The background features a dark blue gradient with abstract, wavy lines in shades of light blue and purple. A network of nodes, represented by small circles, is connected by thin lines, creating a complex, interconnected pattern that suggests data flow or a digital landscape.

Why Just Flatten the
Curve When We Can
Raise the Line?

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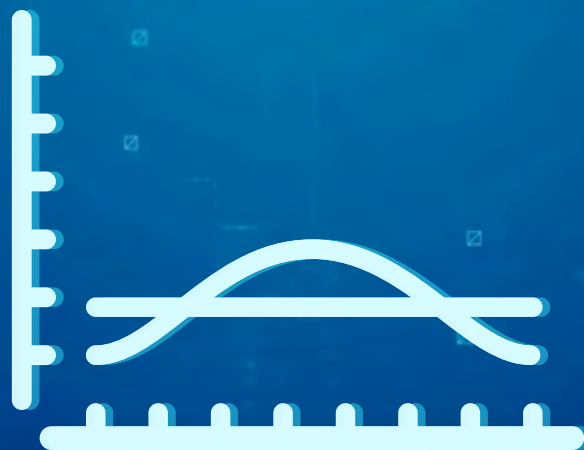
Social distancing, good hand hygiene, drive-through testing and telehealth visits: Yes, there are many ways we can all help flatten the curve to fight this COVID-19 pandemic.

But what if we could do more? What if, in addition to flattening the curve, we could also raise the line?

The line that has held us back is the number of ICU patients our hospitals and dedicated healthcare workers have the ability to treat at any one time. Many U.S. hospitals are already operating at incredibly high capacity, especially within critical care environments where often-overstretched care teams work at breakneck speeds to accommodate the needs of their communities.

To end this pandemic, we have to move faster than the virus. We have to use technology that gives our healthcare teams more visibility than they have ever had before into their patients' conditions, beyond the bedside and beyond the walls of the hospital.

Simply put, we have to raise the line.



How do we raise the line to save lives today and create a new standard of care tomorrow?



Add beds.

More than 1.15 million Americans have been infected so far and [over 67,000 have already died](#) of complications from COVID-19 as of May 1, 2020. More waves of the illness are expected, so we must get creative to best use the resources we have.

In the event of an additional – even moderate – coronavirus outbreak, about [200,000 Americans will need intensive care](#), not including those with critical-care needs who are suffering for reasons other than COVID-19. All told, the American healthcare system only has about 45,000 ICU beds available and a shortage of critical care specialists to care for the complex needs of these patients.

Hospitals therefore need a way to turn any bed into a highly monitored ICU bed, whether that patient is cared for in the critical care wing, in a converted PACU, or in an off-site building, converted dormitory or field hospital. We can't wait on construction to build new physical ICU spaces; we must convert to virtual solutions with all the accuracy and care a typical in-house ICU would have. And this rapid scaling needs to happen at the click of a mouse.



Unlock the data.

The devices hooked to a patient in critical care – which may include cardiac monitors, ventilators and many more – can produce up to 800,000 data points per hour, per patient. Within this data lies the most telling information about a patient's condition, including trends signifying potential events that can mean the difference between life and death.

Care teams need this information from the bedside, from those pieces of equipment both in real-time, as patients are producing it, and retrospectively, for that patient's entire length of stay. Yet, today, it is locked down by the device's manufacturer – with no interconnectivity and no way to acquire it, integrate it or deliver it back to clinicians in an accessible, HIPAA-compliant, shareable manner.

When seconds matter, when lives are on the line, we need to stop forcing providers to assemble a complex puzzle without all the pieces. Care teams need better options than running to the bedside to locate patient data and attempting to rapidly gather knowledge from disparate devices lacking interconnectivity.

Instead, we need to give these heroes on the front lines all of the quality data they need to deliver quality care. And not just for COVID-19, but also for the everyday practice of medicine. This is the next step in raising the line: untethering patient data from bedside devices so care teams can remotely monitor patients, anytime, anywhere.



Keep our most valuable assets safe.

Infection rates are high among front-line healthcare professionals. [Li Wenliang](#), the physician who first reported COVID-19 in Wuhan, China, succumbed to the disease himself just over a month after he first raised the alarm about it. The National Health Commission of the People's Republic of China reported that as of February 24, 2020, [a total of 3,387 healthcare workers in China were infected with COVID-19](#). In Italy, healthcare workers make up at least nine percent of that country's total number of COVID-19 cases, and [Frank Gabrin, M.D.](#), of New York City, became the first of many front-line caregivers to succumb to the virus when he died March 31, 2020, from what he told friends was a lack of PPE.

Protecting our healthcare workers on the front lines should be top priority. Their years of training and experience make these clinicians the most valuable resource we have in the fight against COVID-19 – a resource that is not easily renewable. To help minimize clinicians' risk of exposure, we must enable "clinical distancing," a way for them to provide care through more access to information and fewer bedside visits. And not just for today, but also for the next wave in this pandemic, and any others in the years to come.

