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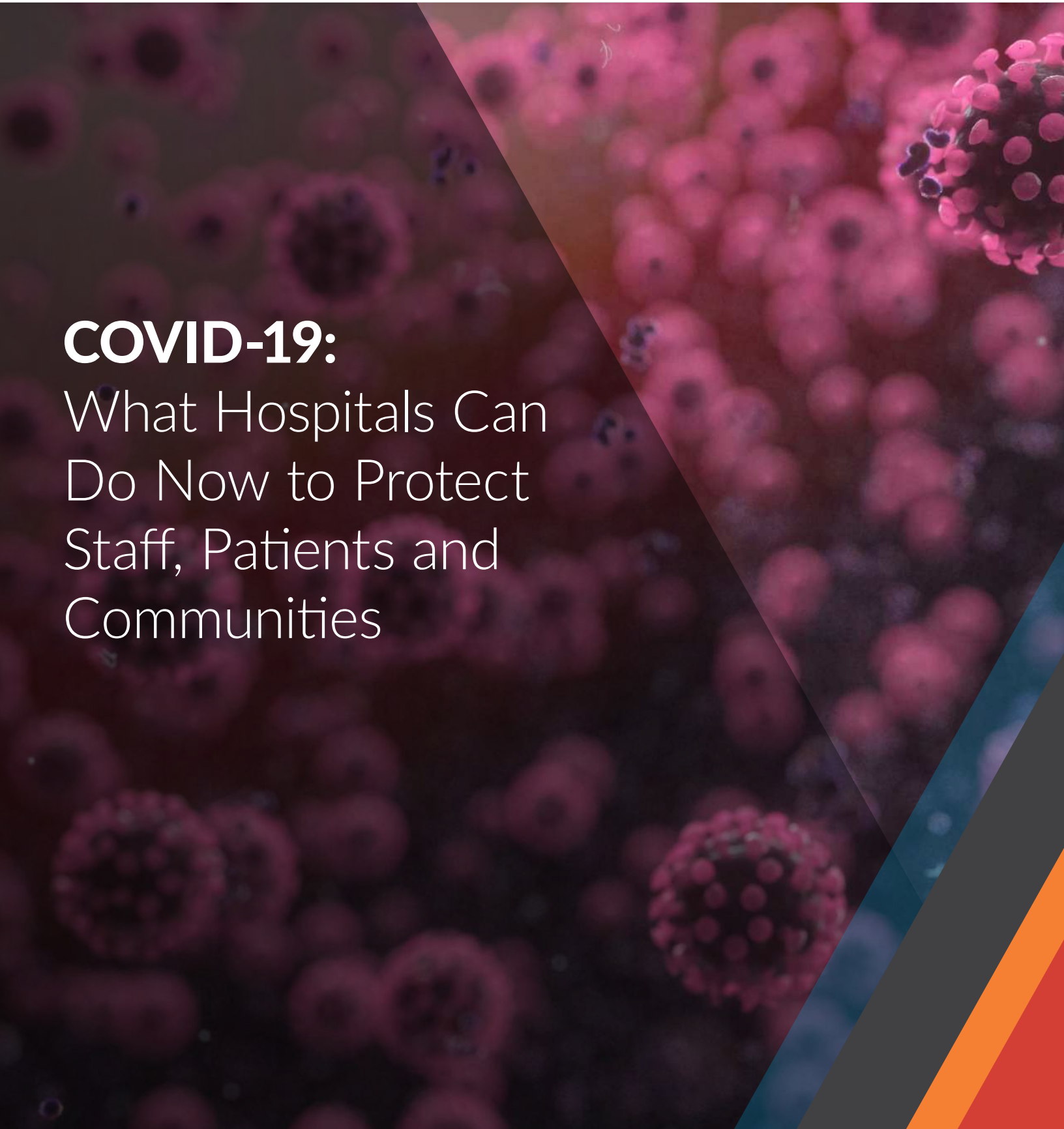


COVID-19:
What Hospitals Can Do Now to Protect Staff, Patients and Communities

About the contributors

Steve Crimando, MA, CHPP, CTM

Crimando, is an internationally known consultant and educator specialized in violence prevention, crisis management, and emergency response. He is the Principal and founder of Behavioral Science Applications, a behavioral threat management and crisis intervention consultancy located in the New York metropolitan area.

