



St. Bernards Healthcare Lowers SIR With CLABSI Prevention Processes

Introduction

Central line-associated bloodstream infection (CLABSI) cases lead to thousands of patient deaths per year, yet these infections can be easily prevented with the right knowledge and practices. As part of their infection prevention efforts, St. Bernards Medical Center recognized the need to better manage central line care by developing a reliable process for CLABSI prevention.

SNAPSHOT



Opportunity

Provide nurses with tools and best practices to manage central line care by developing a highly reliable process for CLABSI prevention.

Solution

MEDITECH's EHR

Benefits

- Lowered SIR to .257, well below previous year's rate of 1.551 from 2016-17 and the national industry standard of 1.0.
- Order sets and reporting on key metrics empower staff to ask the right questions in their central line care efforts.
- Education surrounding CLABSI prevention provides a clear sense of organizational direction, guiding smart decision-making and quality patient care.

Profile

Located in Jonesboro, AR, St. Bernards Medical Center is a 353-bed referral hospital offering health services across key areas, including heart care, cancer treatment, and women's and children's services. St. Bernards is a healthcare destination for their local community, providing healing through medical services and investing heavily in innovative treatment methods.

Challenges and Inspiration for Change

According to the CDC, the standardized infection ratio (SIR) is the primary summary measure used by the National Healthcare Safety Network to track healthcare-associated infections (HAIs), including CLABSI. St. Bernards' initial evaluations showed their CLABSI rate was 1.551 from 2016 – 17, well above the national industry standard of 1.0.

St. Bernards' previous campaigns to centralize CLABSI improvement efforts were sporadic and noninclusive. They saw the need to bundle protocols to fit organizational needs and specific goals.

To reduce their CLABSI rate, St. Bernards leaders formed a multidisciplinary committee of physicians, quality staff, and lab staff. Meetings were challenging to schedule in the early stage of the committee, making it difficult to gain momentum.

Nurses also provided feedback focused on gap analysis: specifically, inconsistent knowledge, practice, and documentation related to central venous access device management. Observations from the Vascular Access Team reports confirmed the inconsistencies, which were in line with historical patterns despite periodic education.

As St. Bernards worked to overcome these challenges, they decided to take a different approach by doing external research. Staff took advantage of a site visit to Piedmont Healthcare (Atlanta, GA) that proved to be



a timely learning opportunity and a relevant source of inspiration. Piedmont shared their “promise package,” which offers support tools to help prevent infections. St. Bernards took particular interest in Piedmont's decision to pair clinicians with engineers to improve processes. The important findings gathered during the site visit inspired St. Bernards to develop their own package, modified according to their resources and staff structure.

Development of the HIRO Package

St. Bernards created a HIRO (highly reliable organizational plan) package that would facilitate the organization of policies, educational materials, performance reports, and MEDITECH documentation related to central lines. When developing the HIRO package, St. Bernards built specific sections of it

into MEDITECH's EHR for performance tracking. This included an insertion bundle compliance dashboard consisting of order sets, central venous checklists, and IV assessments. St. Bernards' primary objective was to create a reliable process for decreasing central line infections, with one source of truth for all information.



After learning from the challenges of their large, multidisciplinary committee, St. Bernards created a “subgroup” consisting of the Vascular Access Team (VAT) manager, an IT representative, and the clinical nurse specialist. The subcommittee increased the frequency of their meetings from monthly to weekly as action items and ideas grew. Both teams realized that a more focused “steering group” could offer administrative support and help expedite decision-making. The steering committee included the:

- CMO
- CNO
- VAT manager
- Infection Prevention (IP) director
- Clinical nurse specialist.

Education and Physician Buy-In

With the subcommittee developing the HIRO package and the steering committee handling governance, they collaboratively evaluated and established education and workflow needs such as physician instruction, nursing maintenance strategies for central line care, and metrics to monitor.

