

Avera eICU[®] CARE[™]

Avera Health – Sioux Falls, SD

Background

Beginning in 1993, Avera Health offered eConsult services to rural, frontier and critical access hospitals that were part of the Avera Health system. Ten years later, eCARE expanded to provide eICU care. In addition, Avera eCARE delivered 24/7 access to a wide range of medical specialists and referrals to specialty care for a growing number of underserved populations and communities. In 2009, Avera eCARE launched eEmergency and ePharmacy for all of Avera's rural hospitals. Additional funding from the Helmsley Charitable Trust and other sources allowed expansion to more than 200 facilities across eight states and the ability to serve partners outside Avera Health. By 2012, eCARE services were available for long-term care and correctional facilities. Avera eCARE telemedicine professionals work together 24/7/365 in the eHELM, a virtual hospital hub, also created in 2012 with the assistance of the Helmsley Charitable Trust.

Program Overview

Health care systems, hospitals, outpatient clinics, long-term care organizations and correctional facilities take advantage of Avera eCARE to support their onsite staff members and services; deliver fast response to patients' health needs, including urgent and critical care; help avoid unnecessary transfers; reduce patient travel time and expense by improving care for residents where they live; and coordinate referrals to additional medical specialists.

The Avera eICU[®] CARE[™] program provides 24/7/365 virtual access to intensivists and professionals, continuous monitoring of patients, predictive analytics for proactive medicine, early intervention with physiological and lab changes, rigorous adherence to evidence-based medicine, and post-consult analysis for continuous quality improvement.

While eICU CARE doesn't replace bedside resources, it does surround a participating hospital's ICU with continuous, supportive supplementary care and complements the hospital's team approach. Avera eICU CARE intensivists are credentialed and privileged at the participating facility, which allows them to provide orders and care for patients as needed. In addition, sophisticated predictive analytics continually monitor patients and allow the care team to respond faster to critical changes in health status.

Here's how it works:

1. The eICU CARE team implements monitoring software and hardware into the participating hospital's ICU rooms.
2. Once patients are admitted to the ICU, they receive around-the-clock monitoring from eICU CARE's board-certified intensivists and seasoned critical care nurses. eICU CARE clinicians remotely view real-time patient information such as cardiac monitors, lab results, medications, and care notes via electronic medical record interfaces and technology integration.

3. The eICU CARE team performs rounds on every patient, ensuring adherence with evidence-based care bundles like sepsis, ventilator weaning protocols, DVT prophylaxis, and stress ulcer prophylaxis.
4. The eICU CARE team collaborates with the participating hospital's ICU team to assess patients and communicate interactively through high-definition video linked to the eICU hub.
5. For additional support, advanced video technology allows eICU CARE clinicians to see close-up views of patient indicators like pupil size, skin color and settings on patient-support devices.
6. Any change in the patient's status notifies the eICU CARE team and prompts them to review and respond to the patient's new status.
7. The eICU CARE team will then alert bedside staff of any potential change that may require medical intervention to avoid any adverse health problems.

Avera eICU CARE supplies monthly reporting, ongoing education and process improvement to build network capacity for the participating hospital.

Impact

The eICU program helps reduce rates of complications and mortality; reduce ICU and hospital length of stay; and support providers and reduce burnout, which increases staff retention and improves recruitment.

Results for the past 12 months include 273 lives saved, \$11.2 million in costs saved, and 7,000 fewer days in the ICU through faster response times to complications.

Lessons Learned

There are a number of eICU programs across the country; some have been more successful than others in gaining and maintaining staff buy-in. Avera eCARE learned early on that clinical leaders and physician champions at each site were critical to fostering long-term success. Other strategies like supporting adherence to evidence-based care bundles, and tracking acuity-adjusted length of stay and mortality, provided quantifiable evidence of the positive impact of telemedicine.

Future Goals

Avera continues to support the growth of eICU through new sales. Most recently, growth has come through partnership with other like-minded health systems who can adopt the program and leverage some of their own intensivist staffing to serve the telemedicine network. Other initiatives focus on maximizing the impact through additional clinical and quality programs.

Contact: Deanna Larson
Chief Executive Officer, Avera eCARE
Telephone: 605-322-4723
Email: deanna.larson@avera.org