

Advocate eICU

Advocate Health Care – Downers Grove, IL

Background

With more than 2 million outpatient and 100,000 inpatient admissions each year, Advocate Health Care is Illinois' largest health system. Grounded by its commitment to the community it serves, Advocate is not only a high-quality, award-winning organization, it is a change leader that integrates innovative technology to improve patient outcomes and save lives.

Program Overview

Advocate was the first hospital system in Illinois and one of the first in the nation to introduce tele-ICU to supplement the already superb bedside care offered to its sickest patients. From a remote access site, board-certified intensivists and intensive care unit (ICU) nurses add unprecedented 24/7 care as they watch over 301 patients in 16 ICUs in Illinois and 109 patients in 3 outreach sites as far away as Delaware. Additionally, the eICU provides ICU oversight to patients who are waiting for ICU beds in three of its emergency departments, as well at night-time coverage to its critical access hospital, all via eCareMobile carts.

Utilizing cutting-edge technology and incorporating evidence-based best practices, these expert eICU clinicians have advanced the quality of care provided to ICU patients. Morbidity and length of stay rates, along with cost, have dropped significantly since the system's introduction. The eICU's successes, its meticulous application of quality metrics (including APACHE, a risk-adjusted severity of illness tool for critically ill patients) to seek opportunities for even further improvement, and dedication to excellence have positioned Advocate Health Care as an experienced tele-ICU source authority that hospitals outside its system and even outside the state look to for advice and collaboration.

Tele-ICU is not a substitute for bedside doctors and nurses. It is meant to partner with and support bedside intensivists, an increasingly scarce commodity, by leveraging technology. At the same time, tele-ICU is transformational. Advanced real-time audio-visual technology, sophisticated data reporting, predictive analysis and a system that alerts caregivers to early changes in a patient's condition empower those caregivers to enact prompt, oftentimes life-saving, interventions.

Impact

Since its 2003 inception, the eICU team has studied its risk-adjusted data to seek opportunities for further quality improvements. It has, among other parameters, maintained a mortality index of 0.47 out of an expected index of 1.0 (saving more than 1,500 lives per year), successfully used eICU technology to diminish the number of days patients spend on ventilators and to detect sepsis early, reducing days spent in the ICU.

Despite these significant achievements, Advocate is continuously trying to improve. As an example, in 2015 compared with 2014 there were 352 fewer ICU days and 331 fewer ventilator days. These initiatives have made people's lives better and have reduced Advocate Health Care costs by millions of dollars. Advocate Health Care's early adoption of new technology to improve outcomes for its patients speaks to its culture of safety and quality that constantly seeks to improve, year after year. Another benefit of the program has been to mentor more than 80 "new to ICU" registered nurses, providing support for 30 to 90 days at the conclusion of their bedside orientation. This is accomplished via a formalized collaboration between the eICU RN and the new to ICU RN, which results in higher levels of staff satisfaction and improved recruiting and retention for the ICUs.

Lessons Learned

These successes didn't come automatically. Over the years of its evolution, the eICU/ICU collaborative efforts yielded the following lessons learned:

- Achieve system standardization of care but with site innovation – let clinical evidence drive the standardization, and recognize and respect the unique culture of each ICU during implementation
- Enable the clinical staff to care for the patient – when developing workflows, always consider the clinician's top desire – to provide care for the patient – at the bedside!
- Tele-ICU can be effective for population management of critical care patients; through partnerships with bedside caregivers, collection of publicly reported data can be improved
- The success of telemedicine will be determined less by what technologies you have and more by how well you use them
- Tele-ICU is a facilitator of change management as much as an "intervention"

Future Goals

As Advocate's eICU has gained experience and expertise in remote monitoring of ICU patients, it now seeks to find partners with whom to share their program and with whom to collaborate to continually improve both the program and clinical outcomes for patients.

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