UW TASP
tele-antimicrobial stewardship program

Engaging your Hospital's Anesthesiology Department in Infection Prevention

Dustin Long, M.D.

Department of Anesthesiology, Division of Critical Care Medicine

Harborview Medical Center

UNIVERSITY of WASHINGTON

UW TASP
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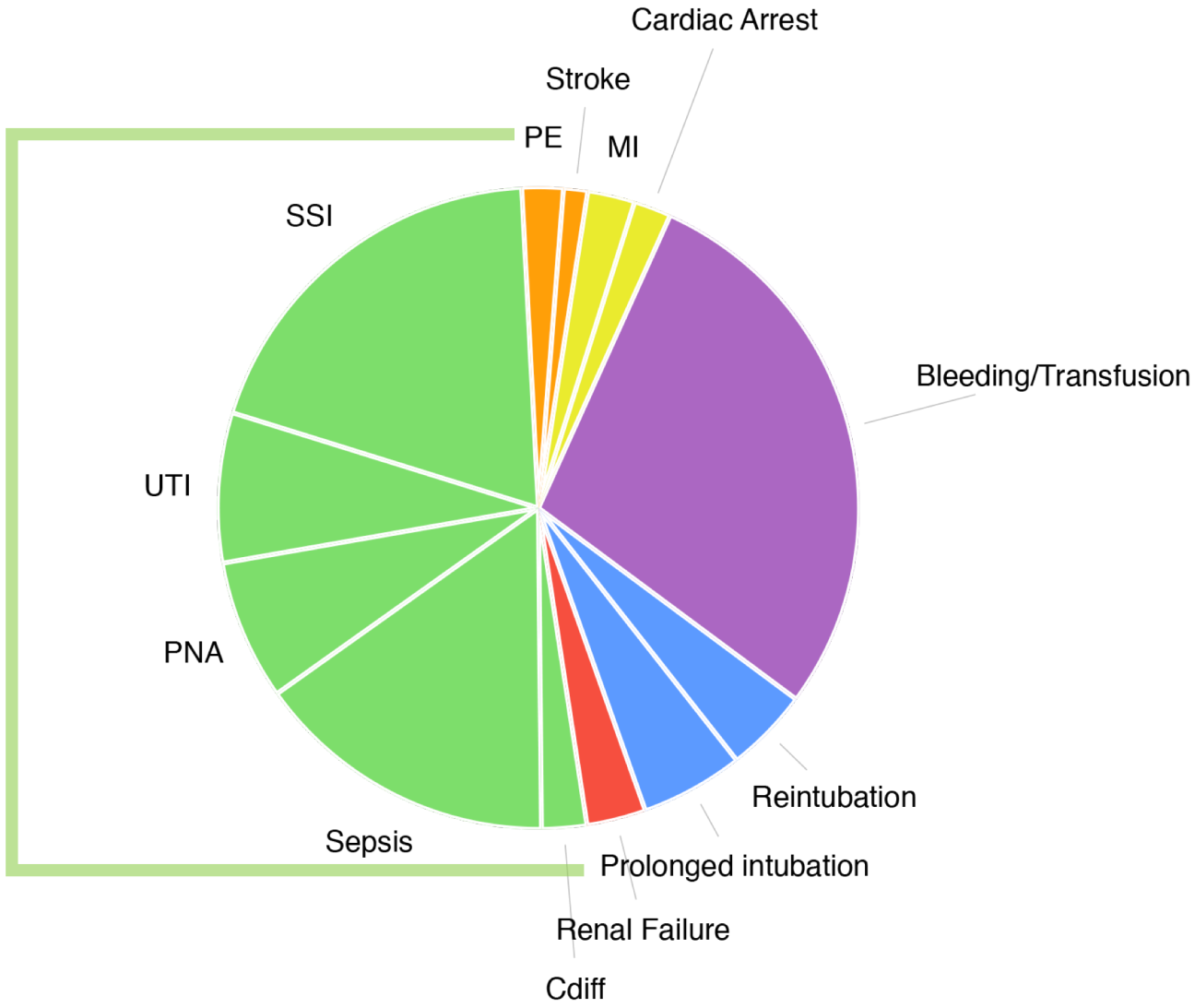
UW Medicine
HARBORVIEW MEDICAL CENTER

