Study Stats

Is there a role for Plus Antibacterial Sutures in reducing the high risk of surgical site infection (SSI) in colorectal surgery?

A retrospective observational analysis examined the incidence and cost of SSI after colorectal surgery and the potential economic benefit of adopting triclosan-coated sutures as part of a value-driven SSI prevention bundle.[1]

Leaper DJ, et al. *Dis Colon Rectum*. 2020; 63(12):1628-1638.

CONCLUSION

There is a substantial burden associated with SSI following colorectal surgery, and SSI-associated costs can continue to increase over a 24-month postoperative period. Adoption of antimicrobial sutures as part of an evidence-based surgical care bundle may result in cost savings.[1]

- The rate of SSI after colorectal surgery is one of the **highest of any surgical specialty**, with a reported incidence as high as 41%[1]
- The true economic burden of SSI is underrecognized; **25% of SSIs can occur later than 2 months postoperatively**[1]
- Triclosan-coated sutures could **save $809-$1170** per patient vs traditional sutures in colorectal surgery*†

METHODS

- A retrospective observational cohort analysis evaluated **107,665 patients** who underwent colorectal surgery in the US between 2014 and 2018 to determine the incidence and economic burden of SSI after colorectal surgery[1]
- Cost analyses were conducted to assess the potential **economic benefit** of using antimicrobial sutures instead of traditional sutures for wound closure in colorectal surgery[1]

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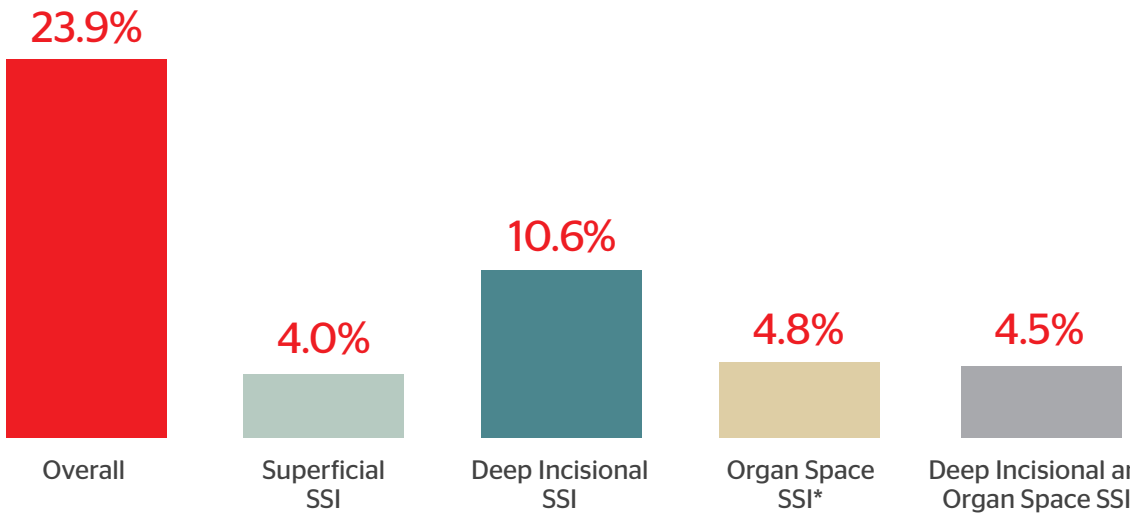
*Median costs estimated to be avoided per patient by commercial payers were $809 (95% CI, $26-$4481) for deep incisional SSIs and $1170 (95% CI, $146- $4884) for superficial and deep incisional SSIs.
†Over 12 months as projected in a peer reviewed economic analysis.

RESULTS

Incidence of SSI 6-month post-colorectal surgery with traditional sutures[1]



Mean incremental costs of SSIs for payers 12 months after colorectal surgery per episode[1]

$36,429-$144,809	**$17,551-$102,280**
Commercial payers	Medicare

Projected savings from reducing deep and superficial SSIs with triclosan-coated sutures over 12 months per patient[1*†]

$809-$1,170	**$870-$1,036**
Commercial payers	Medicare

Using triclosan-coated or -impregnated sutures is supported by level 1A clinical evidence to reduce the risk of SSIs and should be considered as part of a value-driven SSI prevention bundle.[1,3,4]

39% reduction in SSI with triclosan-coated sutures vs traditional sutures (OR 0.61 [0.52-0.73]; 95% CI; *P*<0.001) shown in a 2017 meta-analysis by Leaper et al was the basis for the cost savings calculation in this study.[2]

For complete indications, contraindications, warnings, precautions, and adverse reactions, please reference full package insert.

*Because antimicrobial sutures are not likely to impact organ-space infection rates, the cost analysis was performed on superficial and deep incisional SSIs only.
†Represents mean costs avoided per patient due to reduction in deep incisional SSI only, and in superficial and deep incisional SSI.

References: 1. Leaper DJ, Holy CE, Spencer M, et al. Assessment of the risk and economic burden of surgical site infection following colorectal surgery using a US longitudinal database: is there a role for innovative antimicrobial wound closure technology to reduce the risk of infection? *Dis Colon Rectum*. 2020;63(12):1628-1638. doi:10.1097/DCR.0000000000001799 **2**. Leaper DJ, Edmiston CE Jr, Holy CE. Meta-analysis of the potential economic impact following introduction of absorbable antimicrobial sutures. *Br J Surg*. 2017;104(2):e134-e144. doi:10.1002/bjs.10443 **3.** Ahmed I, Boulton AJ, Rizvi S, et al. The use of triclosan-coated sutures to prevent surgical site infections: a systematic review and meta-analysis of the literature. *BMJ Open* 2019;9(9):e029727. doi:10.1136/ bmjopen-2019-029727. **4.** de Jonge SW, Atema JJ, Solomkin JS, Boermeester MA. Meta-analysis and trial sequential analysis of triclosan-coated sutures for the prevention of surgical-site infection. *Br J Surg*. 2017;104(2):e118-e133. doi:10.1002/bjs.10445

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