PHILIPS

Presence Health

Leveraging Philips eICU program, Presence Health has managed to:

- Standardize clinical processes, therefore reducing variation in care delivery

- Reduce the average duration of mechanical ventilation (DMV) by a full day, which has saved the system millions of dollars

- Reduce length of ICU stay, allowing the system to treat more intensive care patients and increase revenue

Standardizing Care through TeleICU

How Presence Health used telehealth to reduce variations in ICU care and help save millions of dollars as they delivered affordable, quality, and compassionate care

Overview

While there are many teleICUs across the country today, few have the experience and history of Presence Health, one of the first health systems in the U.S. to implement fully integrated teleICU technology. Presence Health is the largest Catholic health system in Illinois, serving over 4 million people in 11 counties. It encompasses over 150 sites of compassionate care including 12 hospitals, over 17,000 associates, and more than 4,000 medical professionals, and it has annual revenue of $2.6 billion.

Presence Health walks the talk in investing in clinical quality and patient care. Since 2005, the Chicago-based system has been remotely monitoring thousands of patients in adult intensive care units, performing critical interventions to improve patient outcomes. Research has shown that teleICUs help improve patient care by reducing length of stay and saving lives, and Presence Health has experienced that firsthand.[1]

Addressing variations in care delivery

Prior to the implementation of its teleICU, Presence Health was faced with the challenge of how to address variations in ICU care delivery across multiple hospitals. Each hospital was using different evidence-based standards and screening tools, and as a result, there were no general guidelines in place across the system. Presence Health needed a way to connect the system and standardize care. "Senior leadership was focused on innovation and being at the forefront of transforming healthcare, and they saw the teleICU as truly disruptive technology. Their main motivations were to increase quality, decrease variability, and increase regulatory adherence, and the teleICU offered exactly that," says Kathy Johnson RN MHA, System Director of TeleHealth Operations at Presence Health's TeleICU Connection.

In preparation for implementation, Philips worked closely with the health system's executives, key leaders, and staff to understand current workflows and how to best integrate the eICU program technology, eCareManager, as well as provide the training needed in order to achieve the desired results. Telehealth in the ICU was still very new in 2005, so it was the first time any of the critical care nurses had seen this type of platform or technology. In addition, Philips also brought in a clinical transformation team to help determine an appropriate roll-out strategy and communications approach, and to support the ongoing operation of the teleICU.

1. Lilly CM, et al. Hospital Mortality, Length of Stay and Preventable Complications Among Critically Ill Patients Before and After Tele-ICU Reengineering of Critical Care Processes. *JAMA*. June 2011; 305(21): 2175-83.
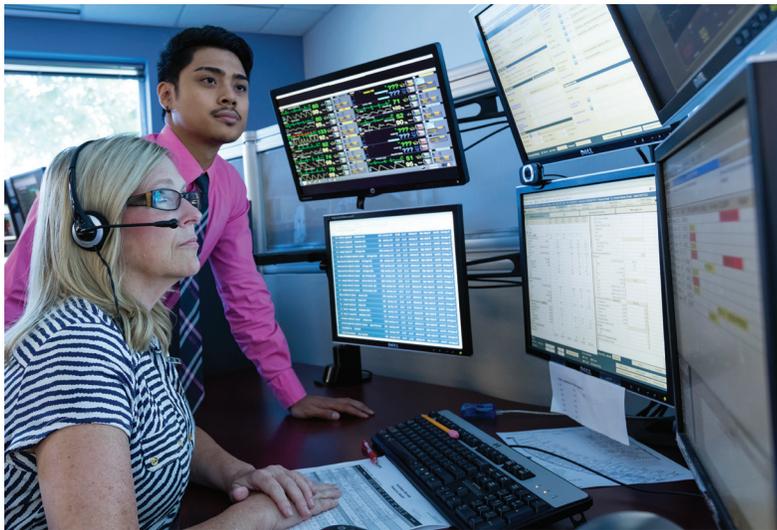
> "The teleICU has been a vehicle that through continuous communication has enhanced and improved clinical outcomes. This program has transformed critical care delivery across our health system. The clinicians in the teleICU are experts in critical care delivery. All teleICU physicians are board certified in critical care medicine, and all nurses are CCRN certified."

**Kathy Johnson, RN
MHA, System Director
TeleHealth Operations**

The Results

The Presence Health teleICU Connection has become essential to providing high–quality care and gives Presence Health a key competitive advantage, helping the system to grow. "Over the past eleven years, our teleICU program has matured and we have streamlined clinical processes to drive outcomes. We are now extending our services to external partners to enhance critical care delivery," notes Presence Health TeleHealth Strategy and Development System Director Laura Messineo RN, MHA.

The teleICU has helped Presence Health to standardize critical care delivery across ten acute care hospitals and one long-term acute care hospital, reducing variations in care delivery and ensuring that all patients were receiving the highest quality care. In 2013, the teleICU saved 7,458 patient ICU days, allowing Presence Health to treat over 2,000 more intensive care patients and increased revenue by $33 million, supporting the health system's mission to provide affordable, quality and compassionate care.[2]

As the teleICU has continued to grow and mature, Presence Health has developed several new programs such as sepsis screening tools and an organ donation process. The teleICU also spearheaded the development of a streamlined approach for daily sedation and weaning trials of ventilated patients within the critical care population. Through the sedation weaning program, Presence Health achieved a full day reduction in the average duration of mechanical ventilation (DMV), which has yielded a yearly cost avoidance of $4.5 million while reducing pain and suffering for patients and improving outcomes.[3]

Data and collaboration help to overcome barriers

Some resistance to change will always exist with such transformative technology. Presence Health overcame these barriers through a focus on communication, transparency, and dissemination of data. "The risk adjusted and benchmarked data allows us to clearly communicate opportunities to improve care delivery, celebrate the successes of driving down ICU length of stay and mortality rates, and decrease adverse events," says Johnson. Being able to measure and demonstrate the value of the teleICU has been key to overcoming initial skepticism, and bedside staff now welcome and appreciate the extra eyes, ears, and intelligence they receive from the teleICU.

Having a partner that is fully engaged and provides expert resources for the long–term – not just during implementation – has been critical to success. "Over the years, Philips has been a great partner listening to feedback from clinicians and making enhancements to the platform," says Messineo. "Twice a year, they meet to evaluate where the pain points are in the teleICU process across the whole landscape. This has resulted in multiple revisions of the platform with more enhancements and incredible improvements made in functionality." Through this regular engagement, Philips and Presence Health can collaboratively discuss how to enhance the eICU program to meet the growing needs of the ICU patient population.