of crisis, as well as managing significant recall burdens in the future. Right-sizing and diversifying inventory control and warehousing will boost the ability of organizations to access the right product or piece of equipment at the right time.

Most important for any type of emergency or disaster is the implementation of a supply management system that:

- Diversifies product choice and manufacturer relationships
- Restructures product contracts to include order fulfillment guarantees
- Builds more strategic relationships with vendors and monitors their performance
- Accounts for emerging guidelines as a crisis unfolds
- Invests in predictive modeling, forecasting, and demand planning
- Incorporates multi-factorial resupply and clinical equivalence purchasing
- Manages inventory, distribution, and logistics for critically needed supplies
- Moves from lowest unit of measure to diversified models based on product types and sourcing arrangements, or sets up a center for shared distribution between facilities
- Considers alternatives ranging from offshored manufacturing to “re-shored” and hybrid systems
- Secures goods and materials for potentially creating organization-specific product lines
- Identifies functional and clinical product equivalencies
- Predicts future needs with assessments conducted through predictive modeling and forecasting

Step 2: Nurture workforce needs

The pandemic has presented many challenges—the need to reskill workers quickly, create long-term remote workforce strategies, or furlough—in the healthcare workforce. However, there are strategies available to address these challenges and, in some cases, create new and improved experiences for staff.

Establishing a hybrid workforce

Outside the healthcare setting, workforce culture has been steadily changing. Many industries, despite facing some small challenges, were ready to jump into a remote workforce world. Even in healthcare we've witnessed slight shifts to work-from-home for business operations staff, but the healthcare organizations that were prepared to rapidly deploy and expand their remote workforce were few and far between. Not only were healthcare executives trying to pivot to manage patient populations remotely, these leaders also needed to understand how to effectively set up and manage remote workers in new roles.

Managers now need to support, motivate, and create a sense of belonging for a workforce that's both remote and on-site—all while keeping data and technology secure and compliant. Also, managers need support and training to lead hybrid teams as they determine which workers will stay remote and which will return. Successful managers will require the appropriate data sets and tools to identify the behavioral characteristics of successful remote workers.

Addressing childcare concerns

With shelter-in-place orders in some states or self-mandated shutdowns when outbreaks occur in other businesses, such as schools and day-care facilities, giving nurses the capacity to self-schedule and work on rotating schedules helps keep home and hospital life in balance. And most importantly while clinical staff are on duty, their continued focus must be on patient care—not completing paperwork or hunting for equipment.

Developing critical skills

The pandemic requires workers to reskill—fast—and be prepared for the next emergency. Leaders also need to be able to easily access key information about workforce skills so they can respond quickly and get the right people in the right roles as quickly as possible. This decision point is yet another opportunity to provide tools to quickly identify the behavioral characteristics that crisis workers need to successfully support their patients.

“ All kinds of hospital workers are getting new assignments: technologists, physical therapists, nurses, doctors, research assistants, administrative assistants, department heads, vice presidents, and more.”

PRIYANKA DAYAL MCCLUSKEY
Boston Globe Staff Writer¹¹

Creating positive workforce—and patient—experiences

Ultimately, workforce success is about creating an experience for clinical and non-clinical staff that in turn creates positive healing experiences for patients. Creating these experiences means provider organizations need to cultivate their workforce by hiring the right people in the right roles. Inclusion and diversity in hiring practices should reflect and support patient demographics, and all healthcare workers—regardless of their role—need to feel that they can do their jobs safely.

Recommended actions

If healthcare workers are unsatisfied with the culture of their organization, their role, or are concerned about their safety, they're more likely to leave. Reducing turnover by using science-driven flight risk indicators and continuous engagement becomes part of leadership's crucial workforce management strategies.

