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Leading Through COVID-19 and Beyond

A Compilation of Strategies

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How to Use this Guide

As the COVID-19 pandemic continues to evolve, emerging clinical practices and evidence to mitigate the impact are evolving as well. In times of crisis, different areas of focus are necessary. The purpose of this playbook is to offer our members critical information, emerging practices and recommendations to enable them to provide the best possible support and care to their clinicians and staff during these extraordinary times, and to rebuild after the crisis. We hope that the information below can assist in helping you navigate the current crisis and build healthy and engaged cultures and teams to serve your communities well into the future.

A broad range of implemented practices and guidelines were reviewed to create this compilation, which is divided into seven parts:

1. [Leading Through the Pandemic](#)
2. [Building Resilience to Weather the Pandemic and Beyond](#)
3. [Creating your Plan Ahead Team](#)
4. [Resuming Elective Surgeries](#)
5. [Digital Health's Breakout Moment?](#)
6. [Rethinking the Supply Chain](#)
7. [Buckling Down on Social Determinants of Health](#)

1. Leading Through the Pandemic

COVID-19's unfolding presents healthcare leaders with extraordinary challenges with no easy answers. In this unprecedented time, there needs to be focus on survival in the current moment while also working towards thriving in a future that will likely look very different than before the pandemic. Additionally, because of the unprecedented nature of this crisis, it is likely that leaders will make missteps throughout the process; what's key is how they respond and communicate, and ultimately pave a path forward for us all.

In Practice

Work simultaneously in the now and near-term while maintaining focus on the future

- In leading **Ford Motor Company** through a difficult turnaround, CEO Jim Hackett used the framework he developed in his previous role as CEO of Steelcase. Essentially, it challenges organizations to work simultaneously in [three-time dimensions](#), concentrating resources and attention equally in all three: Now, Near, and Far.
 - » **Now:** 'Be successful in the now and simultaneously make the critical pivot to the far.' For most, Now includes debt restructuring, cost-cutting, and protecting patients and staff.
 - » **Near:** 'Place bets on the future and pivot resources to support those bets.' Healthcare organizations are beginning to pivot to Near – revising budgets, putting off capital projects, re-thinking staffing, procurement, outsourcing, partnerships, and affiliations.
 - » **Far:** 'Envision a future state and future role, knowing that any prediction is uncertain and subject to change.' Argues that foresight about how things will be different and radical change in leadership thinking will be needed.
- **St. Luke's Health System** in Boise, Idaho had a new CEO at the helm at the beginning of the year. As the new CEO, Roth set goals for the organization and the health system created a [strategic plan](#) for 2020. When the virus hit, the system reorganized its [short-term strategy](#) to focus on the safe care of patients and safety of their staff, including having a great environment to work and practice in.

Communicate frequently with honesty and transparency

- Each day during the COVID-19 crisis, Dr. Craig Smith, Chair of the Department of Surgery, sends a [Columbia Department of Surgery](#) daily letter to faculty and staff about pandemic response and priorities. The updates give a day-by-day account of the pressures facing the health system as the outbreak unfolds. [The Wall Street Journal](#) called Smith “the pandemic’s most powerful writer.”
- **John Hopkins Bloomberg School of Public Health** provides [daily situation reports](#) on the status of the pandemic across the world.
- **University of Wisconsin Medicine** [standardized and streamlined their messaging](#) after some initial trial and error. They send daily community-wide emails, posts to their dedicated COVID-19 information site, video messages, and make recordings of their [virtual town halls](#) publicly available. Their town halls occur weekly on Zoom using a Q&A format as opposed to planned presentations, humanizing the leadership team.
- **McKinsey & Company** offers counsel on [effective communication](#), including:
 - » Give people what they need when they need it. People’s information needs evolve in a crisis. So should a good communicator’s messaging.
 - » Communicate clearly, simply, frequently. Focus on keeping listeners safe and healthy. Then repeat, repeat, repeat.
 - » Choose candor over charisma. Be honest about where things stand, don’t be afraid to show vulnerability, and maintain transparency to build loyalty and lead more effectively.
 - » Revitalize resilience. As the health crisis metastasizes into an economic crisis, accentuate the positive and strengthen communal bonds to restore confidence.
 - » Distill meaning from chaos. The crisis will end. Help people make sense of all that has happened. Establish a clear vision, or mantra, for how the organization and its people will emerge.