2017 NSQIP Outcomes Data

1,028,713 cases from 708 NSQIP-participating sites

HAI 52%



American College of Surgeons National Surgical Quality Improvement Program Participant Use Data File (PUF)

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Goals and Objectives

- Discuss use of local surveillance data to develop prevention strategies
- Review recent SHEA guidelines for infection control in anesthesia
- Discuss opportunities and barriers to implementing anesthesia-related IPC measures

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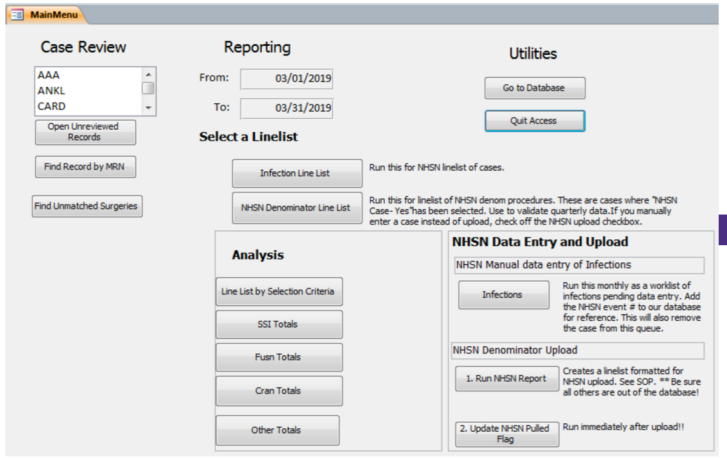
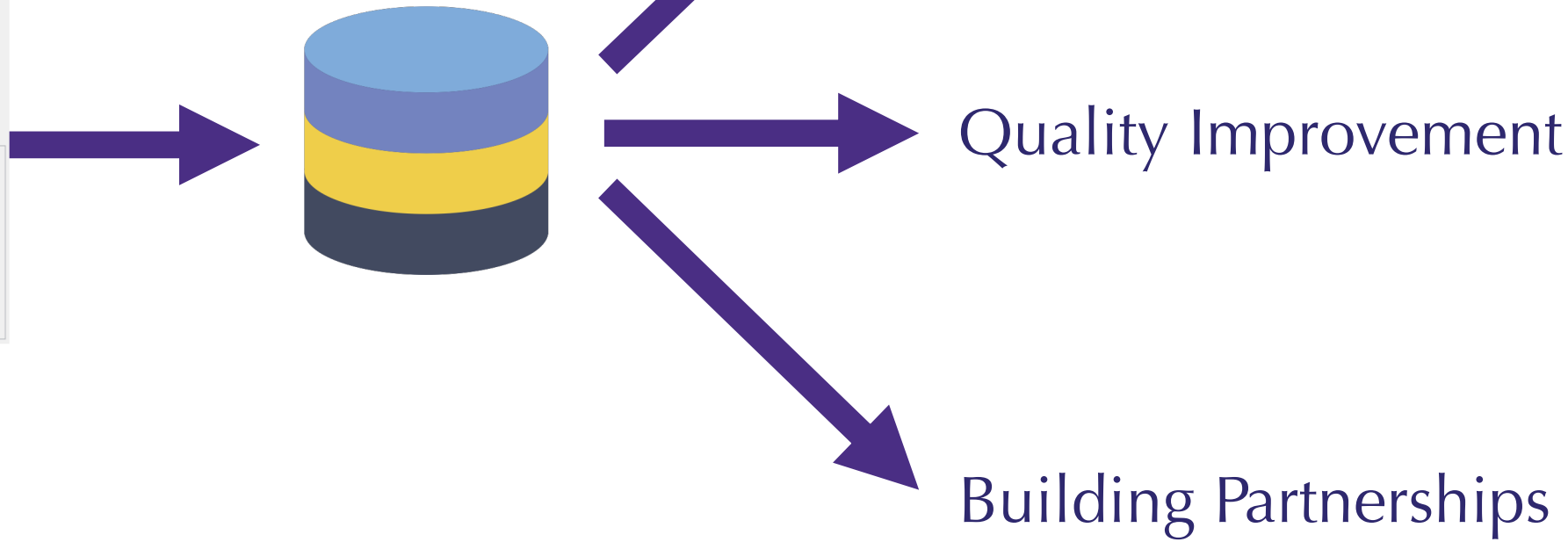
Power of Your Surveillance Data