To create empowering experiences for the healthcare workforce, consider the following:

- Embed learning and development into ongoing performance and feedback discussions
- Build diverse talent pipelines to address staffing shortages (current and projected) and build an inclusive and diverse workforce
- Staff based on patient acuity to eliminate inequities
- Use technology to support a remote or hybrid workforce with engagement that includes regular check-ins, pulse surveys, recognition, and team building
- Create efficiencies in patient workflows and make rooms and equipment accessible to boost clinician satisfaction
- Ensure safety by providing employees with the right PPE
- Give managers the tools to lead a remote or hybrid workforce

Step 3: Analyze financial impact

In order to understand and analyze uncertainty in revenues across all service lines, healthcare finance teams have discovered the need for more agility. At the same time, they must make informed cost reduction decisions for employee and operational expense lines. Financial viability and stability have been difficult to maintain in an industry moving from volume to value, shifts in Medicare populations, accountable care organizations (ACOs), and many of the day-to-day occurrences experienced pre-pandemic.

Hospitals and health systems will continue to face increasing pressure to analyze crisis-related financial impacts on operations while managing liquidity, capital resources, reimbursement, government assistance, and patient safety concerns. Implications also need to be assessed with how patients engage with provider organizations as they access and receive healthcare in person or remotely. The pressure to understand financial consequences does not end there but calls for a predictive quality in order to understand the relational impact between potential financial burdens, ability to meet future demand, as well as the confidence in consumers' willingness and ability to pay for services.

On the other side of the healthcare equation, organizations have to monetize the cost of clinician burnout, as well as revenue lost from postponed elective procedures. Operating margins still need to be maintained amid supply chain disruptions and increased costs. Meanwhile, this entire moving healthcare landscape is being managed and accounted for with limited information, uncertainties from CARES Act legislation, FCCRA, payment uncertainties from CMS, and more.

Recommended actions

Hospitals and health systems can account for all these areas by embedding financial management, predictive analytics, executive dashboards, and accounting software with capacity and scenario modeling for insightful, strategic decision-making. The other ways financial systems can help organizations face the current pandemic and future crises are to:

- Guide and analyze treasury and cash management
- Understand accurate service line and departmental profitability
- Enable capital investment decisions based on ROI and payback calculations
- Assist in determining appropriate growth opportunities for development and investment; highlight unprofitable business lines to divest
- Manage merger and acquisition activity fluctuations
- Leverage accurate cost data to support value-based negotiations with payers
- Automate manual tasks
- Monitor governance risk and compliance
- Provide fraud management

For hospitals and health systems to continue functioning during this crisis or any future emergency, being able to analyze financial impacts of supply chain activities, staffing needs, and any other financial implications for your organization will help maintain a sense of stability now and in the future.





Step 4: Streamline workflows and automate contact tracing

During the current pandemic or other emergency, hospitals and health systems are laser focused on efficiency, quality, and especially safety. Being able to streamline workflows, improve care coordination, locate critical equipment, and contact trace all play prominent roles in keeping patients and caregivers safe.

Streamlining workflows, improving care coordination, and tracking equipment

In today's hectic, complex, hospital environment, being able to streamline workflows and improve care coordination can be the difference between life and death for critically ill patients. A unified lens into medical equipment, patients, and staff across the facility ensures that they are all in the right place at the right time yet it also poses significant challenges.

Searching for equipment is a consistent, facility-wide challenge, and a major patient safety risk due to the distraction and delays in care delivery as staff hunt for missing items. By minimizing the search process and revealing an insightful view into equipment location, status, time in location, proximity, and par level, caregivers can react to any patient situation that arises with speed and precision.

In addition, the maintenance of temperature sensitive equipment has long been a manual process for staff. Having a consistent, proactive way to manage this task with minute-to-minute monitoring of refrigerators, freezers, and warming cabinets provides automated compliance for the preservation and storage of pharmaceuticals, blood, and other biological specimens. The result is that caregivers are spending less time on administration and more time per shift working at the top of their licensure.