He is a Certified Threat Manager, a Board Certified Expert in Traumatic Stress (BCETS), and a Certified Homeland Protection Professional (CHPP). Crimando is a Certified Police Instructor, a member of the Association of Threat Assessment Professionals, and an expert in behavioral threat assessment and threat management.

Regina Phelps, RN, BSN, MPA, CEM,

Phelps is an internationally recognized expert in the field of emergency management, exercise design, and pandemic and continuity planning. Since 1982, she has provided consultation and speaking services to clients in four continents. She is founder of Emergency Management & Safety Solutions, a consulting company specializing in emergency management, continuity planning and safety.

Phelps conducts over 100 exercises per year for her large multi-national clients. She has lectured extensively at international disaster and business continuity conferences, including Disaster Recovery Journal (DRJ) Conferences; Continuity Insights, World Congress on Disaster Medicine (WCDM); and the International Association of Emergency Managers (IAEM).

On a daily basis, hospitals operate at or near capacity. From staff shortages to overcrowded emergency departments, hospitals are continually striving to find new ways to overcome challenges, quickly and efficiently coordinate care, and achieve the best patient outcomes.

When faced with a public health crisis, such as COVID-19, a further strain on hospital resources combined with a lack of preparedness can be devastating.

A hospital's ability to anticipate and respond defines how adept they will be in responding to a host of risks that can threaten resilience.

When hospital resilience is threatened, operations and more importantly, lives are placed at risk. Long-lasting negative implications often include a loss in financial stability and brand reputation.

>95%

Hospitals are at 95% capacity or higher, given the strong, late flu season.[2]

Dealing with Overcapacity Fears in Real-time

As cases of COVID-19 rise in the U.S., overcapacity fears are coming to life. Hospitals are already dealing with a bad flu season that has stretched resources. Now, with COVID-19, hospitals are challenged with trying to balance other critical care cases with this new epidemic.

Regina Phelps, pandemic expert and former hospital administrator warns that hospital resilience will be significantly tested due to a lack of adequate intensive care resources, including bed capacity. "You don't overbuild for something that will only happen once every hundred years."

According to a new report from the John Hopkins Center for Health Security, if the COVID-19 virus continues to spread more widely in the United States, 38 million people could need medical care; 1 to 10 million people might need to be hospitalized; and between 200,000 and 2.9 million people might need to stay in an intensive care unit, depending on how the epidemic unfolds.