Spine Care at HMC

1,000 spinal fusions per year

Diverse, medical complex population

"EPOC" spine pathway

Spine

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Home > Published Ahead-of-Print > **Enhanced Perioperative Care for Major Spine Surgery**

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Enhanced Perioperative Care for Major Spine Surgery

Dagal, Armagan, MD, FRCA, MHA[*,†,‡]; Bellabarba, Carlo, MD[†,‡]; Bransford, Richard, MD[†]; Zhang, Fangyi, MD[†,‡]; Chesnut, Randall M., MD, FCCM, FACS[†,‡]; O'Keefe, Grant E., MD, MPH[†,‡,§]; Wright, David R., BM, FRCA[*]; Dellit, Timothy H., MD[¶]; Painter, Ian, PhD[||]; Souter, Michael J., MB, ChB, DA, FRCA, FNCS[*,‡]

Spine: December 19, 2018 - Volume Publish Ahead of Print - Issue - p
doi: 10.1097/BRS.0000000000002968
Health Services Research: PDF Only

SDC PAP

Abstract | Author Information | Article Metrics

Study Design. The enhanced perioperative care (EPOC) program is an institutional quality improvement initiative. We used a historically controlled study design to evaluate patients who underwent major spine surgery before and after the implementation of the EPOC program.

Objective. To determine whether multidisciplinary EPOC program was associated with an improvement in clinical and financial outcomes for elective adult major spine surgery patients.

Summary of Background Data. The enhanced recovery after surgery (ERAS) programs successfully implemented in hip and knee replacement surgeries, and improved clinical outcomes and patient satisfaction.

Methods. We compared 183 subjects in traditional care (TRDC) group to 267 intervention period (EPOC) in a single academic quaternary spine surgery referral center. One hundred eight subjects in no pathway (NOPW) care group was also examined to exclude if the observed changes between the EPOC and TRDC groups might be due to concurrent changes in practice or population over the same time period. Our primary outcome variables were hospital and intensive care unit lengths of stay and the secondary outcomes were postoperative complications, 30-day hospital readmission and cost.

Results. In this highly complex patient population, we observed a reduction in mean hospital length of stay (HLOS) between TRDC *versus* EPOC groups (8.2 *vs.* 6.1 d, standard deviation [SD] = 6.3 *vs.* 3.6, $P < 0.001$) and intensive care unit length of stay (ILOS) (3.1 *vs.* 1.9 d, SD = 4.7 *vs.* 1.4, $P = 0.01$). The number (rate) of postoperative intensive care unit (ICU) admissions was higher for the TRDC n = 109 (60%) than the EPOC n = 129 (48%) ($P = 0.02$). There was no difference in postoperative complications and 30-day hospital readmissions.