Principles for leading effectively

- **CIO Magazine** published 10 principles for effective leadership during this crisis:
 - » Put individuals ahead of institutions
 - » Cultivate hope, not just confidence
 - » Reduce your risk tolerance to zero
 - » Be vulnerable
 - » Do not commercialize on the crisis
 - » Do the unexpected

- » Focus on the small things
- » Point to credibility
- » Offer personal help
- » Cater to the least fortunate

Take the opportunity to streamline operations to adapt and scale services? This line feels incomplete

- Co-CEOs of **CommonSpirit Health**, one of the nation's largest healthcare systems, are managing the crisis using a [toolbox of strategies](#) to focus on patient care, staff safety, and adapting to the changing situation, including maintaining widespread communication platforms, PPE conservation, predictive analytical tools, and partnering with local health departments to test for COVID-19 at the same time that they are developing their in-house testing capabilities.

Resources

- **Harvard Business Publishing** [Leading Through a Pandemic](#)
- **McKinsey & Company** [Leading Through the Crisis](#)
- **HealthLeaders** [Webinars for Transitioning to Post-Pandemic Success](#)
- **American Association for Physician Leadership** [Resources in the Midst of Crisis](#)
- **PwC** [COVID-19 Navigator](#): Diagnostic tool to assess the potential impact to your business and gauge your readiness to respond.
- **Center for Creative Leadership** [Resources for Leaders](#)

2. Building Resilience to Weather the Pandemic and Beyond

Clinician burnout in the U.S. was already at critical levels before the pandemic. So it should come as no surprise that the mental well-being of health care workers is in serious jeopardy. A [survey-based study](#), published in the *Journal of the American Medical Association*, examined the mental health outcomes of 1,257 health care workers attending to COVID-19 patients in 34 hospitals in China. A large proportion of them report experiencing symptoms of depression (50%), anxiety (45%), insomnia (34%), and psychological distress (71.5%). Another [study of 269 physicians](#) from George Washington University Medical Center found similar statistics in the U.S., with 53% of physicians reporting moderate to severe symptoms of anxiety, 43% reporting depression, and 16% reporting insomnia.

It stands to reason that provider burnout will only increase during the pandemic. The impact of this burnout will be far-reaching, well beyond the duration of this current crisis. Crisis leaders must concentrate on keeping team members healthy and safe and providing them with the tools they need to maintain their resilience in the face of unusual challenges.

In Practice

[Provide Emotional Protective Equipment: Evidence-based crisis mental health support](#)

- The Psychiatry Director at **George Washington University Medical Center** started [Physician Support Line](#), a peer-to-peer hotline for physicians across the nation staffed by more than 500 volunteer psychiatrists.
- Organizations such as the [National Fallen Firefighters Foundation](#), the [Red Cross](#), the [National Center for PTSD](#), and [Coursera/John Hopkins School of Public Health](#) all provide training in stress first aid and mental health interventions.
- **Oscher Health in New Orleans** set up [a call-in number](#) where a social worker or psychologist can talk immediately with a staff member experiencing acute stress. They also have behavioral health team members rounding units and providing support strategies for stress management.

Other strategies include:

- Set up confidential mental health support for frontline workers. When staff call in, connect them to targeted internal or external behavioral health support services.
- Provide virtual drop-in sessions or “office hours” with staff from your organization who have expertise in providing mental and emotional support.
- Offer virtual one-on-one or group moral distress consults with a trained facilitator.

Provide resources and team-based staffing approaches to reduce physical and emotional stress

- A [RAND study](#) recommends immediate actions such as, but not limited to:
 - » Frequent shift rotations and breaks to reduce the physical impacts as well as emotional stress.
 - » Provide an isolated and dedicated place for staff to rest and ensuring they have enough time to recover between shifts.

- » Provide resources such as childcare support or alternative living arrangements to minimize the risk of viral spread to their families.
- » Deploy consistent interdisciplinary care teams who rotate on and off to foster peer support and morale.
- » Encourage a team-based approach to decision-making from the start of care to assist with ethnically challenging decisions. Proactively involve an ethics team or palliative care team where available.
- **Children’s Mercy** in Missouri established a [COVID Employee Wellness Support Team](#) of two dozen psychiatrists, clinical social workers, chaplains, and hospital leaders. With this group, they have set up virtual support groups, set up one-on-one virtual meetings with mental health professionals, created a Respite Room in the hospital, lead virtual guided meditation three times per day, and conduct wellness rounds in the ED and NICU.

Other strategies include:

- Allocate a quiet, dedicated space in your facilities where providers can go to decompress for a few minutes during their shift.
- Start team meetings or huddles by having a staff member share a [90-second uplifting story](#) that exemplifies one of their core values.
- Create “bounce back kits” with items like a reflection exercise, earplugs, etc., and store them in a central location so staff can access them in moments of distress.
- Encourage staff to bring mementos that remind them of positive times—like photos of their family—to store in their locker and glance at when they’re feeling overwhelmed.
- Provide onsite or virtual meditation for staff.

