# Implementation of a Colorectal Surgical Site Infection (SSI) Prevention Bundle and Checklist

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## Background

**In 2020, our surgical leadership team noted an alarming trend for colorectal surgical site infections (SSI). The colorectal SSI internal data for Lynchburg General Hospital and Virginia Baptist Hospital in 2019 confirmed a 6.98% infection rate.**

**The leadership team began a call to action in the perioperative departments with the formation of an interdisciplinary committee with representation from nursing leadership, infection control, a general surgeon and process engineering support. The focus of this team was to develop a plan to reduce the SSI rate for colorectal surgeries.**

## Goal

**The primary goal for the interdisciplinary team was to decrease colorectal SSIs from 6.98% to less than 0.733% by December 2021.**

## Literature Review

**A decision was made to create SSI bundle for colorectal surgery. The literature review highlighted the following interventions:**

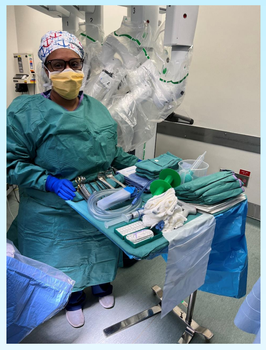
- **Antibiotics and redosing**
  - **Boushey et al. (2022), Falconer et al. (2021), Fuglestad et al. (2021), Hajirawala et al. (2020), Harris (2018), Ohman et al. (2017), Pop-Vicas et al. (2020), Schlick et al. (2021), Weiser et al. (2018).**
- **Chlorhexidine wipes**
  - **Bebko et al. (2015), Boushey (2022), Falconer et al. (2021), Franklin (2020), Fuglestad et al. (2021), Harris (2018), McGee et al. (2019), Mullen et al. (2017), Ohman et al. (2017), Pop-Vicas et al. (2020), Weiser et al. (2018).**
- **Separate closing clean instrument tray**
  - **Falconer et al. (2021), Harris (2018), Hajirawala et al. (2020), McGee et al. (2019), Pop-Vicas et al. (2020), Weiser et al. (2018), Zywot et al. (2017).**
- **Normothermia with forced air warming**
  - **Bebko et al. (2015), Boushey et al. (2022), Fuglestad et al. (2021), Hajirawala et al. (2020), Weiser et al. (2018).**
- **Decolonization with nasal swabs**
  - **Bebko et al. (2015), Harris (2018), Mullen et al. (2017), and Franklin (2020).**

## Methods

**After the review of literature and team discussion, a colorectal SSI bundle and checklist were developed. This checklist was used to guide staff on the standard practice of the SSI prevention bundle. Education was provided in multiple ways to the various teams including surgeons and consisted of staff meetings, presentations, huddles, and one-on-one coaching.**

**The checklists were completed in real time pre-intra-post operatively and were then collected for data review.**

**After implementation data was compared retrospectively over a time frame of one year.**

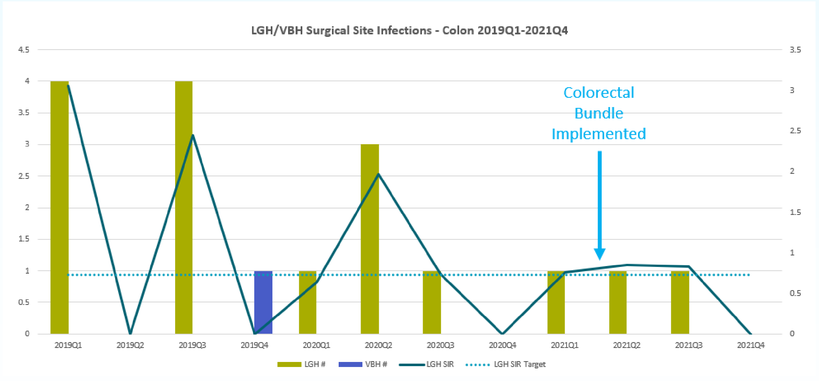


Dominique Johnson, ST with an OR clean closure set up

**The checklist implemented included the following elements:**

- ❑ **Antibiotics and redoes schedule**
- ❑ **Chlorhexidine wipes**
- ❑ **Separate OR clean closing tray**
- ❑ **Normothermia**
- ❑ **Nasal decolonization**
- ❑ **Bowel Preparation**

## Results

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## Conclusion

- **The colorectal checklist implemented in January 2021, provided a standardized process for our health systems to safely care for colorectal surgical patients.**
- **The colorectal checklist implementation dropped SSI rates from 6.98% to 0.5719% in a timeframe of one year.**

## Recommendations

**Recommendations include:**

- **Key-stakeholder participation with process change and implementation**
- **Standardization of best practices in the preparation of colorectal surgical patients**
- **Implementation of an evidenced based checklist**
- **Surgeon and staff engagement with education across all surgical services departments**
- **Auditing the process with feedback and coaching**

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