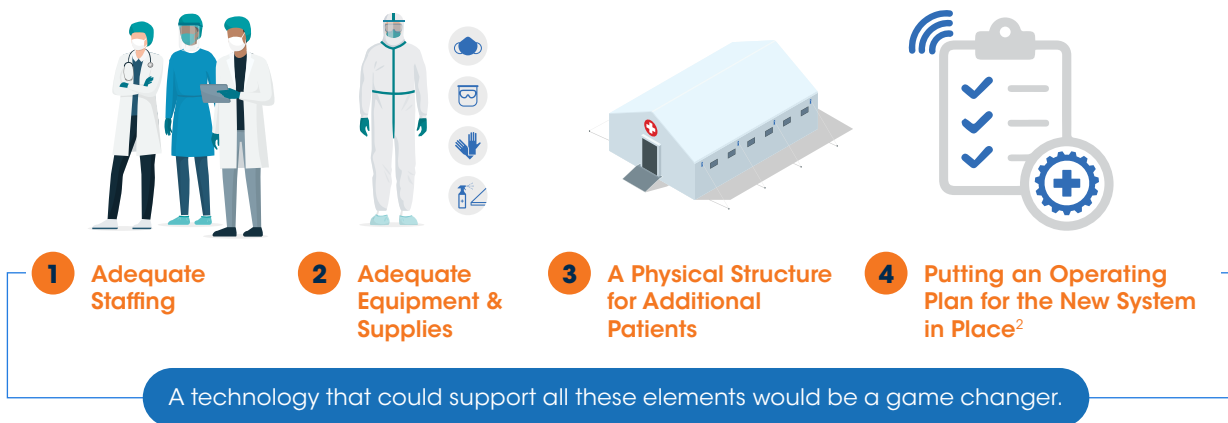


SURGE CLINICAL READINESS: CARDIAC TELEMETRY MONITORING IN THE FACE OF HOSPITAL OVERCROWDING

Healthcare leaders who work on the operations side of an organization have long understood the woes of hospital overcrowding. Just a few short years ago, the pandemic influenza virus challenged our nation’s surge planning ability. The United States found itself in a position where the infected patient population that qualified for an inpatient bed greatly outnumbered the staffed capacity.¹ Fast forward to 2020, when we are back in the epicenter of a new pandemic that has offered unprecedented obstacles with even more patient overload.

Like most operational challenges, there is a downstream effect that crosses many areas of patient experience. Patient processes that impact input, throughput, and output have to be reexamined by healthcare leaders in preparation for medical surge events. Although human and capital resources are essential to safely place patients in a health system, increasing inpatient beds is another crucial measure for combating patient throughput issues.

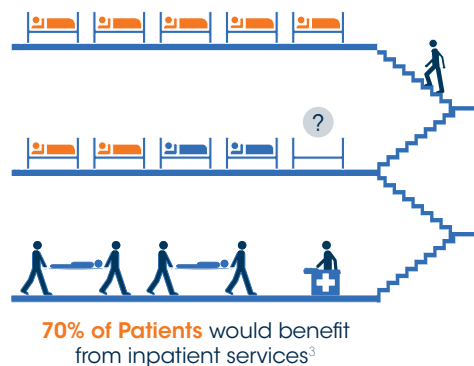
Surge planning consists of four elements:



The Problem

According to the Emergency Department Benchmarking Alliance, emergency departments across the United States manage over 411,000 patients per day, and 70% would benefit from inpatient services.³ A cardiac telemetry monitor is indicated for nearly 70% of the top 10 diseases admitted through the emergency department.⁴ Triaging the appropriate level of care in the United States is a difficult trend to manage, which has been exacerbated by the pandemic. Hospitals have limited resources, and front-line leaders have to make care decisions based on physical space and supply limitations.

Who should get the last telemetry bed?