Strengthen peer networks with formal support systems

- **Doctors of BC from the British Columbia Medical Association** run free [physician peer “support sessions”](#) on Zoom where a moderator prompts staff to discuss their personal and professional concerns with a small group of peers.
- The **military** employs a [“battle-buddy” approach](#) in training and combat situations, to foster accountability, team-building, and mutual support: consider partnering junior frontline staff or clinicians taking on critical care patients for the first time with more tenured team members to get advice and voice concerns.
- Encourage staff to share stories of providers going above and beyond the call on a public forum.

Take care of the necessities so staff can focus on caring for patients

- Launch a “care and share” website where community members can volunteer to help staff with tasks like grocery shopping and childcare. [Gator Sitters](#) at **University of Florida Health** pairs hospital staff in need of child care, pet care, and other household duties with student volunteers. University of Michigan Health set up the [M-Response Corps](#) to solicit medical student volunteers to help at donation centers for PPE or to assist dispatchers with assigning patients.

- Partner with organizations providing free meals to health care staff, like [Sweetgreen](#) and [UberEats](#)—and when possible, order and encourage group meals.
- Connect staff to alternate housing options if they're worried about exposing their family to COVID-19. Hotels like the NYC Four Seasons have offered up space to health care workers in need.

Widely share resources that staff can tap into on their own terms

- Share open online resources on coping with anxiety and stress with frontline staff, such as Headspace's [meditation sessions](#) or the NHS in Mind's [free videos](#) with eight techniques for coping with anxiety and stress.
- Send out weekly “wellbeing” email updates to the organization where staff can access centralized information on mental health and support services—or include a daily reflection in a standing COVID-19 newsletter.

Resources

Counseling and therapy:

- [ACCP Physician Support Line](#)
- [National Academy of Medicine](#)
- [Talkspace telehealth therapy](#)
- [NeuroCore telehealth counseling](#)
- [Battle Within teletherapy network](#)

Guides to self-care and coping:

- [American Psychiatric Association](#)
- [UW Medicine Coping with Uncertainty and Anxiety Resources](#)
- [Decompress Podcast](#)
- [NHS Scotland](#)
- [NYT](#)
- [Ten Percent Happier](#)

Meditation/mindfulness apps:

- [Headspace](#)
- [Calm](#)
- [Stop, Breathe, and Think](#)
- [VA Mindfulness Coach](#)

3. Creating your Plan Ahead Team

As we continue to battle the first wave of COVID-19, we also have to think to the future and subsequent waves of the virus, as well as those who have either been unable to access care they need or have avoided seeking care during the pandemic.

The Second Health Crisis of the Year

Physicians are concerned that patients with severe illnesses who delay or avoid in-person care for their conditions could face long-lasting health consequences—or even death. Delays in care also have the potential to overload the U.S. health care system after the first wave of the virus dies down. Jonathan Lee Gleason, Jefferson Health’s Chief Quality Officer, commented: “The impact of delayed medical care could become [“the second health crisis of this year.”](#)”

What Should Health Systems Do?

Health systems should be aggressively expanding telemedicine solutions that have opportunity to treat patients outside of the hospital and stratifying services that can be done in an office and do not require being within six feet of the patient. Non COVID-19 care zones can also be set-up, perhaps staffed by those who have tested negative for the virus or those who have already recovered. Health systems should also frequently provide updates to their patients and communities about the COVID-19 prevention measures that have been put in place to ensure their safety.

Maintaining Surge Capacity while Guarding Against Resurgence

Over time, as cases plateau and decline, there will be questions about how long to maintain surge capacity while also guarding against a [second and third wave of the virus](#). The subsequent waves may be more challenging as COVID-19 is paired with the recurring flu season, but the impact will depend on the extent that testing, contact tracing, and potential treatments have evolved.

What Should Health Systems Do?

Wave one has taught health systems much about the processes, procedures, and communication; data collection and lessons learned will be key in understanding what went well in the first response and what should be changed for the next wave. Health systems should begin putting together a **Plan Ahead Team** to develop forward-looking scenarios and identifying options and actions to act tactically and strategically.

Strategies

- Plan Ahead Teams elevate your view beyond the day-to-day response and tackle the extreme uncertainty facing your organization. The team should:

- Enable modular, scalable thinking that health leaders need to navigate a rapidly evolving situation. The Plan Ahead Team will deliver a strategic action plan to guide and accelerate decision making.
- Collect forward-looking intelligence, developing scenarios, and identifying the options and actions needed to act tactically and strategically. Unlike a typical strategy team, it should plan across all time horizons (immediate, monthly, quarterly, and yearly) to stay on top of escalating issues and required decisions.
- Deliver scenarios, recommendations for actions, and trigger points to the leadership team so that they can decide on the right course of action. The best response to navigating through the COVID-19 crisis and the subsequent recovery will differ based on an organization's circumstances.

