


Safety Stand Down: Using QI Tools to Respond to Bloodstream Infections in the CICU

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Background


- In fiscal year 2021, the CICU CLABSI rate was 2.2 infections per 1,000 central line days.
- This rate was higher than the hospital goal of 1.6 infections per 1,000 central line days, the hospital-wide rate of 1.77, and the combined rate for high-risk units of 2.05 for the same period.
- Several cardiac-specific exclusionary criteria exist which prevent bloodstream infections in the setting of a central line from being identified as CLABSIs.
- In September 2021, after greater than 100 days without a CLABSI, CICU patients experienced three CLABSIs (4.45 infections per 1,000 central line days) and four additional bloodstream infections in the setting of a central line that did not meet CLABSI criteria due to presence of a ventricular assist device or intracardiac central lines.

Aim





INFECTION
PREVENTION
RISK
THEMES





FOCUSED
INTENTIONAL
ROUNDING





ACTION
ITEMS TO
MITIGATE
RISKS

FY22 CICU
CLABSI RATE
≤ 1.6
INFECTIONS
PER 1,000
LINE DAYS

Methods

- Event review themes were analyzed to identify key drivers among seven affected patients
- A rounding script and survey were developed which focused on identified key drivers
- Focused intentional rounding with individual and small group discussions were completed to obtain additional input from clinical staff across disciplines and on all shifts
- Data analysis was completed to identify themes and action items
- An impact/effort matrix was developed to prioritize action items.

Rounding Outcomes

Identified Themes

Hot Zone Cleaning- lack of...

Hot Zone Cleaning- variability

Hand hygiene- broken/empty...

Dressing integrity-...

Home linens- wrong cadence

Comfort objects- wrong cadence

Hand hygiene- crowded pods

Clutter- no family feedback

Arterial line- delayed...

Unit acuity

Skill mix

Hand hygiene- unit acuity

Clutter- long term patients

0

2

4

6

8

10

12

Interventions

- 12 interventions identified:
 - Hand hygiene: Replaced clocks in area with low visibility
 - Comfort objects/home linens: Standardized comfort object/positioning aid laundering
 - Hot Zone Cleaning: Clinical Practice Refresher for all CICU nurses about Hot Zone Cleaning; Re-initiated leadership Hot Zone Rounding
 - ECHO protocol: Modified guidance regarding ECHO/ultrasound gel in the setting of a central line
 - Supply availability: Made statseal available locally
 - Situational Awareness of CLABSI risk: Patients at high risk for CLABSI reviewed at multidisciplinary safety huddle

Identified action items were prioritized using an impact/effort matrix:

IMPACT/EFFORT

Ultrasound CHG

Clocks

Safety Checklist Update

Oozing art line product

Presence of central line to moderate risk ECHO protocol

Hot Zone Rounding

Comfort objects/positioning aids on Sundays (stocking)

Hand Hygiene Rounds

Hot Zone Cleaning

Ultrasound gel (increase par)