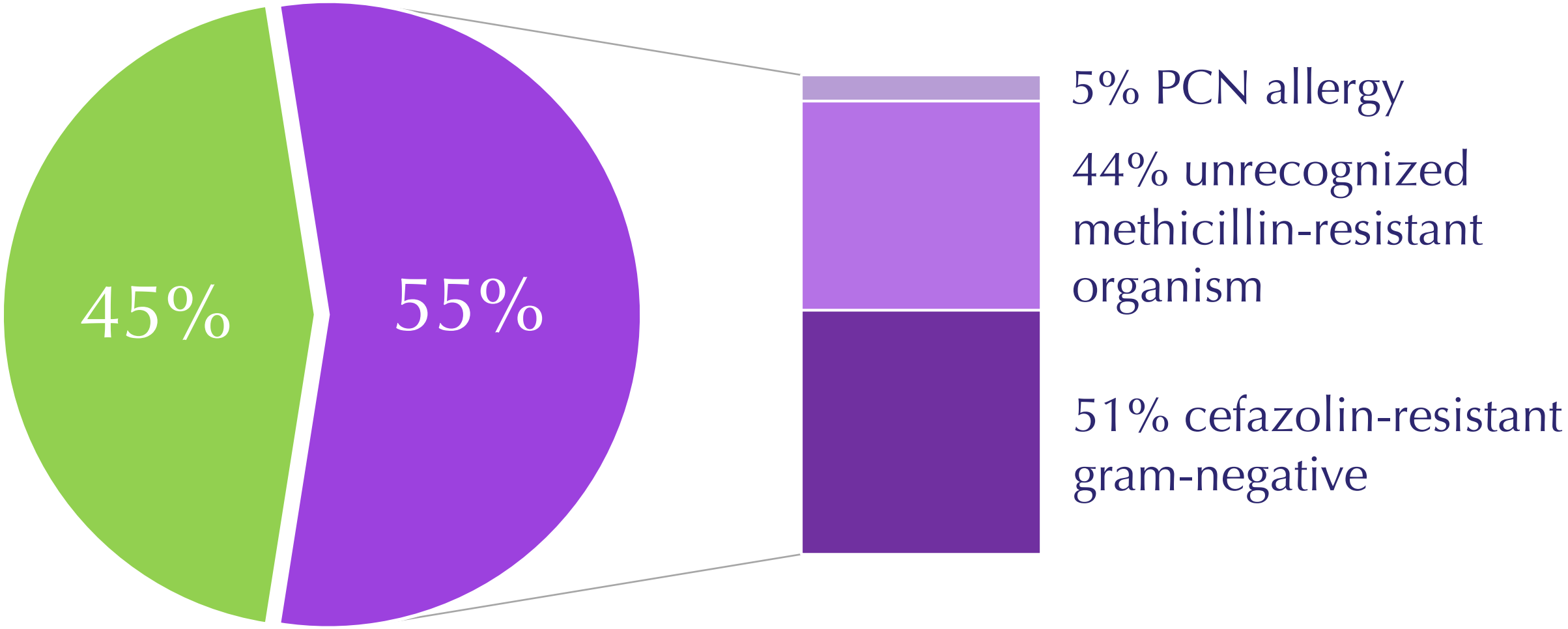
Quality Assurance

Are we effectively screening preoperative patients for MRSA?

