

Partners in Protection Webinar Series

# YOUR ROLE IN PREVENTING SURGICAL SITE INFECTIONS



**Maureen Spencer, MEd, BSN, RN, CIC, FAPIC** is an independent Infection Preventionist Consultant with over 40 years of experience and is board certified. Maureen was previously the Director, Clinical Education at Accelerate Diagnostics, Corporate Director, Infection Prevention for Universal Health Services, Infection Control Director at New England Baptist Hospital, and Director of the Infection Control Unit at Mass General Hospital.

**Peter Graves, BSN, RN, CNOR** is an independent perioperative consultant. Peter has chaired several national AORN committees' and served on the AORN national board of directors. He has extensive clinical and medical device leadership experience and is the Treasurer/Secretary for the CCI Research Foundation.

) WATCH NOW: Your Role in Preventing Surgical Site Infections

1 CE for RNs,\* CSTs, CSFAs, and other Associate members of AST\*\*

### **Defining Surgical Stewardship**

Surgical Stewardship is focused on the optimization of patient outcomes. This can be achieved through the adoption of a culture where optimal perioperative care and evidence-based practices are utilized – every day, everywhere, by everyone.



## True Costs of a Surgical Site Infection are Underestimated

One reason for the These overall SSI costs provide Estimated means In earlier publications, disparity between these a more accurate representation attributable cost of the most common reported costs and of the true costs that has been SSI treatments cited incremental cost to the those from these recent underestimated by surrogate in the CDC guidelines hospital cited was the analyses is the **increase** data rather than the "real ranges from \$10,443 to added inpatient stay in infection treatment world" data presented in these \$25,546<sup>1</sup> readmission<sup>2</sup> cost to payers over time papers

- Real-world cost of managing superficial, deep-incisional/organ space infection in surgery was significantly higher than previously reported, with payer costs escalating over a 12-month post-operative period<sup>1</sup>
- Surgical approach, payer type, and comorbid risk factors contributed to increased risk of infection and economic burden
- SSI occurred most frequently following revision THA and revision TKA and resulted in substantial incremental costs
- There is often a need for prolonged care for patients who experience an SSI, especially in the case of deep incisional infection or organ space infection or leak
- The adoption of a robust evidence-based surgical care bundle to mitigate risk of surgical site infection and economic burden is warranted



#### **Use Dissemination and Implementation Science**

• The field of dissemination and implementation science (D&I) bridges the gap between public health, clinical research, and everyday practice by providing a knowledge base about how health information, interventions, and new clinical practices and policies are translated in specific settings

Non-coated sutures

- D&I explores new and innovative approaches, such as behavior change, engaging leaders, and adapting culture
- D&I focuses on the social and behavioral aspects of moving discoveries from an experimental environment into widespread everyday practice
- D&I focuses on what helps and what hinders the uptake, effective implementation, and sustainability of evidence-based programs in clinical practice

#### Implement A Colorectal Wound Closure Bundle

- Glove change prior to wound closure
- Dedicated wound closure tray
- Use of antibacterial (triclosan antiseptic) sutures for wound closure
- Application of skin adhesive following subcuticular wound closure
- Remove surgical drape after applying dressing .
- Comprehensive post-operative patient instructions •

#### Double Gloving Should be the Standard of Care in Surgery

The 2006 Cochrane Review demonstrated that double gloving reduced cross infection.



#### **Educate on the Published** Guidelines





American College of Surgeons Inspiring Quality: Highest Standards, Better Outcomes

#### A 2022 Meta-Analysis evaluating surgical site infections and the use of a wound closure tray reported:

- Overall SSI risk was reduced by 46% after a wound bundle was implemented (n=~8,000 patients)
  - Using a wound bundle had a significant effect on the SSI rate (p<.00001)
- Superficial SSIs were reduced by 54% (n=20,806)
  - Using a wound bundle had a significant effect on superficial SSI rates (p<.00001)
- Organ space SSIs were reduced by 42%
  - Using a wound bundle significantly reduced organ/space SSI rates (p=.0006)

#### References:

- Berrics-Torres SI, Umscheid CA, Bratzler DW, et al; Healthcare Infection Control Practices Advisory Committee. Centers for Disease Control and Prevention guideline for the prevention of surgical site infection, 2017. JAMA Surg. 2017;152:784–791. Agency for Healthcare Research and Quality. Estimating the Additional Hospital Inpatient Cost and Mortality Associated With Selected Hospital-Acquired Conditions. Updated November 2017. Leaper DJ, Holy CE, Spencer M, Chitnis A, Hogan A, Wright GWJ, 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
- 3.
- 4.
- Leaper DJ, Holy CE, Spencer M, Chitnis A, Hogan A, Wright GWJ, 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? Diseases of the Colon and Rectum. 2020; 63(2):12628-38. Edmiston CE, Spencer, M. Gunja, N. Holy, C. Ruppenkamp, J., Leaper D. Longitudinal rates, patient risk factors, and economic impact of superficial and deep incisional surgical site infection (SSI) following primary and revision total hip arthroplasty: analysis of a US Tertospective Commercial claims database analysis. urg Infect (Larchmt). 2023;24(4):366-375. Edmiston CE, Spencer, M. Gunja, N. Holy, C. Ruppenkamp, J., Leaper D. Longitudinal rates, risk factors, and costs of superficial and deep incisional surgical-site infection (SSI) after primary and revision total knee arthroplasty: A US retrospective claims database analysis. [published online ahead of print, 2023 Feb 2]. Infect Control Hosp Epidemiol. 2023;1-9. Edmiston CE, Jr., Leaper DJ, Chitnis AS, Holy CE, Chen BP, Risk and economic burden of risk rad economic burden of risk and economic burden of surgical site infection (SSI) post-hysterectomy using a US. Longitudinal database. Surgery. 2022;171(5):1320-30. Gilmartin H, Hessels A, et al. Dissemination and implementation science for infection primer. AIIC 47 (2019) 688–692. Bakama EG, Okeme JM, Makama EJ, Ameh EA. Glove Perforation Rater Surgery. And Controlled Study To Evaluate the Efficacy of Double Gloving. Surg Infect (Larchmt). 2016;17(4):436-442. Bekele, A, Makonnen, N, Tesfaye, L et al. Incidence and patterns of surgical glove perforations: experience from Addis Ababa, Ethiopia. BMC Surg 17, 26 (2017). 5.

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