

Eliminating Infection Prevention Barriers in Cardiac Surgery with Implementation Strategies

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Problem: In 2021, our facility had a significantly higher coronary artery bypass grafting (CABG) chest surgical site infection (SSI) rate (3.42) compared to the New York State (NYS) average (1.51).

Objective: Utilize implementation science (IS) to reduce CABG chest SSI rate.

Results:

Post intervention, our facility's CABG chest SSI rate decreased significantly from 3.42 in 2021 to 1.25 in 2022 (p=0.04), which was not significantly different from the NYS rate of 1.04. This improvement was sustained in 2023 with a CABG chest SSI rate of 1.7, which was not significantly different than the 2022 facility or NYS rate.

Methods:

Creation of Multidisciplinary Team:

- A3/Lean project design utilized
- Team members and leaders represented continuum of care (ambulatory and inpatient)
- Process and outcome measures defined

Facilitated Monthly Meetings:

- Reviewed SSI Data
- Review of best practices & expectations with all team members
- Address identified barriers
- Plan and follow actions

SSI Reduction Gap Analysis:

- Gemba walks
- Product review
- Staff interviews
- Observation of practices
- Prospective audits

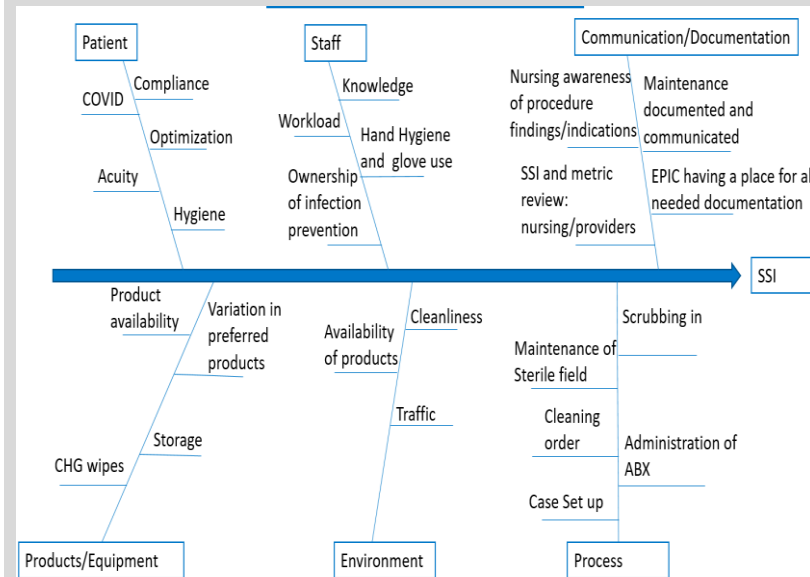
Back to the Basics Campaign

- Use of CDC Category IA Recommendation for Basic SSI Prevention
- OR attire
- Antibiotic timing
- Door closures
- Glucose control
- Noes-to-toes documentation

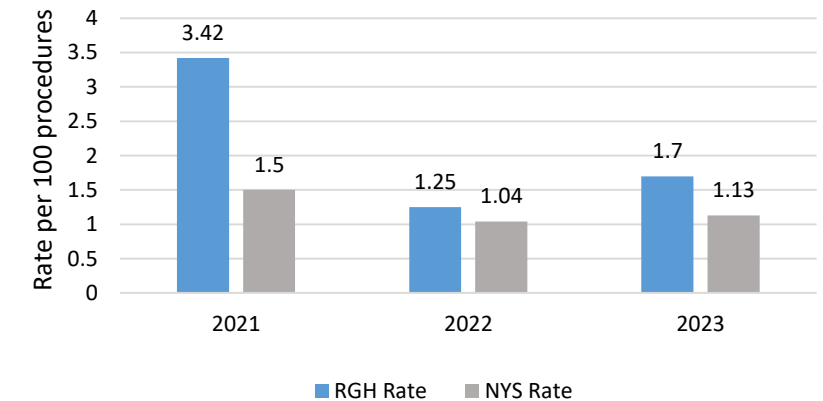
Evaluation of Fidelity:

- OR Observations
- Environment of care rounding
- Prospective audits
- Monthly action registry review

SSI Reduction Gap Fishbone Analysis



Facility and NYS CABG Chest SSI Rate



Conclusion:

A multidisciplinary IS approach led to a substantial reduction in infections, with a 65% decrease in the targeted SSI rate. Including all stages of care in the approach was crucial for identification of implementation gaps. The IS based strategy enabled the team to pinpoint barriers, track metrics, and adapt strategies effectively.

For more information:

<https://redcap.link/CABGSSI> or QR Code:



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Disclosures: None

References

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