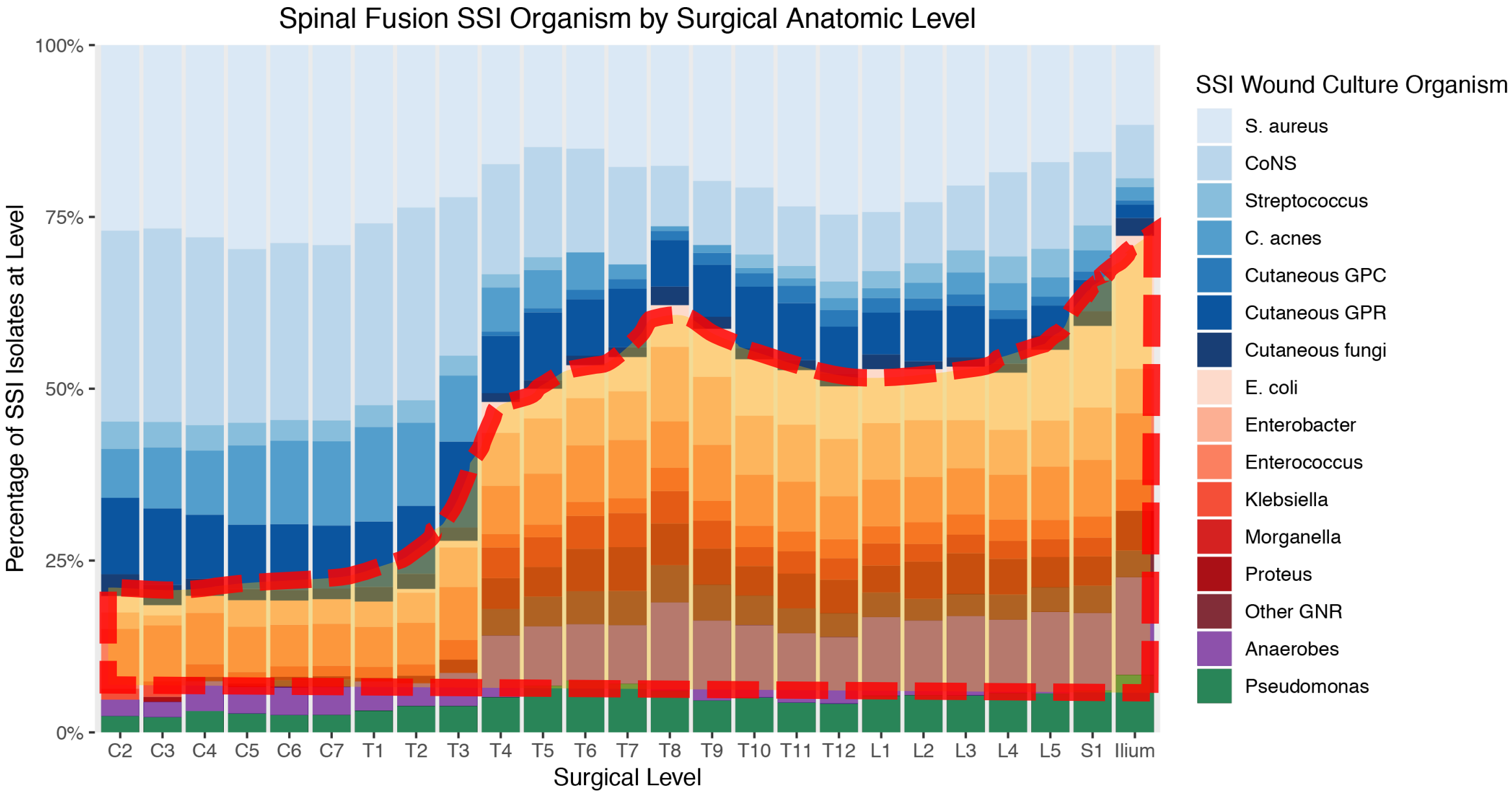
Are MRSA+ receiving prophylaxis including vancomycin?