St. Bernards achieved physician buy-in thanks to the heavy involvement of their CMO. By providing rationale for upcoming changes and adjustments, the CMO made

it easier for physicians to digest updated processes through newsletters and direct visits. St. Bernards also conducted 1.5 hour education classes over the course of 6 weeks that prepared physicians to execute CLABSI prevention plans; the classes also included nursing staff to ensure a clear alignment of care team responsibilities. Reducing central line infections was also an established hospital goal promoted by a safety committee, which included physician representation.

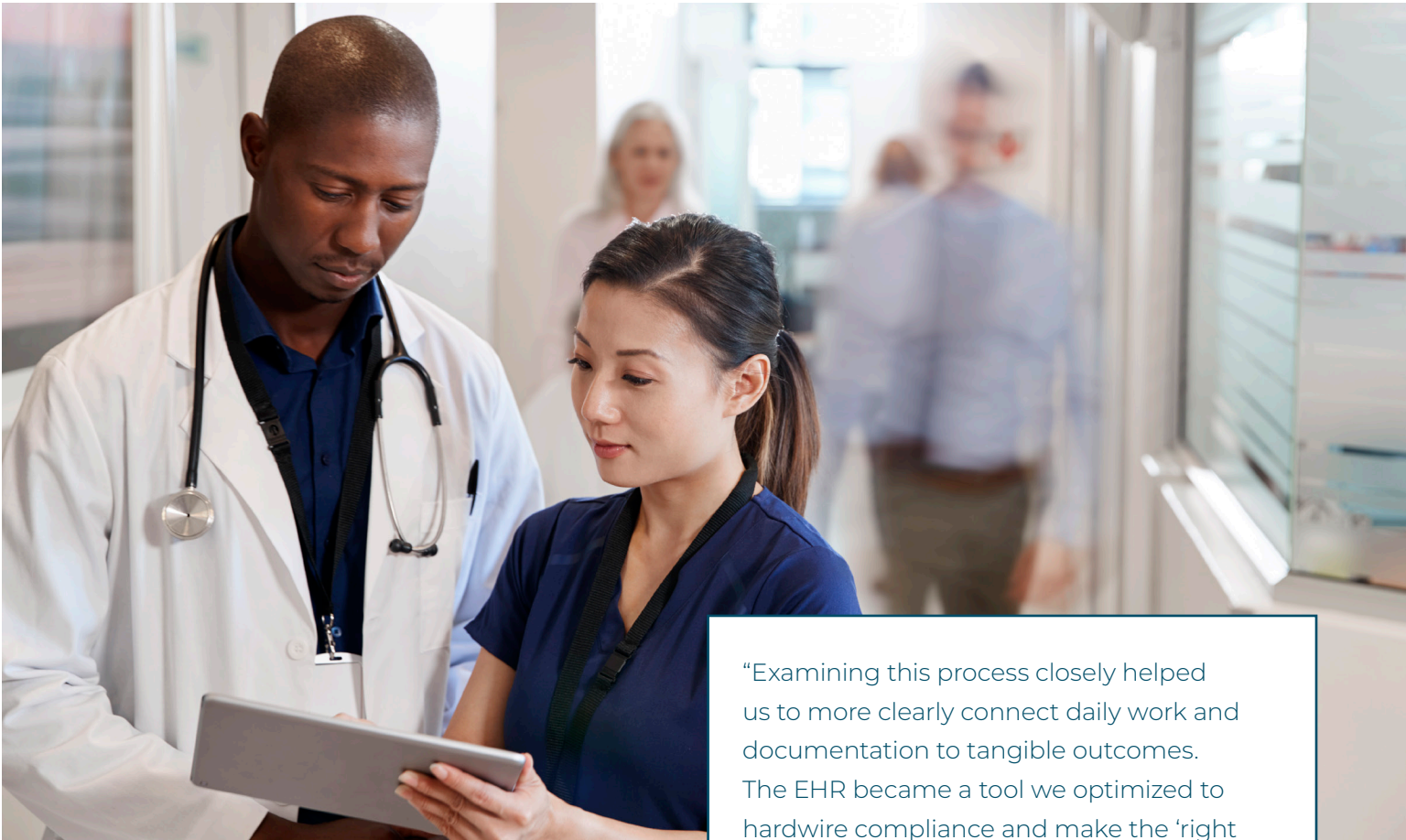
Culture Transformation

The culture at St. Bernards shifted from looking at central lines as a convenient method of administering fluids and medications and drawing blood for lab work to treating lines as a potential risk for harm. Staff stopped using “standing orders” that gave nurses permission to use lines as a default, implementing an “OK to Draw Blood from Central Line” order that must be placed for any labs to be drawn from the central line. Providers have to select if this is a continuous order or a one-time use order when placing.