Contact tracing

One of the main ways to mitigate the spread of COVID-19 within a hospital, clinic, or other health setting is a rigorous infection control process. The need for infection management is not new, because tracking and containing infections have always been critical for healthcare organizations.¹² However, never have we seen the need to manage this level of contagion throughout all areas of the facility with so many unknowns.

Because coronavirus spreads so quickly, it's not uncommon for a patient to enter a hospital or clinic and unknowingly spread it through the air and on surfaces. Picture a COVID-19 patient walking in the emergency room or other waiting areas, and you can quickly see how in the course of admitting, patients come into contact with multiple pieces of equipment and surfaces, as well as interact with various staff, and possibly other patients.

Historically, tracing a patient through a facility was a painstaking manual process, and typically took hours and sometimes days with staff piecing together potential interactions. A lengthy, multi-step process like this creates significant inefficiencies and inaccuracies, while allowing contagion to continue to spread.

All of this is especially important as healthcare leaders work to control contact and reduce potential points of infection during the current pandemic, but more importantly, set them up for success with whatever crises may arise.



Recommended actions

Here are some actionable steps for improving workflow and contact tracing in a hospital or health system during the current pandemic, increasing preparedness for any future crises, and restoring confidence in patient safety.

- Maintain patient and staff safety by tracing their movements throughout the facility
- Develop a system that offers real-time reporting on patients, staff, and equipment locations
- Examine current workflows to determine where to achieve additional efficiencies
- Review protocols for maintaining and tracking equipment so inventory is up-to-date and ready to use
- Ensure clinical staff are working at the top-of-licensure, not spending time tracking down supplies and equipment, or maintaining temperature-sensitive environments

Step 5: Keep information flowing

The ability of provider organizations to offer a comprehensive and clinically complementary healthcare operations platform holds enormous value. Keeping information flowing will help them not only survive the current pandemic but be ready for any unexpected events.

Current clinical and business systems are not integrated well enough to easily support COVID-19 challenges or for that matter, typical day-to-day events, such as offering predictive analytics that link emergency department and primary care to bed, ventilator, staff, and PPE demand. The current healthcare ecosystem is not prepared to exchange data at scale, and interface and data standards were not configured to support pandemic surveillance, tracking and tracing. Not to mention the shift to telehealth that has brought requirements for rapid, new integrations.

“For the moment, many healthcare provider organizations have put aside long-term IT plans. CIOs must address the emergency directly in front of them. While they cannot lose sight of business objectives that are on the horizon, they must also focus on the critical issues in front of them today.”

GARTNER

Healthcare Provider CIO's Action Plan for COVID-19, April 2020.

Abiding by the rules

To keep information flowing to the right people at the right time in the healthcare ecosystem, a variety of things need to happen, and shifts are occurring with two prominent regulatory agencies.

First, the Office of the National Coordinator for Health Information Technology (ONC), published proposed EHR Certification Criteria that calls for a requirement to make a broad set of FHIR APIs available for patients and population health purposes. This helps address the shift toward consumerism that the industry is currently experiencing, where patients want more of their personal health information delivered via a consumer-grade experience in an understandable format.¹²

In a companion effort, the Centers for Medicare and Medicaid Services (CMS) issued a proposed rule addressing Conditions of Participation for many Medicare and Medicaid-related health plans. This would require them to implement FHIR API-based methods of making claims-based health records available to patients, other health plans, and other third-parties, thereby allowing technology developers to create new applications that enable individuals to use the data.

Both proposed rules are expected to be finalized soon. Their commonality is that they want to provide a summary or discrete component of a clinical record to a third party, largely as a means of reducing duplication, improving quality, and making providers more efficient.

Going beyond information exchange between clinical systems

While these rules offer a starting point for connecting clinical and business systems, healthcare is an inordinately complex ecosystem even within the four walls of a delivery organization. Hundreds of internal and external systems should be connected to interoperate.