Belonging bag labels

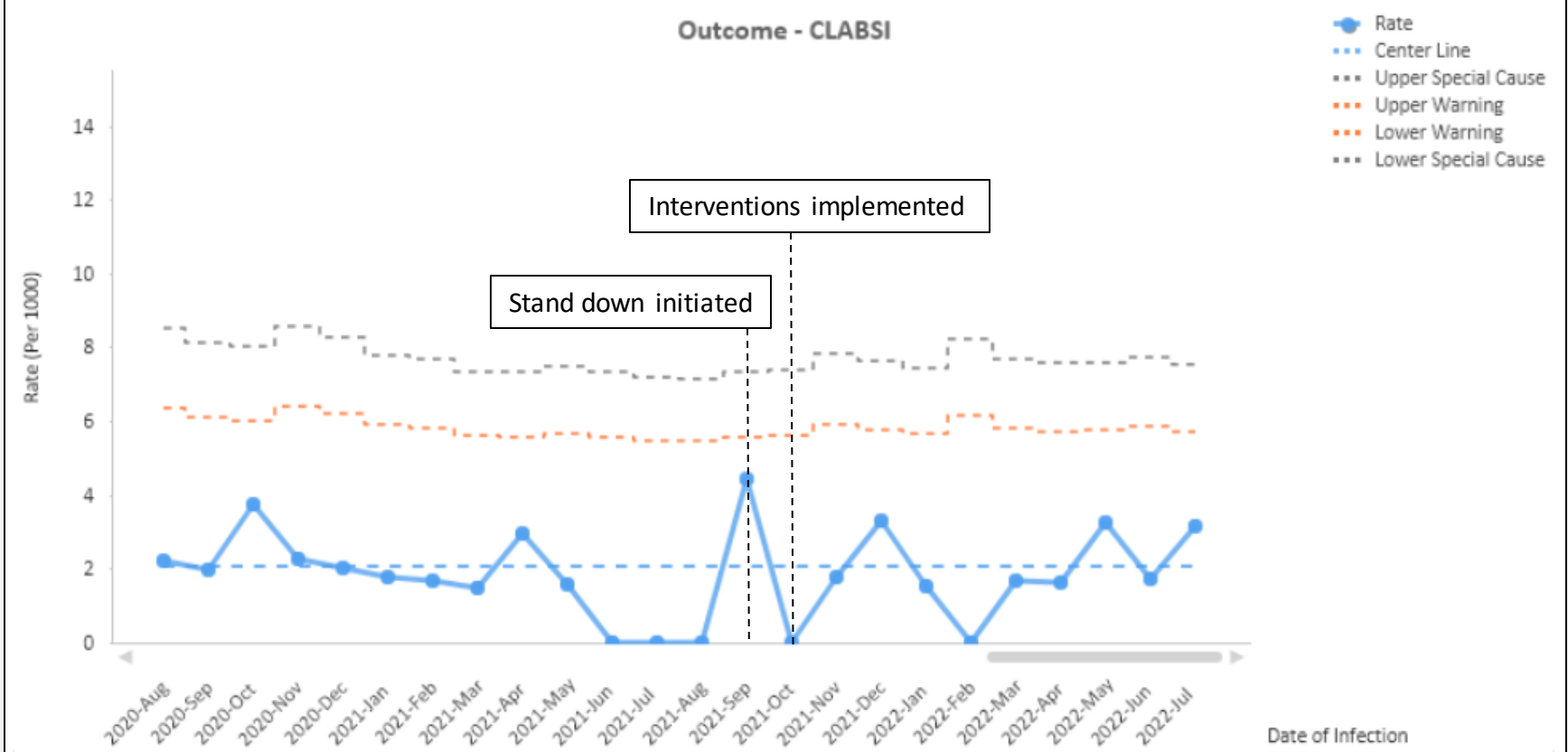
Storage of st belonging

EFFORT

IMPACT

Results

- Prioritized interventions were implemented beginning in October 2021 and sustained to the present day.
- The CLABSI Rate in the CICU was 1.6 infections per 1,000 central line days in FY22, meeting the hospital goal.




Lessons Learned

- Deference to Expertise**: Inclusion of the frontline clinical staff in identifying opportunities for improvement is essential
- Sensitivity to Operations**: Obtaining input through focused intentional rounding allowed clinical staff to participate
- Preoccupation with Failure**: Value in being responsive to an identified concern before special cause variation
- Reluctance to Simplify**: Recognition of the complexity of the CLABSI definition, specifically related to cardiac care, and identifying similar vulnerabilities that underly both CLABSI and non-CLABSI BSIs

Acknowledgements

Supported in part by: The Cardiac Center at Children's Hospital of Philadelphia, Cardiac Intensive Care Unit clinical staff, and the Children's Hospital of Philadelphia Harm Prevention Program



The CICU staff celebrating a CLABSI-free month in February 2022.

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