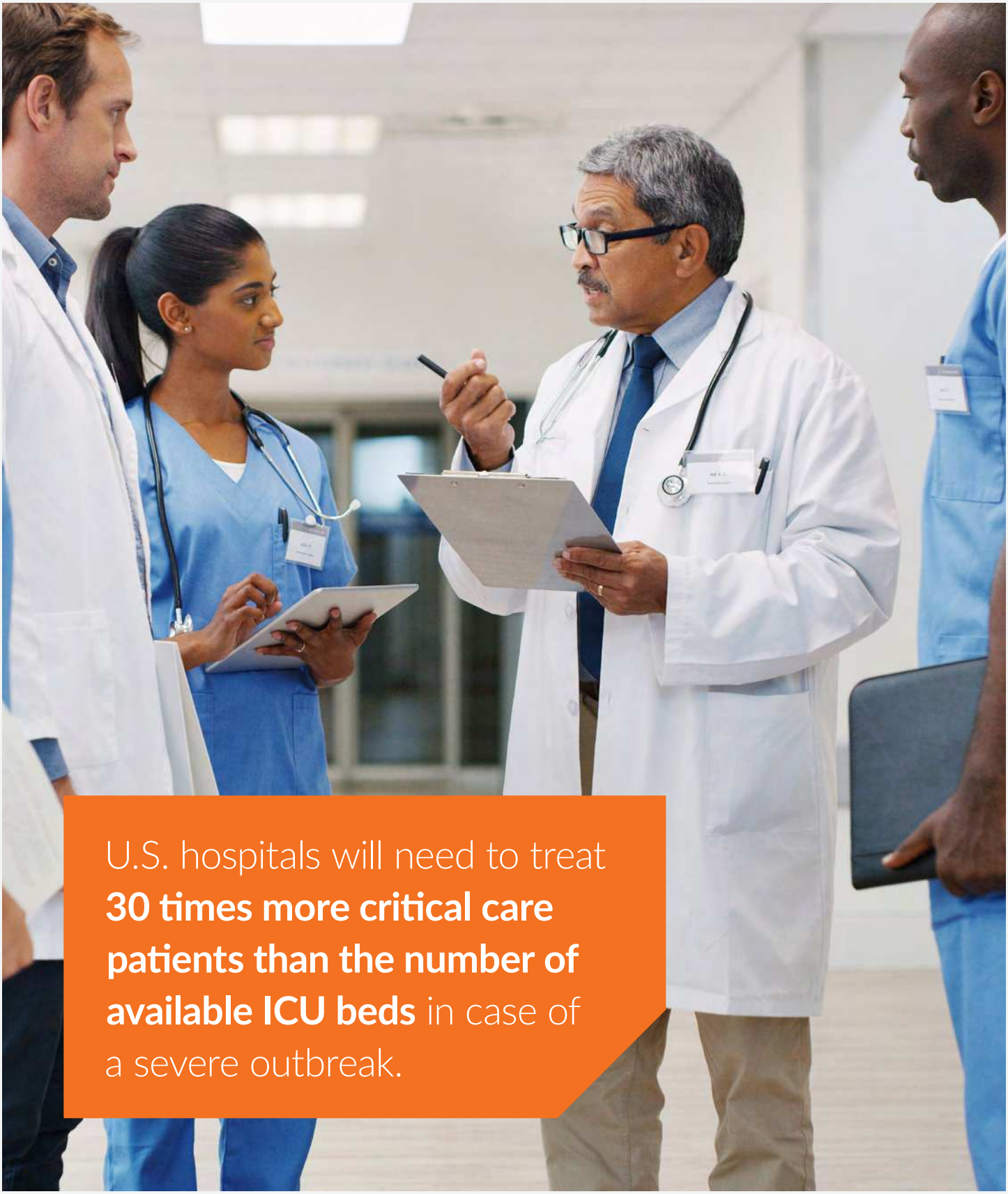
The U.S. has about 46,500 medical ICU beds and an estimated 46,000 ICU beds from hospital specialty units that could be converted in a crisis. This is less than half of what may be needed if the disease turns out to have moderate severity.[1]

Hospitals are often at the center of their communities when it comes to ensuring the health of the local population. This is particularly evident during a crisis, when those in need of aid tend to turn to their local Emergency Department.

"In addition to those who are truly sick, hospitals and healthcare facilities can be overrun with the "worried well," who by definition are people who do not need medical treatment, but who visit the doctor or hospital to be reassured," according to Steve Crimando, an expert in behavioral threat management. "When the daily news is dominated by stories about a pandemic, anyone experiencing a sniffle or cough is likely to be concerned that they have a more severe illness and turn up at healthcare providers for testing or treatment.

[1] Eric Tonor MD, and Richard Waldhorn, MD, *What U.S. Hospitals Should Do To Prepare Now for COVID-19 Pandemic*, John Hopkins Bloomberg School of Public Health, Center for Health Security, Feb., 27, 2020. http://www.centerforhealthsecurity.org/cbn/2020/cbnreport-02272020.html

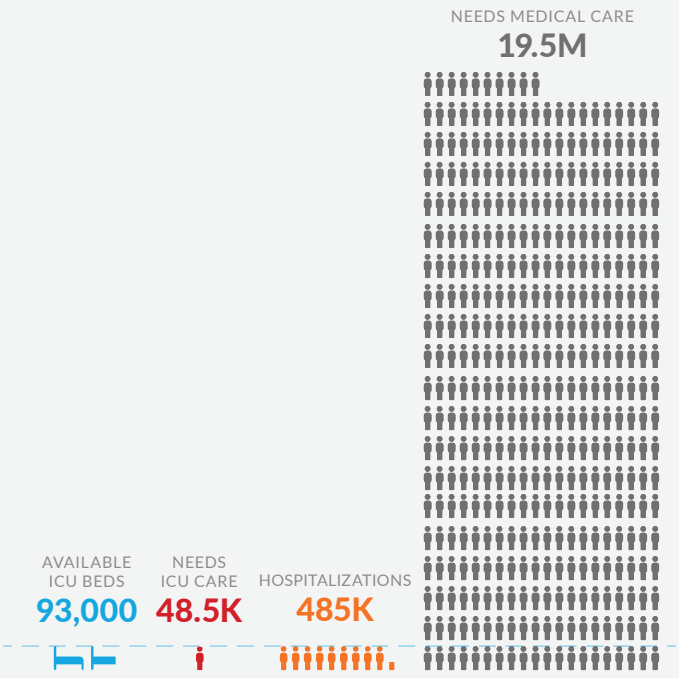
[2] *Coronavirus Containment Chance Missed, U.S. Aims to Blunt Impact*, Bloomberg, March 10, 2020, https://www-bloomberg-com.cdn.ampproject.org/c/s/www.bloomberg.com/amp/news/articles/2020-03-10/window-to-contain-coronavirus-passed-in-some-places-cdc-says