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Existing Solutions

There are three solutions that hospital systems choose when it comes to overcrowding. The first option is to **hold a patient in a designated space or the emergency department**. The second is to admit the patient to an **unmonitored bed**. Both of these “solutions” are a way for health systems to ration care through a randomized selection process, one that exposes health systems to **standard of care inconsistencies**. The third option, which is not often chosen, is **enterprise expansion**. This involves a capital expenditure request to increase the number of monitored beds in a hospital. This process takes approximately 90 days from presale to go-live, and enterprise expansion has many challenges, including infrastructure inflexibility, implementation issues, and cost barriers.

The Solution

Nihon Kohden has worked diligently to develop a solution that could meet the medical surge challenges quickly and feasibly. The *NK-HealthProtect™ Wireless Surge Solution (WSS)* is a technology that thinks outside the “hospital box.” The *NK-HealthProtect™ WSS* **offers wireless monitoring of ECG rhythm, blood pressure, and oxygen saturation for up to 24 patients on a single portable screen**. This bundle was designed to combat resource limitations, patient overcrowding, and monitoring inconsistency.



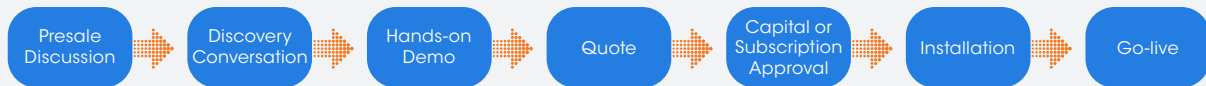
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Case Study

Adventist Health Glendale is a 515-bed nonprofit organization located in Glendale, California, USA, founded in 1905. It, like many other health systems across the nation, has been inundated by a large volume of patients but lacks the ability to monitor them effectively. The leadership team at Adventist decided to look to the vendor market for a cardiac monitoring solution. Their goal was to increase inpatient beds while maintaining the ability to monitor clinical deterioration. Zary Koffekian, MHA/Ed, BSN, Administrative Director of Telemetry and Med/Surg, shared her perspective:

“With the pandemic crisis upon us, we as leaders look for ways to smooth operations and resource availability as much as we can. One of our struggles was not having enough telemetry monitors, and our current cardiac vendor required a new larger server to support another 24 monitors. That was both costly and time-consuming. **We needed a product that was easy to deploy with a quick setup so our organization could repurpose patient care areas. We had to look for different ways to achieve our goal, and Nihon Kohden helped us meet our goals.**”

The *NK-HealthProtect™* WSS was quickly chosen to help alleviate emergency department crowding and improve patient flow. The hospital reactivated a closed medical unit to house their COVID-19 patients. They selected the WSS because it was cost-effective and quick to deploy. The timeline to expand monitoring capability was a short 13 days, which allowed the hospital to move patients out of holding situations and into the newly repurposed medical unit. Adventist expanded by 40 inpatient beds, thereby improving emergency department input, throughput, and output.



Before the purchase of this solution, Adventist was not a Nihon Kohden customer. The vendor was tasked to partner with Adventist to monitor their COVID-19 patients in a unit that did not have traditional antenna coverage. The *NK-HealthProtect™* WSS generates alarms when vital signs fall outside preset limits or three lethal arrhythmias are detected, offering advanced warning of patient deterioration. The health system saw this purchase as a down payment toward a larger future capital purchase, allowing them to expand their traditional telemetry coverage across the entire health system.

Conclusion

Medical surge planning is a very complex problem. There is no single answer waiting in the wings for health systems to combat hospital overcrowding. However, Nihon Kohden is ready and able to deploy this solution to the healthcare industry to ensure a consistent cardiac monitoring option with a suite of solutions that will fit seamlessly into any pandemic-preparedness plan, ensuring clinical readiness. The *NK-HealthProtect™* WSS **checks the box for surge planning**: it supports the placement of **staff** to monitored areas, expands the **supplies** needed, and opens the ability to monitor in the additional **structure** and **systems** planning is aligned to support disaster-related decision making. The *NK-HealthProtect™* WSS mitigates poor patient outcomes during overcrowding by alleviating emergency department overload, improving patient throughput, and ensuring operational capability.



Contact healthprotect@nihonkohden.com
to discuss how we can help your surge planning

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