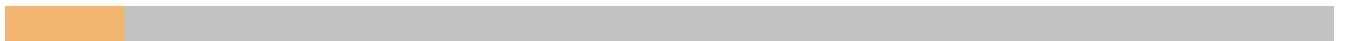




**HIMSS** Analytics

# HIMSS Analytics Stage 7 Case Study

Nebraska Medicine



# Profile

Nebraska Medicine includes two acute care hospitals: Nebraska Medical Center, a 621 bed acute-care facility, the state's largest and highest-rated hospital, and Nebraska Medicine – Bellevue, a 55 bed full-service hospital. The hospitals serve patients from all 50 states and more than 50 countries internationally.

U.S. News & World Report has consistently named Nebraska Medicine the top hospital in the state and Becker's Hospital Review recognizes Nebraska Medicine as one of the 100 Best Hospitals in America. Nebraska Medicine has an international reputation for providing solid organ and bone marrow transplantation services and houses one of the nation's three biocontainment units that have successfully treated patients with Ebola and is capable of caring for anyone exposed to a contagious and dangerous disease. Nebraska Medicine is designated as a Magnet hospital for nursing excellence and in December 2015 achieved HIMSS Analytics EMR Adoption Model™ Stage 7 for both Nebraska Medicine hospital locations.

## The Challenge

Nebraska Medicine has a complex and highly-specialized patient population and high bed occupancy, in which all beds are MDI tele-capable; however, utilization of telemetry significantly exceeded benchmarks with like institutions. Data showed approximately 65 percent of patients hospitalized for longer than 24 hours spent the majority of their hospital stay on telemetry and 70 percent of telemetry orders were not canceled until the patient was discharged. Excessive telemetry causes increased work for patient care teams, who must respond to false alarms; can cause complications for patients without risk for cardiac events or stroke; and can be taxing on the organization's Heart Monitoring Unit. As Nebraska Medicine's patient population continues to expand, continued high telemetry utilization would also require significant capital investment to add a second central monitoring hub. Decreasing telemetry utilization would ensure Nebraska Medicine staff could meet the growth needs within the organization.

## Implementation Overview

The Nebraska Medicine Clinical Effectiveness team, comprised of clinical, technical and quality team members, has the goal of optimizing patient care, reducing variability, decreasing cost and improving patient outcomes. To support earlier discontinuation of telemetry in patients, this clinical effectiveness team focused on a commonly-reported reason for not discontinuing telemetry: providers involved with a patient's care were unaware of why telemetry was started and therefore, were hesitant to discontinue it. The clinical effectiveness team was able to leverage its multidisciplinary membership to implement changes within the system in 16 weeks. To remedy the identified situation, an indication requirement was added to all telemetry monitoring orders. Additionally, a decision support tool in the electronic health record was created to require review of the telemetry order after 48 hours and provide a quick method of discontinuing telemetry if no longer indicated.



# Resulting Value / ROI

- Increase in provider-discontinued telemetry orders prior to discharge, demonstrating that providers are evaluating the continued appropriateness of telemetry monitoring and discontinuing telemetry when appropriate
- Decrease in percentage of patient days with telemetry, as orders are discontinued earlier in the patient's stay; the project goal was to decrease average telemetry days per patient by 0.75 days and the actual achievement was 0.85 days
- Estimated cost savings of \$40 per day for an annual savings of \$560,000
- Reduction of Heart Monitoring Unit technicians' workload by 12 percent, achieved in the first five months following implementation
- Additional benefits include an improvement in patient satisfaction upon discontinuation of telemetry and a decrease in alarm fatigue due to telemetry alarms

## Lessons Learned

Working in partnership with clinical care teams, technology can be leveraged to provide information at the point of care to aid in decision making. Clinical effectiveness teams can quickly identify the cause of the problem and work collectively to identify technology solutions that support patient care workflows. Rapid roll out of projects can be facilitated through an effective governance and department structure to support rapid, quick wins.