U.S. hospitals will need to treat **30 times more critical care patients than the number of available ICU beds** in case of a severe outbreak.

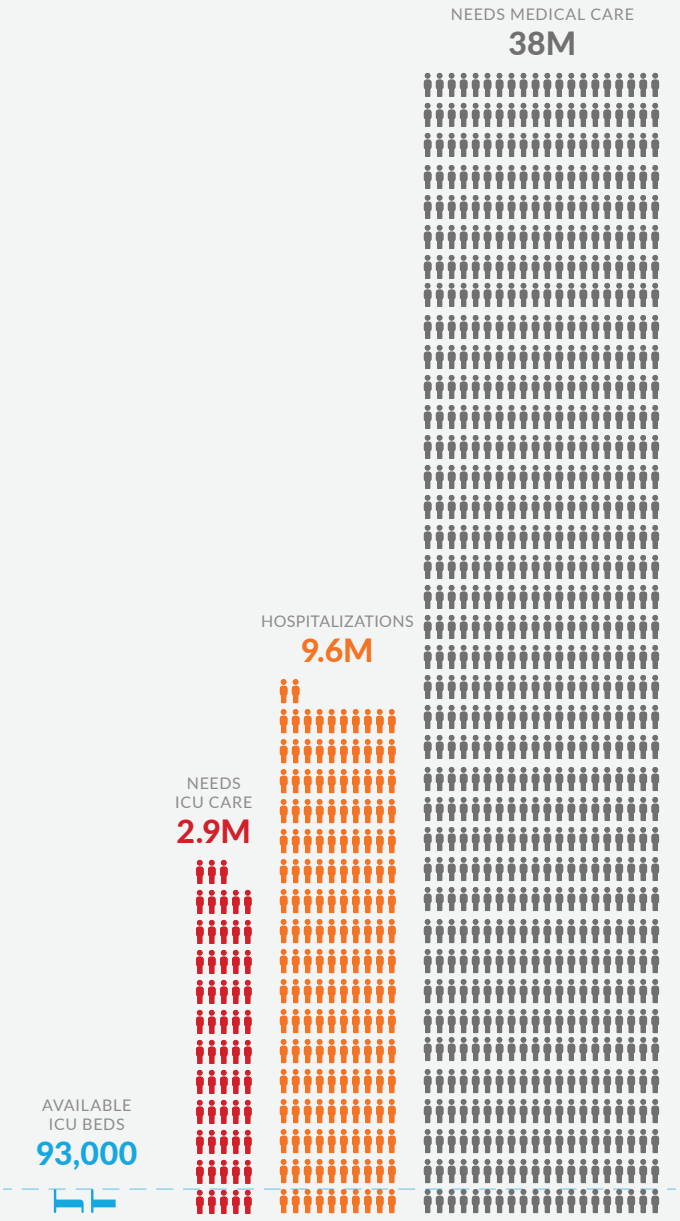
Typical Flu Season

(average)