Actions to Take

- Launch a Plan Ahead Team to get ahead of the next stage of the crisis.
- Direct that team to work across multiple time horizons.
- Gain a realistic view of your starting position.
- Develop scenarios for multiple versions of the future.
- Determine actions and strategic moves across scenarios.
- Set trigger points that drive your organization to act at the right time.

4. Resuming Elective Procedures

As of late April, a number of states are considering resuming or are resuming elective surgeries and planning for a rapid recovery of delayed elective surgery and ambulatory operations. [Fourteen hospital and health system leaders shared the most challenging aspects of resuming elective surgeries](#) and the first steps they are taking. Common themes included:

- Willingness of communities to come back in person
- Ability to obtain the appropriate amount of rapid COVID-19 R-PCR testing
- Coordinating with local, state, and federal guidelines
- Balancing the ethics of financial impact and risk of life
- Having enough PPE to meet the demand going forward

Facility readiness to resume elective surgery will vary by geographic location. Released guidelines recommend that there should be a sustained reduction in the rate of new COVID-19 cases in the relevant geographic area for at least 14 days, and that the facility should have the appropriate number of beds, PPE, ventilators, and trained staff to treat all patients without resorting to a crisis standard of care. Additionally, the safety of patients and the community must be ensured by practicing best practices for preventing and mitigating risk of spread.

In Practice

- [Centura Health in Centennial, CO](#) started with a 22-member multidisciplinary physician- and clinician-driven team across their 17 ministries to manage the virus. This “return to normal” group provides standard recommendations and considerations in four areas — resources, patient selection, critical nature of the patient and capacity. They also direct the formation of individual hospital committees to make the final determination of the prioritization of patients based on unique needs, impact of COVID-19, geography, acuity and availability of support.
- [University Hospitals Cleveland Medical Center](#) in Ohio is working on managing COVID-19 micro surges and planning for what’s next. They started a multi-disciplinary coronavirus preparedness team in February and switched to a system-level incident command structure in March. The system-level command group meets twice a day, everyday, with plans to surge to 100%, 200%, and 300% capacity. Recovery and reactivation planning has begun using the same command structure.
- **University of Missouri Health Care** reached out to every institution in the state to see if they have enough PPE for the next several weeks with a standing offer to send excess PPE to them if needed. They plan to take a two-tiered approach to re-opening. Their incident command team sets a weekly budget for resources needed to treat each case; they then give each department chairs group a weekly budget or resource allocation, along with analytics data on medical necessity and resource use, to help them determine which cases in their respective departments should be scheduled.
- [William Bee Ririe Hospital](#) in Nevada began rescheduling by reaching out to patients, explaining the risk/benefit and allowing the patient to decide. They are doing phone registration and will bring the patient directly back to the pre-op/post-op area to reduce exposure and time in the facility. They allow more time for the case so the potential for delays and making patients wait is reduced. They also have a contingency plan to stop cases if they see an increase locally or have admissions that increase risk for patients.
- [Methodist Healthcare](#) in San Antonio will conduct universal COVID-19 testing for all elective surgery patients prior to their procedure and will continue with a “no visitor” policy per HHS guidance.

- CoxHealth in Springfield, Missouri appointed a group of highly regarded informal and formal physician leaders to establish the criteria to guide the prioritization of cases. Due to the degree of subjectivity, the final decisions are made by this physician panel. They have a three-stage revamping, which may be stepped back or advanced based upon readiness metrics and risks of outbreaks. **Each stage is based upon completing two cycles with a flat number of new cases per day.**

Frameworks

- **University of Chicago** surgeons released their [Medically Necessary Time-Sensitive \(MeNTS\)](#) scoring system to help prioritize which procedures to perform. The MeNTS scoring system considers 21 factors scored on a scale of 1 to 5 for each case. A higher score indicates that the procedure would pose greater risk to the patient, utilize more resources, and have a higher chance of exposing health care personnel to the virus. Factors they consider include:
 - » Anticipated length of stay
 - » Time required in the operating room
 - » Size of the surgical team
 - » Probability of needing intubation to perform the procedure
 - » Effectiveness of non-operative treatment
 - » Impact of two week delay on disease outcome and surgical difficulty/risk
 - » Impact of six week delay on disease outcome and surgical difficulty/risk
 - » Age of the patient
 - » Presence of comorbidities (lung disease, CV disease, diabetes, immunocompromised)

