CHAIN Preventing HAIs in Minnesota | Collaborative Healthcare-Associated Infection Network

www.mnreducinghais.org

2018 CHAIN Award for Excellence Winning Nominations

Abbott Northwestern Hospital was recognized for its Central Line Associated Bloodstream Infection (CLABSI) Prevention Team.

The hospital has a multidisciplinary CLABSI team comprised of key stakeholders including nursing leaders, anesthesiologists, hospitalists, intensivists, cardiologists, nurses, and an infection preventionist. With strong support from hospital leaders, the team meets monthly to review data, update policies and implement central line practice changes. Under new leadership in 2017, the team implemented new CLABSI reduction practices.

The hospital's previous work related to CLABSI reduction had not achieved substantial decreases in infections, with rates decreasing from 2015 to 2016 by approximately 10 percent. Data analysis suggested that a majority of CLABSIs were related to central line maintenance lapses. Infection preventionists conducted central line maintenance audits and confirmed gaps in compliance with central line maintenance best practice recommendations.

With a data-driven approach from the maintenance practice concern, the team implemented five new approaches to improve central line maintenance practices: rounding on patients with a central line on the ICU, medical oncology, and telemetry units; creating an all-inclusive central line dressing change kit along with a 21-step dressing change procedure; modifying central line patient education; forming Clinical Action Teams with CLABSI nurse champions; and conducting mandatory central line dressing return demonstrations for all nurses.

Central line standard rounding was initiated in 2017. Rounding focused on increasing CLABSI awareness; educating patients, families, nursing staff and providers; discussing ownership of central line care for patients transferred internally or from an outside facility; and changing culture. Rounding consisted of central line dressing assessment, chart review, antimicrobial disk placement and compliance, dressing date compliance and number of dressing changes requested during rounding, and appropriate central line indication.

Central line rounding involved an infection preventionist rounding on units alone or with a nursing leader, a clinical nurse specialist or a circulating nurse. This collaborative rounding allowed timely feedback to staff, daily updates to unit leaders and staff and the ability to escalate concerns quickly. Rounding occurred weekly on the telemetry unit, biweekly on the medical oncology unit and multiple times throughout the week on ICUs depending on rounding results.

In 2017, rounding occurred on over 2,000 central lines, with a leading focus on tracking the percentage of central line dressings that needed to be changed. After implementation of the above interventions, the percentage of dressings that needed to be changed decreased 67 percent from the first month of rounding to December 2017. CLABSI rates decreased by 20 percent from 2016 to 2017, and the number of CLABSIs hospital-wide decreased by 23 percent. Through the first two quarters of 2018, over 2,200 central lines have been rounded on. CLABSI rates in 2018 have decreased 20 percent compared to 2017. In total, the interventions implemented resulted in a 36 percent reduction in CLABSI at Abbott Northwestern Hospital.

Bethany on the Lake was recognized for its infection control efforts.

The long-term care facility developed an interdisciplinary team focused on infection control made up of nurses, pharmacy staff, social work staff, the medical director and the administrator. This team participates in weekly and monthly quality improvement meetings to review data gathered by a dedicated infection control nurse and create strategies to improve identified problem areas. Areas of specific improvement have included engagement of residents and their families in the infection control process, antibiotic stewardship and review of infection prevention processes.

Organizational engagement was necessary to the facility's commitment to safe patient handling through infection prevention and good stewardship of antibiotics. The first step was to educate residents, direct care staff and rounding providers on infections commonly seen in geriatric patients and how those infections can be best treated, along with adverse effects directly related to misuse and overuse of antibiotics.

Urinary tract infections are one of the most commonly observed infections. Bethany On the Lake initiated a campaign to standardize treatment, by educating staff that if the Loeb minimum criteria were not met, a urine specimen would not be collected for testing and supportive symptom management would be started instead (i.e., increase fluids, exercise, vital sign monitoring, medication review). This criterion also is used for patients with respiratory and soft tissue infections.

Bethany on the Lake collaborated with its local emergency department to identify an order bundle including urine specimen collection for anyone over 55, resulting in a practice of prescribing antibiotics based on culture results and not empirical evidence alone. The facility also completes an antibiotic timeout where a form is submitted no later than 72 hours for the resident's primary physician to review. This form includes follow-up data about the specific antibiotic order, lab and diagnostic results and status of infection symptoms. The provider then can indicate to direct care staff whether the continuation of the medication is warranted.

Engaging residents and their families has been critical to the success of the infection control program. The interdisciplinary team and resident council facilitate antibiotic stewardship education for all residents and their families, as well as open forums on the topic during council meetings, care conferences and discharge planning meetings.

Since implementing the infection control program, Bethany on the Lake has seen infection statistics drop. The facility has been recognized on the Minnesota Department of Health Honor Roll at the gold level for collaboration, action, and commitment.

TRIA Orthopaedic Center was recognized for its preoperative Staphylococcus aureus nasal screening program.

In the summer of 2016, TRIA started a preoperative Staphylococcus aureus nasal screening program for total joint patients to reduce the number of patients colonized before surgery and thus reduce the number of surgical site infections. Approximately two months after starting the screening protocol, specimen collection compliance was noted to be only 30 percent. TRIA conducted a thorough review of collection data including location of collection, timing of collection and laboratory orders (including staff who entered them) to identify opportunities to improve screening.

The review showed that the majority of TRIA total joint patients were completing their history and physical appointments at providers outside of the TRIA/Park Nicollet network. Though patients were provided with a paper copy of the screening order when completing their pre-op appointment outside of the network, it was not being completed.

To rectify this, all total joint patients with out-of-network providers were asked to schedule a nurse visit at TRIA to complete their pre-op screening. Additional TRIA nursing staff received training on how to collect the screening specimen to ensure the process was efficient for everyone involved. Also, documentation templates were created in the electronic medical record to minimize time spent charting collection, education and decolonization information. Infection prevention staff also created an algorithm for administrative assistants and nursing staff to use to determine if a patient required screening, time frame for collection, decolonization and any necessary changes to preoperative protocols (i.e., antibiotic selection, timing, etc.) based on screening results.

Robust educational handouts were created for patients to ensure they were involved in the process. “Screening and treatment for Staphylococcus aureus before surgery” provides basic information on what Staphylococcus aureus is, why screening is important, what a positive result is, a link to MDH resources and a table for tracking decolonization treatment for those whose screening tests are positive. All patients scheduled for a total joint procedure receive this handout.

“Preoperative nasal screening for Staphylococcus aureus at an out-of-network clinic” is given to patients who are completing their preoperative history and physical out of network along with a paper copy of their screening order. The handout describes the importance of collection, the time frame in which the specimen should be collected, contact information to send screening results to and what to do if the specimen cannot be collected.

TRIA leaders have been instrumental in this effort in providing adequate staffing and training resources to ensure the process flows smoothly and efficiently. The leadership team also approved a ‘no charge code’ for screening visits to encourage compliance.

The screening process changes made over time have significantly increased the percentage of specimens collected from approximately 30 percent to 90 percent. The rate of total joint infections in hospital-based procedures performed by TRIA surgeons has also declined significantly.