Operational systems such as the supply chain must be integrated to EHRs, point of care systems, and finance to promote streamlining of healthcare operations—and to free hospital clinical staff from paper, phone, and fax purgatory. Furthermore, when the supply chain combines information with clinical data to support analytics, and leverage AI, it ultimately offers a broad understanding of the role of supply chain in value delivery and clinical outcomes.

Recommended actions

If the healthcare industry implements both technologies and policies to bring these combined clinical and operational data streams into analytics and AI-driven eco-systems, the resulting integrated workflows enable business systems to act as a clinical complement to the mission of healthcare.

Here are the key actions for keeping information flowing within a hospital or health system:

- Develop a cloud integration plan to address consumerism that offers patients access to their data
- Be ready to address regulatory changes that require or promote interoperability standards
- Work with partners to develop integrations for data and information sharing
- Be ready to scale and make changes in an evolving environment that includes telehealth and remote care monitoring

Final thoughts

COVID-19 has created immediate and long-term challenges that have led to swift and radical changes within hospitals and health systems. Healthcare is all about caring for people—with the most important goal of maintaining or improving health. In recent months, healthcare organizations have swiftly risen to a variety of challenges, and have worked together to support and learn from each other, as well as lean on their partners for guidance. Healthcare—now more than ever—is a diverse community working toward a common purpose.

The opportunities for driving better outcomes through aligned clinical and business platforms are manifold. A healthcare operations platform can create a functional convergence with clinical operations to enhance performance with patients and clinicians, as well as in diagnoses, procedures, and the revenue cycle. This will help hospitals and health systems maintain the functionality and flexibility needed to manage before, during, and after the COVID-19 pandemic—or any other crisis.

¹ "COVID-postponed joint replacements are costing U.S. health systems around \$2 billion monthly" [Fortune](#), August 6, 2020, Bernard J. Wolfson

² "Hospitals get \$100B in massive stimulus deal as facilities face COVID-19" [Fierce Healthcare](#), March 25, 2020, Robert King

³ "The Impact of the COVID-19 Pandemic on Outpatient Visits: A Rebound Emerges" [The Commonwealth Fund](#), May 19, 2020, Ateev Mehrotra, Michael Chernew, David Linetsky, Hilary Hatch, and David Cutler

⁴ "HHS Awards \$15 Million to 159 Providers for Telehealth Training, Expansion", [mHealthIntelligence](#), May 14, 2020, Eric Wicklund

⁵ "HHS Awards \$15 Million to 159 Providers for Telehealth Training, Expansion", [mHealthIntelligence](#), May 14, 2020, Eric Wicklund

⁶ "Prescriptions for antidepressants, anti-anxiety, anti-insomnia drugs jumps 21% post COVID-19" [Fierce Healthcare](#), April 16, 2020, Paige Minemyer

⁷ "Health-Care Industry Loses 1.4 Million Jobs in Pandemic" [Bloomberg](#), May 8, 2020, John Tozzi

⁸ "Table 1.5.1. Percent Change From Preceding Period in Real Gross Domestic Product, Expanded Detail" National Income and Product Account, [Bureau of Economic Analysis, US Department of Commerce](#)

⁹ "What. Went. Wrong? Supply Chain struggles with its early response to explosive coronavirus pandemic" [Healthcare Purchasing News](#), July 23, 2020, Rich Dana Barlow

¹⁰ "What. Went. Wrong? Supply Chain struggles with its early response to explosive coronavirus pandemic" [Healthcare Purchasing News](#), July 23, 2020, Rich Dana Barlow

¹¹ "Infectious Diseases", [Healthcare, Safety and Health Topics, Occupational and Safety Health Administration, US Department of Labor](#)

¹² "Healthcare's Age of Liquid Data: Extreme Interoperability Sparks Personalized, Real-Time, High-Value Services" [4sightHealth](#), May 28, 2020, Jeff Jones and David W. Johnson

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