The Arlington, Va.-based IDSA and HIV Medicine Association (HIVMA), [released their recommendations on steps towards the reopening of business and social activity in the midst of the COVID-19 pandemic](#). A stepwise approach to reopening is:

- Widespread, sustained availability of accurate diagnostic testing, including validated nucleic acid amplification assays (NAAT) and anti-SARS-CoV-2 antibody detection to allow for comprehensive case surveillance.
- Phasing of the reopening of states and regions “based on the ability to safely, successfully and rapidly diagnose, treat and isolate individuals with COVID-19 and individuals who have been in contact with them.”
- Scaling up of supplies of PPE and of critical care resources, including ventilators, ECMO, and dialysis machines.
- Physical distancing measures that must remain in place in prevent recurrent outbreaks.

- Support for telehealth-based care delivery.
- Broad, longer-term pandemic preparedness, “with investment into R&D, infrastructure (including stockpiles of PPE and adequate manufacturing capabilities), workforce, and clear governance structures.”
- **High, medium, and low-impact factors** will slow down or speed up recovery on the road to resuming elective surgeries.

High Impact Factors

- Supply constraints:
 - » Bed, OR, and staff capacity constraints, potentially shifting cases to competitors with shorter wait times; and
 - » Availability of PPE, testing, and supplies (blood, IV bags and pumps, etc.) that meet demand—and reinforce safety among patients and staff.
- Demand drivers:
 - » Lingering consumer anxiety/fear of exposure to infection may result in site of care shifts or reductions in use;
 - » Loss of insurance and/or job may result in patients delaying or canceling care and shift payer mix to lower reimbursed Medicaid; and
 - » Patients opt for non-surgical treatment options, or choose to not reschedule their postponed visit.

Medium Impact Factors

- Supply constraints:
 - » Loss of workers who were furloughed, laid off, or quit and how quickly organizations can regain this staff;
 - » Status of ambulatory sites, which can reduce or delay downstream referrals for procedures; and
 - » Organizational readiness of using telehealth for upstream services.
- Demand drivers:
 - » Delays in care, leading to exacerbation of health issues and longer lengths of stay, especially for medical cases; and
 - » Reduced demand for price sensitive services due to employer increases in cost sharing in next year’s benefit year.

Low Impact Factors

- Supply constraints:
 - » Time off or reduced hours/productivity of staff involved in managing COVID-19 care; and
 - » Lasting negative stigma of SNF sites leading to longer LOS, less bed turnover.
- Demand drivers:
 - » Prolonged social distancing guidelines and permanent lifestyle changes which may reduce travel and result in less accident-induced trauma; and
 - » Mortalities in highly affected regions that reduces demand.

Resources

- **CMS** [Recommendations for Re-Opening Facilities to Provide Non-Emergent Non-COVID-19 Healthcare](#)
Recommendations on providing essential non-COVID-19 care in regions with low incidence of COVID-19.
- **American Academy of Orthopaedic Surgeons (AAOS)** [Guiding Principles for Re-Opening](#)
Guidelines on safely resuming elective procedures, including ensuring adequate facilities, workforce, testing, and supplies as well as adequate workforce across phases of care.
- **AORN Joint Statement: Roadmap for Resuming Elective Surgery after COVID-19 Pandemic**
Joint statement from the CDC, the U.S. Surgeon General, the American College of Surgeons and the American Society of Anesthesiologists with guidelines for timing of reopening, COVID-19 testing, PPE, case prioritization and scheduling, and post-COVID-19 issues.
- **American College of Surgeons** [Local Resumption of Elective Surgery Guidance](#)
Set of principles to help local facilities plan for resumption of elective surgical care.
- **American Enterprise Institute: Roadmap to Reopening**
Road map for navigating through the pandemic. It outlines specific directions for adapting our public-health approach, such that we can transition to new tools and approaches to prevent further spread of the disease.
- **Ambulatory Surgery Center Association (ASCA) Statement on Resuming Elective Surgery as the COVID-19 Pandemic Recedes**
This guidance outlines important considerations that ASCs must evaluate before proceeding with postponed cases to ensure the safety of patients, their families and surgery center staff.

5. Digital Health's Breakout Moment?

The adoption of digital health tools—from assessment services to telemedicine—has rapidly accelerated, with healthcare organizations looking to digital solutions to support their efforts against the pandemic. We are witnessing what could be digital health's breakout moment, with the potential to continue in the long-term with a hybrid system of virtual and in-person care.