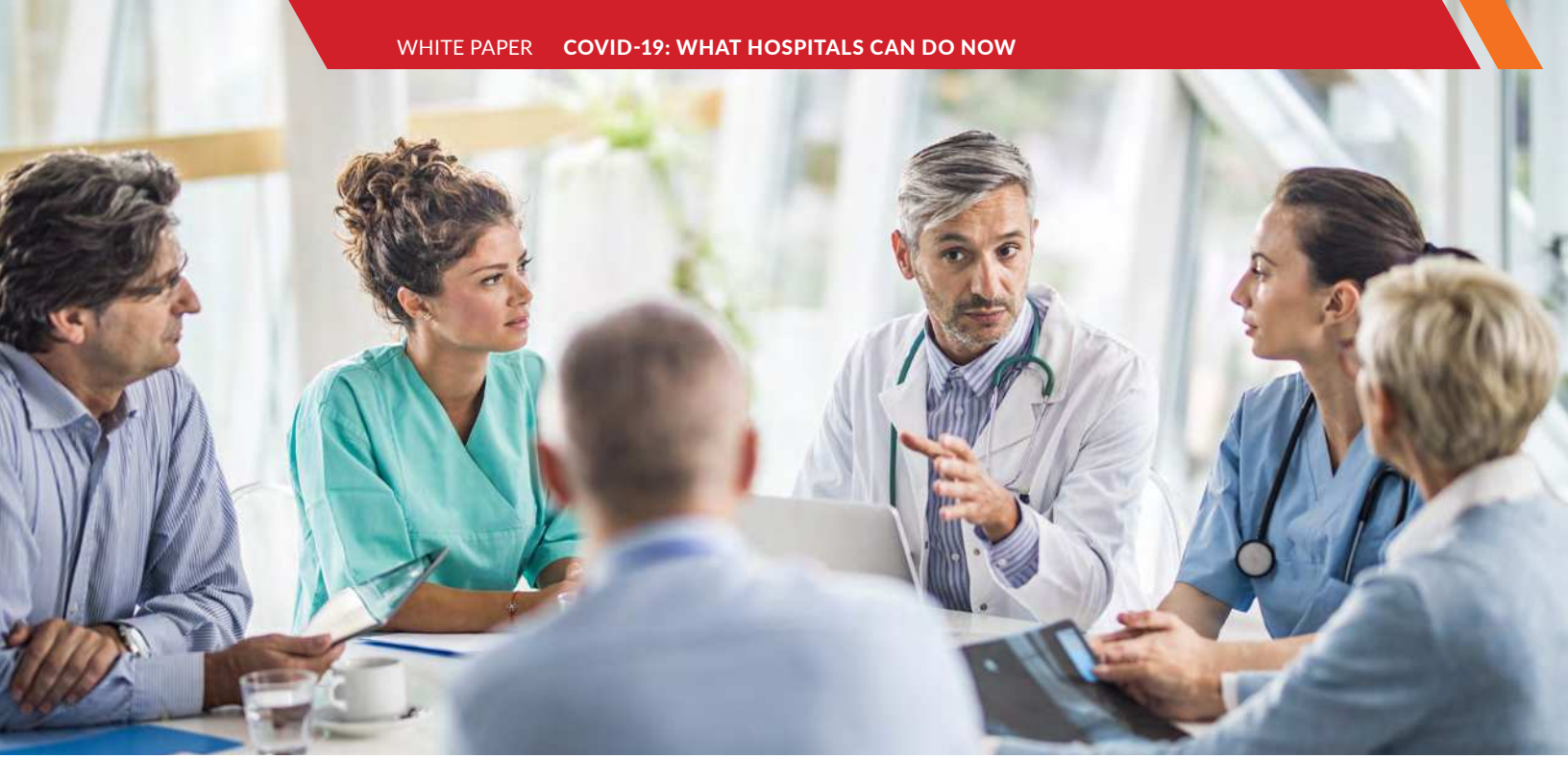


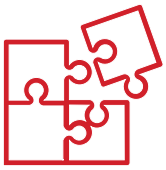
Severe Scenario

(based on the 1918 influenza pandemic)



= 50,000 ICU beds = 50,000 patients





Hospitals will have to rethink how they provide services – such as cancelling elective surgeries, deferring procedures, or pushing non-urgent services away from the critical care units.

To overcome surge capacity, hospitals need to delicately balance non-urgent, critical and COVID-19 cases with the following strategies in mind:

+ Prioritize and Triage Care: When faced with overcapacity issues, hospitals need to prioritize which services and types of elective procedures can be deferred to accommodate more critical patients.
+ Create Capacity: Discharge patients who qualify for early discharge and transition patients that no longer need hospital care/resources to a rehabilitation center or long-term facility.
+ Develop and Maintain a Communications Plan: Develop and maintain a communications plan to better coordinate patient care within the facility and increase efficiencies including patient throughput.
+ Collaborate with Local and Regional Hospitals: Collaborate with local and regional hospitals to leverage resources and when necessary transfer patients based on bed availability.