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In addition to virtual ICUs and command centers, we also need to enable flexible virtual rounding to keep providers from risk of exposure, which is especially important for this particularly vulnerable population of skilled specialists who tend to be older in age and more at risk for severity of infection. Virtual rounding also creates an opportunity for ancillary professionals, such as specialized respiratory therapists, to keep eyes on patients and to collaborate easily with other specialists like pulmonologists and critical care nurses. It also allows for clinicians in quarantine, or those coming out of retirement, to integrate seamlessly into the care team. Virtual rounding reduces PPE usage by utilizing front-line staff most efficiently, and, when PPE resources are scarce, leaves more supplies available for those who must be on-site for treatment.



Add clinicians.

The need for more clinicians — especially those skilled in the art and science of critical care — is paramount. They are a resource that must be utilized efficiently in the battle against this virus.

But where do we find them? On a typical day, critical care specialists are in short supply. According to the Society of Critical Care Medicine, [48% of acute care hospitals do not have critical care intensivists on staff](#). The 28,000 specialists we have in the U.S. today are simply not enough to provide all the care that is needed for complex COVID patients. And, if the healthcare system forces them to provide care in the same way it has for decades: tethered to the bedside, at a higher risk for exposure, lacking the tools to operate at peak efficiency, the numbers will be even fewer.

Once we have unlocked the data and provided remote access to it to protect providers from exposure, we then need to provide flexible workflows that allow each member to monitor more patients. Doing so will also allow us to bring able and willing, highly-trained critical care professionals that may be in quarantine or coming out of retirement back into the fold seamlessly to support every wave of this pandemic. The key to expanding staff capacity at this level is ensuring that all of these specialists have access to the data they need and the ability to interact seamlessly with on-site teams from wherever they are. Doing so would enable skilled physicians and nurses to enter the fight in some of the hardest-hit areas from any place in the world.



Do more with data.

Unlocking data from the bedside, getting more eyes on patients, and protecting healthcare workers from exposure is critical to getting through this pandemic. No one can argue the need for these measures in raising the line. And while we don't know everything about COVID-19 yet, we do know that this virus moves quickly. So, we have to be faster, know more and do more.

To gain a deeper understanding of a patient's condition for evidence-based decision-making around that individual's care, clinicians also need access to unlimited retrospective data, across all devices connected to a patient, for an entire length of stay. They need to be able to share that trended data remotely with other members of the team to support collaboration and make informed decisions about treatment protocols. If we add this data and these capabilities into the mix, healthcare, as a whole, will be able to create a collective brain trust around patient treatment related to this disease.

The glaring reality is that COVID-19 behaves unlike anything clinicians have seen before, making it imperative that we use collected data to gain a deeper understanding of this disease. Now is the time to leverage the knowledge gained in the first wave of infection to get ahead of patient deterioration and prepare for the next surge. Gaining access to complete retrospective data across all patients will afford us the opportunity to leverage machine learning and AI to create algorithms, risk scores and patient-specific analytics. Doing so will help care teams improve the delivery of care today, prepare for future waves of the pandemic, and enhance efficacy of care in years to come.

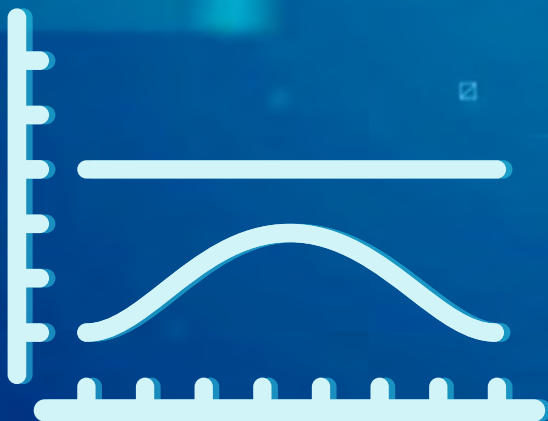
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We have to do more
than flatten the curve.
We have to raise the line.

In short, we have to use the only thing faster than a virus – digital technology – to arm healthcare in the war against this virus. Unlocking data from the bedside is the key component to creating the future of healthcare that truly leverages data to save lives, a need that has become so glaringly apparent during this pandemic.

Raising the line today puts us ahead of the curve for the next wave of COVID-19, and for the next pandemic or disaster. It also helps us establish a new standard of care for tomorrow and move toward the future of healthcare.

This technology exists today. MIC and Intel are collaborating to introduce Sickbay, the only scalable FDA-cleared clinical surveillance and analytics platform created for ICUs. As part of Intel's \$50 million pandemic response, the Scale to Serve Program will help hospitals rapidly install and scale MIC's Sickbay™ platform. Through the Scale to Serve program, Intel has agreed to fund the implementation fees, and MIC will waive the first 90 days of software subscription licensing fees for the first 100 hospitals that qualify. Hospitals interested in access can apply for the program [here](#).



**Raise the
line today**



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