In Practice

Contact-less interactions

- Providers are rolling out **zero-contact workflows** to promote social distancing and protect patients and staff. [Memorial Health System](#) in southeastern Ohio and northwestern West Virginia partnered with [Phreesia Patient Intake platform](#) to enable “Zero-Contact Intake.” Patients complete registration from their home, car, or other spaces to support no-waiting-room workflows. Patients are also screened for COVID-19 risk factors and intake information is taken ahead of each telehealth visit.
- Brigham and Women’s Hospital in Boston has been testing a new piece of hardware to help them treat coronavirus cases — a [robotic dog called Spot](#). The robot is outfitted with an iPad and radio so a medical technician can interface with patients. The hospital is currently using the robot to interview patients suspected of having less-serious cases of COVID-19 in order to limit staff exposure to COVID-19 and reduce PPE usage. The next step is to have the robot begin taking vital signs of new patients.
- **New York City-based Northwell Health** is expanding a program to equip COVID-19 patients’ rooms with Amazon Echo devices, according to [CNN](#). The two-way audio and video devices allow providers to communicate with patients virtually, helping reduce their exposure to the virus. **Mayo Clinic** is also using Alexa to provide “[Mayo Clinic Answers on COVID-19](#)” to receive CDC guidance and information from experts at Mayo.
- **Massachusetts General Hospital** in Boston workers [created](#) makeshift video portals by attaching iPads to IV poles, allowing employees to communicate with COVID-19 patients in isolation rooms.
- **Mount Sinai Health System in New York City** [adapted](#) its stroke platform to remotely monitor and connect with COVID-19 patients. Patients simply text “Precision Recovery” to 332-213-9130 and a physician will then chat with the patient via video.

- **Robert Wood Johnson University Hospital in Brunswick, New Jersey**, [installed](#) “video robots” in its pop-up tents that transmit a video of the patient to a physician inside the emergency room. The robot features an electronic stethoscope to monitor the patients’ breathing.

Virtual rounding

- Several health systems are using “[virtual rounding](#)” during the pandemic. **Nemours Children’s Health System in Florida** leveraged a secure app for rounding and Epic monitor for remote access to in-room cameras. They currently conduct 340 virtual rounding visits per week since it went live at the end of March. [The University of Chicago Medicine](#) use a care rounds application to capture questions, comments, and requests their patients and families may have during a hospital stay. Comments were captured in the mobile application and shared with staff members.

Virtual training

- **CHI Franciscan** in Tacoma, Washington designated a small group of “[virtual hospital](#)” nurses paired up with physicians and administrators to implement a virtual care response for patients. Within one week, they trained over 1,000 providers and caregivers to become ‘virtualists’ and ‘telepresenters.’ A secure video connection combined with virtual exam tools and best practices brought providers, registered nurses, medical assistants, therapists and their patients together while keeping the most vulnerable in the safety of their homes.
- A [Ventilator Simulator](#) from Open Pediatrics provides an immersive online mechanical ventilation training tool based on the most recent evidence-based guidelines in pediatric and adult ventilation. The virtual ventilator incorporates real-time changes in vital signs, ventilatory parameters, patient appearance, arterial blood gases, chest x-rays and more.

Combating Misinformation

At a time when misinformation is especially rampant, and in many recent cases, dangerous, it is imperative that those working in science collectively steward and uphold a standard for how information is translated and shared to the public. COVID-19 is a reminder of how science informs decisions, shapes policy, and can save lives. The antidote to this current infodemic may be as important to our collective future as a vaccine.

Telehealth

- A [Merritt Hawkins survey](#) of 842 physicians across the country revealed that half of physicians are using telemedicine. Health systems around the country are now seeing thousands of visits a week - [a system like Allina Health in Minnesota is seeing almost 5,000 visits per day](#). Hospitals will likely continue to push patient remote monitoring and telehealth programs following the first wave of the pandemic.
- **Stanford Primary Care** wrote up their experience [shifting primary care practices to virtual visits](#) to 80% of overall visits in their Express Care urgent care centers in two weeks leveraging Epic and Vidyo, a video vendor. They designed new nursing schedules and intake protocols and obtained additional personnel, funding, and resources for rapid scaling.

Contact tracing

- [Singapore publishes detailed data](#) on each known case, including where the person lives and work and the hospital they were admitted to. [Facebook released a map of coronavirus symptoms crowdsourced](#) from its users. [Apple and Google are releasing an API](#) for iPhones and Android phones to enable tech-enabled contact tracing while Cuomo and Bloomberg announced that they will launch will be [the largest scale contact tracing program](#).