Hospitals will have to rethink how they provide services – depending on their facilities they may have to cancel elective surgeries, defer procedures when necessary or push non-urgent services to other locations, away from the critical care units. “For example, hospitals might have draw stations for phlebotomy that they can move to another location, which might be lower risk,” said Phelps.

Both Phelps and Crimando advise that healthcare systems need to brace for the long-haul, a public health crisis that at best may extend to 12 months with a possibility of lasting 18 months.

It’s important to remember that these types of public health crises can be long emergencies, so planners must anticipate a crisis that can span a year or longer, said Crimando. It will be important to understand the nature of pandemics and the key elements of a pandemic plan, but also to anticipate the various behavioral and communications challenges that will affect the public’s perception and response to such an event.

One of the biggest challenges that hospitals will face is maintaining sufficient staffing levels.

Staffing for the long-haul

Not all hospitals and healthcare systems are created equally. Supplies, equipment and staffing resources differ depending on the type of facility as evidenced by the different challenges that long-term facilities and rehabilitation centers are facing as they try to treat a population that are at heightened risk due to age and underlying health conditions, with an often understaffed nursing team.

One of the biggest challenges that hospitals will face is maintaining sufficient staffing levels. “Staffing is often a problem in hospitals in general, but with this particular outbreak, it’s going to be significant for several reasons,” said Phelps.

Long hours and added stress can be taxing on workers, resulting in weakened immune systems that lead to illness. Not to mention, the potential of becoming infected. “Workers are already concerned about the lack of Personal Protective Equipment (PPE) and other equipment or may be concerned about potentially exposing their families if they become infected, said Crimando.”

As a result people may opt out of going to work.

In addition to the fast-paced working conditions, there are many extra required medical steps in terms of hygiene and ensuring that PPE is being properly worn, says Crimando. “COVID-19 patients and their families are also going to have high levels of stress and given this rapidly-changing health crisis will need more guidance and hand-holding from staff.”

And staffing and surge capacity go hand in hand. A failure on staff’s part to report to work could further compromise the surge capacity of an already-strained healthcare system.

Long hours and added stress can be taxing on workers, resulting in weakened immune systems that lead to illness. **As a result people may opt out of going to work.**

Ensuring adequate supplies of personal protective equipment, vaccines and antiviral drugs for all hospital employees could boost an employee's willingness to report to work.

Crimando points to a landmark study by John Hopkins analyzing hospital workers' willingness to report to work during an influenza pandemic.

The study found that hospital-based communication and training strategies could boost an employee's willingness to report to work, including ensuring adequate supplies of personal protective equipment, vaccines and antiviral drugs for all hospital employees; and establishing awareness and preparedness.[3]

Perceived importance of one's role in the organizational response was also strongly associated with staffs' willingness.

To help support staff during this stressful time and better coordinate staffing Phelps and Crimando suggest the following:

