

“It’s a Marathon, Not a Sprint”

Sustained Bloodstream Infection Improvement: Multidisciplinary Education and Practice Bundles to Reduce CLABSIs

Program Overview

The vascular access team at Children’s Healthcare of Atlanta embraced a multidisciplinary approach utilizing education and development of practice bundles, which, over the past four years, has enabled Children’s Healthcare to reduce central line-associated bloodstream infections among their young patients.

Objectives

- To reduce system-wide and unit CLABSIs
- Increase the days between infections
- Increase and sustain 90 percent hand hygiene compliance

Solutions

The vascular access, performance improvement and infection prevention teams of Children’s Healthcare of Atlanta started the campaign over four years ago in response to a national initiative to improve patient safety and outcomes by preventing CLABSIs, an effort made all the more personal when the CEO shared her story of a friend who developed a CLABSI.

A key strategy was to enable clinicians and non-clinicians to recognize that they play an instrumental role in the prevention of infections, and that these infections are, in fact, preventable. To develop the initiative, the vascular access team employed the Lean Rapid Process Improvement Methodology using evidence-based guidelines from leading infection prevention organizations. The resulting broad-based, multidisciplinary approach involved stakeholders in multiple areas.

The bloodstream infection task force was composed of key stakeholders across the continuum of care. They adopted evidence-based CLABSI prevention bundles and practices supported by national quality organizations such as Child Health Corporation of America and the Institute of Healthcare Improvement. that included:

- Insertion and maintenance checklists
- Standardized dressing change kit
- Establishment of a consistent dressing change day
- Implementing bundles via a phased approach to include all units
- Standardizing policies and practices among units

A task force was formed in order to engage front-line staff in standardizing vascular access equipment and procedures. This team identified an opportunity to reduce infection risk by using chlorhexidine Gluconate (CHG) hub scrub for line entry.

A need was identified to review CLABSI data in real-time. The infection prevention and quality team helped create tools for data monitoring and analysis, first piloting and then rolling out a BSI huddle, a strategy to improve communication among the various staff members. A “Days Since Last Infection” sign was displayed in each unit for visual management.

Recognizing the critical importance of proper hand hygiene, a hand hygiene education campaign titled “Foam Up” was created by the marketing department and rolled out over a two-year period.

Various other departments within the hospital were engaged to contribute to the multi-year program’s success:

- The peer review and medical executive committee supported physician practice changes, such as sterile barrier guidelines during line insertion.
- Patient and family education helped to create hand hygiene education material for patients and caregivers.
- Home health agencies were invited to an education session on central venous line care.

Outcomes

- Bloodstream Infection rates were reduced by 77 percent in the last five years resulting in more than 500 avoided bloodstream infections with a cost avoidance of over \$23 million.
- Two critical care units have gone 319 and 384 days respectively without a CLABSI.
- Hand hygiene rates consistently remain above the 95 percent target. Currently, the rate is 98.3 percent evidence that hand hygiene became engrained in the culture of safety.