Artificial intelligence

- Hospitals are launching [accelerated tests of AI](#) to triage and care COVID-19 patients, while continuing to correlate actual disease progress with the AI modeling. Applications include [search for new molecules](#) capable of [treating COVID-19](#), to scan through [lung CTs for signs of Covid-related pneumonia](#), and to aid the epidemiologists who tracked [the disease's spread early on](#). The technology is even powering new tracking software that might help identify those walking around with a fever or catch people violating quarantine rules.
- While there has been considerable news coverage about the use of AI to combat the pandemic, understanding its true effectiveness and scale still remains to be seen. The [Brookings Institute](#) cautions that expectations on what AI can do should be questioned and further studied.

Resources

- American Hospital Association (AHA) [Digital Pulse](#). Resource to assess critical digital capabilities they will need to meet the challenges of COVID-19
- AVIA, a digital health innovation network, COVID-19 [digital resource guide](#).
- Yale School of Medicine Telehealth Training Video. [Yale](#)
- AMA: Quick guide to telemedicine in practice. [AMA](#)
- CMS: [Coronavirus \(COVID-19\) partner toolkit](#). Contains links for telehealth resources.
- CMS: Medicare Telemedicine Health Care Provider Fact Sheet. [CMS.gov](#)

6. Rethinking the Supply Chain

The pandemic has revealed how vulnerable our globally integrated supply chains are with hospitals unable to get the supplies and equipment they need. Supply chains built on just-in-time inventory and distributed component sourcing may need to be reconsidered as successful JIT systems depend on every link of the chain remaining uninterrupted.

In the short term, hospitals have looked to alternative sources from the community or by pooling resources in the service area. Moving forward, health systems and supply chains will require more resilient manufacturing through nearshoring and even onshoring, full automation, and software-based management. Organizations will need to address existing and potential future bottlenecks to identify when and where potential shortages will occur. Additionally, hospitals have formed regional consortiums to pool bed capacity and staffing resources; one possible solution is to look at pooling and coordinating resources and supplies regionally, while sharing real-time information about inventory.

In Practice

- **Sharp HealthCare** in San Diego is using [clinical surveillance software](#) to maximize the use of existing supplies, while generating alerts to prevent drug and supply shortages. They customized the software to accommodate COVID lab orders and layered in interval monitoring in the system for hydroxychloroquine drugs as they saw demand increase for this treatment. They also assessed medications typically given at multiple intervals throughout the day to understand if patients could be converted to once-daily alternatives.
- **Amazon** opened a nonprofit online store for COVID-19 first responders that sells face shields, surgical masks, ventilators and other supplies. The store, called [COVID-19 Supplies](#), is available only to accredited medical professionals, government agencies and emergency responders, including police and fire departments.
- The **Missouri Hospital Association** launched a [PPE marketplace](#) using a new tool from Google to connect providers with state PPE manufacturers and suppliers. The new online tool connects manufacturers that have shifted production to PPE during the COVID-19 pandemic with buyers in the healthcare market.
- A supply chain management professor at Northeastern University recommends [key actions to diversify production](#).
 - » Enhance transparency. Understanding where drug raw materials originate from in order to better project impact on the supply chain.
 - » Increase U.S. and near-shore manufacturing to help with production and distribution.
 - » Leveraging AI capability to identify shortages or other reasons for the change.
- **Indiana University Health** set up [Incident Command Systems](#) at its 17 hospitals to allocate critical supplies. They controlled critical supplies manually and required employees to request supplies beyond their normal usage.

- An **Ohio Health University Fisher College of Business** proposes a new approach to global sourcing decision-making, known as “[total value contribution](#) (TVC).” TVC encourages supply chain managers to first consider how decisions impact value drivers – such as safety, reliability, and sustainability, even before they consider costs. TVC focuses on total value, not just price, by structuring the analysis so that unit price info is only considered at the end of the process.

7. Buckling Down on Social Determinants of Health

Every crisis tends to highlight and exacerbate areas of fragility and not-so-hidden cracks in the existing infrastructure. COVID-19 has proven itself to be the perfect storm for disproportionately impacting already-marginalized populations, including persons of color, low-income communities, and the homeless. Social Determinants of Health data (occupation, income, food security, transportation, social support and more) is proving to be increasingly crucial as we find out more about the disease. These inequalities will only increase as we see the following scenarios play out over the next few months:

Wave of Medicaid/uninsured

One [study](#) estimated that up to 40 million people could lose their health insurance with a 25% unemployment rate by July. However, it should be noted that individuals who lose their insurance may enroll in Medicaid or purchase new insurance through the exchange, therefore not leaving them entirely uninsured. Medicaid — which is run jointly by the states and federal government and covers about 70 million Americans — is already [seeing application spikes](#).