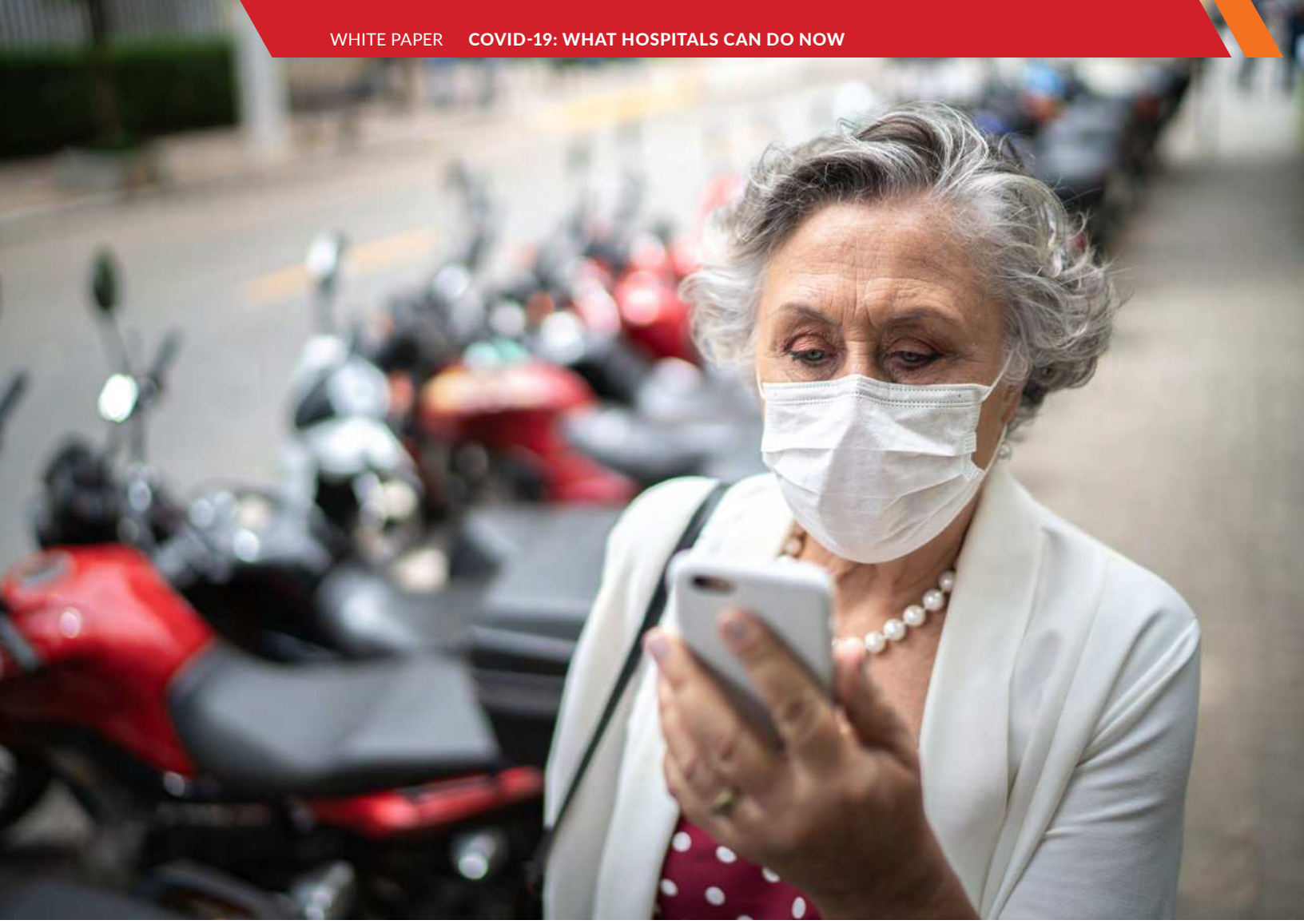
+ Frequent updates and communication from hospital leadership to provide transparency and build trust.
+ Better educate health workers as to their designated roles during an emergency scenario, and then motivate them with an understanding of why this role makes a difference.
+ Necessary training and updates to quickly get staff up to speed when they are needed to cover shifts due to a staff outage within another area of the hospital.
+ Prevent staff burn-out and fatigue by managing staffing charts to ensure that staff aren't overburden with shifts and are getting enough of rest.
+ Manage scheduling with an up-to-date database that allows contact with all staff based on their schedules, their areas of expertise and the hospital's needs.

How you communicate during an emergency — from contacting all staff and patients and coordinating care to collaborating with emergency personnel and state and local health officials when necessary — will define the immediate and long-term impact on a hospital and the surrounding community and patients it serves.

When responding to a public health crisis of this magnitude, there are many paths of communication to consider. For example, a hospital may need to rapidly activate alert teams in the hospital, call in additional clinical staff to handle the surge, notify the administrator on duty of the event, or notify facilities to change traffic patterns and isolate triage areas, among many other communications.

Identifying and communicating with each person requires pre-set (and approved) messaging for each response team and a pre-identified list of individuals who will be impacted by the emergency. A system that preloads the most up-to-date contact information for all staff, contractors and volunteers helps ensure accuracy and prevents delays in communication and response.

[3] Balicer, R.D., Barnett, D.J., Thompson, C.B. *et al.* Characterizing hospital workers' willingness to report to duty in an influenza pandemic through threat- and efficacy-based assessment. *BMC Public Health* **10**, 436 (2010). https://doi.org/10.1186/1471-2458-10-436



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—Regina Phelps, pandemic expert and former hospital administrator

Diagnosis Technology

The current response from hospitals reflects better practices in comparison to what Phelps and Crimando have seen historically with disease outbreaks such as SARs in 2003 or the Ebola outbreak in 2014. Better training, preparedness initiatives and allocation of resources have played a critical role – and communications is core to all of these initiatives.