Before this initiative, physicians took on most of the responsibility for ordering central line placement. With the development of the HIRO package, providers were encouraged to consult the VAT for troubleshooting when necessary. St. Bernards consolidated their order sets to one — including insertion order, reminders, consent, and time to remove — in MEDITECH’s EHR and indicated line types; the single source of truth facilitated physician documentation and greater consideration into whether the line was necessary. The VAT started following the BARD Access System central line care/maintenance guidelines, recommended by the CDC and the Infusion Nurses Society. They also became more proactive in discouraging the manipulation of central lines, known to increase the risk of infection.

Floor nurses also started to handle more daily interventions related to chlorhexidine gluconate (CHG) bathing and flushing of the lines, including documenting patient status. Capturing and reporting on this data brought more accountability to the bedside. Also, IP staff conducted line care observation, offering real-time advice and feedback.

Go-LIVE, Awareness, and Reporting



“Examining this process closely helped us to more clearly connect daily work and documentation to tangible outcomes. The EHR became a tool we optimized to hardwire compliance and make the ‘right thing to do’ more prominent and reportable.”

Kasey Holder, MD
Vice President of Medical Affairs

St. Bernards Healthcare

St. Bernards went LIVE with their HIRO package in November 2018. The launch included 24/7 support from steering committee members, who conducted weekly meetings to review metrics and reports that focused on key questions. The internal team put a calendar on the Intranet page so front-line staff could celebrate when 100 days had passed without a reportable CLABSI event, which boosted employee morale.

FAQs and resource pages gave staff easily digestible and accessible information that provided support for processes and specific situations. Thus, physicians and nurses were able to be more strategic with their responses to patient feedback and/or pushback, using their training to guide smart decision-making when there are central line complications. Infection Prevention Rounders drove awareness, while follow-up surveys continue to give staff the opportunity to share their personal experiences in different care settings.

Reports pulled from MEDITECH orders and nursing documentation have also provided valuable insights, including:

- Daily and monthly reports from CLABSI TPN, Hibiclens, and Diprivan dashboards for patient statuses.
- Maintenance-targeted reporting that measures compliance goals achieved through order sets, which are safer, faster, and more accurate.
- A Central Venous Access Device Observation Report containing weekly audits performed at random, ensuring staff are properly following checklist items.

Lowered SIR and One Source of Truth



- FY Oct. 2016 – 2017 SIR of 1.551
- FY Oct. 2017 – 2018 SIR of 1.03
- HIRO launched in Nov. 2018
- FY Oct. 2018 – 2019 SIR of 0.257

Thanks to their efforts and having one source of truth, St. Bernards accomplished their goal of lowering the SIR below the 1.0 national standard. The organization's most recent SIR, as of April 2020, was .241 after launching the HIRO package in November 2018.

Following a consistent organizational philosophy empowered St. Bernards to create a highly reliable process for decreasing central line infections; staff gained a clear sense of direction through the outlining of responsibility (i.e., primary nurse vs. vascular nurse) and help from MEDITECH's EHR.

"Examining this process closely helped us to more clearly connect daily work and documentation to tangible outcomes," said Kasey Holder, MD, vice president of Medical Affairs. "The EHR became a tool we optimized to hardwire compliance and make the 'right thing to do' more prominent and reportable."

Looking Ahead

St. Bernards is working to ensure their CLABSI processes sustain reliability. The organization continues to build clinical decision support within MEDITECH's EHR, and is seeing positive results with *C. difficile*. St. Bernards plans to take on CAUTI next, creating a HIRO package that will help them to achieve better CAUTI outcomes across the entire organization.



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