Closure of primary care practices across the nation

Close to half of physicians aren't sure they have enough cash to keep their practices open, the [Larry A. Green Center and Primary Care Collaborative survey of more than 2,600 doctors](#) found. More than two-fifths have had to lay off or furlough staff to keep afloat as the large majority (85%) face dramatic decreases in patient volume.

Expansion of the Mental Health conversation

There will likely be a monumental shift in attitudes toward mental health. Health systems are already seeing how emotional well-being is factoring into their workforce's ability to perform under stress. Among the public overall, a [Kaiser Family Foundation](#) poll conducted April 15-20 among 1,202 adults revealed that more than half (56%) say that worry and stress related to the coronavirus situation are leaving some marks on their mental and physical well-being.

As we move forward, how will we emerge from this experience collectively stronger? How can providers drive community impact at scale? How do we revise the present and future so as not to repeat the past?

In Practice

- **SDoH determinants.** The American Medical Association (AMA) announced a [new online resource hub](#) aimed at shining a light on structural issues contributing to and exacerbating health inequities amid the COVID-19 pandemic. These curated resources, assembled by the AMA Center for Health Equity, build upon ongoing AMA efforts to **ensure physicians have the support and tools necessary to navigate the changing landscape posed** by the COVID-19 pandemic while providing critical care for patients.
- **Linking payment for social risk.** COVID-19 emphasizes how the social determinants are connected to physical health, according to a [study by Humana and National Quality Forum](#) published in the New England Journal of Medicine. The study argues that because of the effects that social determinants have on health, population-based payment models should include a social-risk adjustment, as well as clinical risk adjustment. **Adjusting payment for social risk** will provide incentives for addressing health-related social needs, the study argues.
- **Rapid response outreach to combat disinformation.** The infodemic has created a challenge for healthcare systems to communicate accurate yet timely information, given the rapidly changing nature of the situation. [Best practices for rapid response communications](#) include:
 - » Target specific populations with timely, relevant and factual messaging. Avoid unnecessary disruption.
 - » Prepare responses for common post-disaster questions, such as inquiries regarding emergency updates and access to healthcare, roadways, food and water.
 - » Use multiple channels to engage (time permitting).
 - » Think of crisis communications as one portion of a larger, more comprehensive engagement program. Experience shows that members who have received messages in the past are more likely to engage in the future.
- **CrisisWelltok**, the consumer health activation company, is applying its proprietary data that includes [social determinants of health \(SDOH\) factors together with advanced analytics](#) to help health organizations understand which individuals to target and engage across the populations they serve.
- **ProMedical, the Northwest Ohio and Southeast Michigan** has invested heavily in SDoH projects for the last few years, shifting some of those resources to its own employees – namely in childcare and food support. They partnered with YMCAs to secure limited numbers of slots for ProMedica healthcare employees. They also opened up food clinics at hospitals for staff and patients who screen positive for food insecurity.

- **Rush University Medical Center in Chicago** takes an inside-out approach to investing in long-term equity to improve life expectancy and strengthen local economies. They launched [West Side United](#), a health equity collaborative that includes eight hospitals, to spread adoption of equity tactics. They also committed to local purchasing from local vendors and organized position applications by zip code to increase local hiring.
- **Henry Ford** in Michigan offers [COVID-19 care kits](#) for disease self-management for patients with coronavirus convalescing in their own homes. Kits include materials donated by the Detroit Pistons and WHOMedics, a manufacturer of certain at-home medical products. Materials include:
 - » A pulse oximeter to help measure blood oxygen levels
 - » Gatorade to replenish lost electrolytes due to the disease
 - » Hand sanitizer
 - » Face masks to protect others from infection
 - » A symptoms log to help patients identify if their health begins to deteriorate

Resources

- CDC NCHHSTP [Social Determinants of Health Resources](#).
- UCSF [Impacts of COVID-19 Pandemic on Vulnerable Populations](#)
- Center for Health Care Strategies [Addressing the Needs of Medicaid Populations](#)
- Robert Wood Johnson Foundation [COVID-19 Resources](#)
- [Data visualization tool](#) from Rensselaer Polytechnic Institute (RPI) demonstrates how SDoH are affecting COVID-19 risk and outcomes

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About Kahler Slater

Kahler Slater creates environments that enrich lives and achieve powerful results. Through architecture, interior design, strategic advisory and environmental branding, we leverage design to help our clients reach their strategic goals for advancing their organizations. We use a Performance-Based Design process that is grounded in research to ensure that we design for change. With clients around the United States, Canada and Singapore, our team includes marketplace experts in the higher education, healthcare, corporate office, multi-family living environment, hospitality, and sports and wellness sectors.

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