When communication is done well, it helps manage people's expectations and fears, and makes it more likely that they'll follow instructions during a public health crisis. If done poorly, it can cause confusion and undermine trust. Both staff and patients rely on information from hospital leaders, who have access to the most up to date information and are leading critical event management initiatives.

The proactive measures that hospitals have in place, beginning with wide-spread signage that informs and instructs patients to the many dispensers of hand sanitizer, are signaling to patients that they have an important role in helping to contain this disease as soon as they walk through hospital doors.

"Patients need help with understanding the disease and will often turn to their primary care physicians as a trusted source," said Phelps. "The telehealth capabilities that we have now are far advanced than what was available during SARS and have been critical in triaging care."

By leveraging telehealth, physicians can determine whether a patient has symptoms of a common cold or another diagnosis unrelated to COVID-19.

By leveraging telehealth, physicians can determine whether a patient has symptoms of a common cold or another diagnosis unrelated to COVID-19, eliminating the risk of them going to the hospital and the possibility of being exposed to sicker people. If someone is exhibiting symptoms associated with COVID-19, physicians can guide them on what to expect when they visit the hospital and the safety measures that are in place.

"There has been a very proactive response among hospitals to triage care, said Crimando. "When triaging begins at home for that initial screening, even when patients meet the criteria for the next level of care and need to seek treatment at the hospital, things will be less scary."

Crimando provides the example of how the public health system in Hong Kong distributed webcams to residents during the SARS epidemic.

"Public health nurses were checking on people throughout the day, helping to reassure those that didn't have SARS but may have been quarantined," said Crimando. "The ongoing contact can help prevent social isolation during these situations while reducing the number of people unnecessarily flocking to hospital doors for treatment."

Leveraging communication platforms to poll clinicians if they have taken their temperature or are exhibiting COVID-19 symptoms before reporting to work is also another method that hospitals can implement to ensure the well-being of their staff, while keeping patients safe from possible exposure.

Staff Safety and Security

Communication is also critical in ensuring hospitals can account for all staff, locate staff during an incident and better assess if they are safe and are able to care for patients.

During a health crisis, there's often heightened concern among the public about the lack of medication or supplies. "Home health aides and visiting nurses are likely to be carrying masks, gloves, medications and other supplies that might be in high demand," said Crimando. "If driving, they should drive cars that are unmarked, to further protect them from confrontation," he adds.

Many new safety and security technologies can be leveraged to alert at-risk staff, whether on site or off-site. For example, communication platforms can be leveraged to provide situational awareness to home health workers, who may be entering a neighborhood that has seen a recent wave of violence. Technologies with two-way communication and a panic button feature can also enable hospitals to conduct well-being check-ins and can empower staff to call if they're in need of help.

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"Every day healthcare providers will have to re-assess their hospital's response to adapt to this unfolding situation."

—Regina Phelps, pandemic expert and former hospital administrator

"Transparency, honesty and constant communication, will guide the best response."

—Steve Crimando, behavioral threat management expert

The following tips can help hospitals keep hospital staff safe:

+ More than one mode of communication should be leveraged to contact staff, given that staff may be impacted in different ways and back-up forms of communication may be necessary. To help minimize disruption, your team should evaluate the best ways to interact with your team members.
+ Choose a communications system that tracks the status of each message and enables each individual to confirm receipt of the message. A system that continually contacts individuals on multiple delivery modes is optimal to ensure every person is accounted for and has received the appropriate message in accordance to their situation/location.
+ Account for all staff, track where on-duty staff are located during an incident, and better assess if they are safe and are able to care for patients by leveraging a communications platform to check-in or poll status.
+ Provide an instant way for staff to call for help leading to an improved response time and de-escalation of a situation. Communication systems that include two-way communication and a panic button can be leveraged to quickly notify first responders and can be configured to provide the geo-coded location of a staff member.

As this rapidly changing public health crisis unfolds, there are many new best practices and take-aways that we all will learn. New insights will be gained on how to set-up off-site quarantine and treatment centers in communities. Guidance will emerge on how we can better help care for patients with COVID-19 while alleviating the feeling of isolation due the preventative measures that may prevent families and loved ones from visiting.

"Every day healthcare providers will have to re-assess their hospital's response to adapt to this unfolding situation," said Phelps. "Transparency, honesty and constant communication, will guide the best response," adds Crimando.

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