How are we doing at addressing PCN “allergies”?

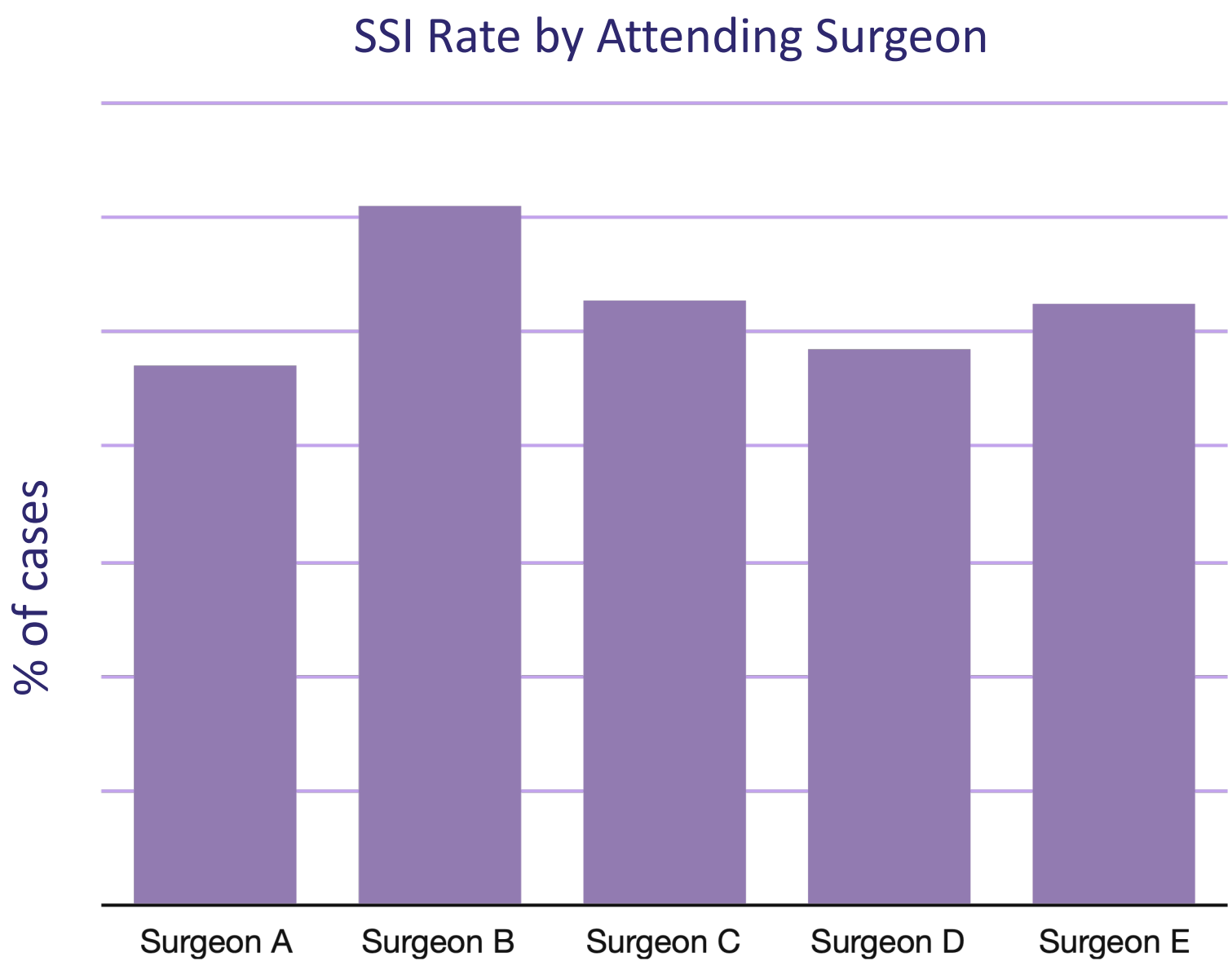
Quality Improvement



Quality Improvement



Partnership Building



Partnership Building

Audience Feedback

Have you made any changes in surgical prophylaxis recommendations based on your local microbiology or hospital antibiogram?

a) Yes
b) No
c) Not sure

"Selection of antimicrobial drugs for SSI prophylaxis or treatment among liver transplant or kidney transplant recipients should be informed by local pathogen and antimicrobial resistance data."

Rates and Causative Pathogens of Surgical Site Infections Attributed to Liver, Kidney, and Heart Transplant Procedures, 2015 – 2017 (Chea N., Division of Healthcare Quality Promotion, CDC. SHEA 2019 Poster Presentation)

Open Question to Audience

How do you administer vancomycin in a timely fashion when indicated for surgical prophylaxis?

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SHEA Guidelines

Infection Control & Hospital Epidemiology (2019), **40**, 1–17
doi:10.1017/ice.2018.303

SHEA Expert Guidance

Infection prevention in the operating room anesthesia work area

L. Silvia Munoz-Price MD, PhD[1], Andrew Bowdle MD, PhD[2], B. Lynn Johnston MD[3], Gonzalo Bearman MD, MPH[4], Bernard C. Camins MD, MSc[5], E. Patchen Dellinger MD[2], Marjorie A. Geisz-Everson PhD, CRNA[6], Galit Holzmann-Pazgal MD[7], Rekha Murthy MD[8], David Pegues MD[9], Richard C. Prielipp MD, MBA, FCCM[10], Zachary A. Rubin MD[11], Joshua Schaffzin MD, PhD[12], Deborah Yokoe MD, MPH[13] and David J. Birnbach MD, MPH[14]

[1]Froedtert & the Medical College of Wisconsin, Milwaukee, Wisconsin, [2]University of Washington, Seattle, Washington, [3]Dalhousie University, Halifax, Nova Scotia, [4]Virginia Commonwealth University School of Medicine, Richmond, Virginia, [5]University of Alabama at Birmingham, Birmingham, Alabama, [6]University of Southern Mississippi, Hattiesburg, Mississippi, [7]Baylor College of Medicine, Houston, Texas, [8]Cedars-Sinai Medical Center, Los Angeles, California, [9]University of Pennsylvania, Philadelphia, Pennsylvania, [10]University of Minnesota, Minneapolis, Minnesota, [11]David Geffen School of Medicine at UCLA, Los Angeles, California, [12]Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio, [13]University of California San Francisco School of Medicine, San Francisco, California and [14]University of Miami Miller School of Medicine, Miami, Florida

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Purpose

The potential for clinically significant microbial cross transmission in the intraoperative environment poses a threat to patient safety. A growing body of literature has shown contamination in the anesthesia work area, including the anesthesia medical work

comprehensive, and multidisciplinary, and that will allocate hospital resources to educate healthcare personnel and to acquire new infection prevention and control components (eg, single-use laryngoscopes). Facilities should consider this guidance document in revisions of their anesthesia OR policies.

This guidance builds on the foundational premise that all

SHEA Guidelines

- Hand hygiene in the OR
  - Availability of alcohol-based hand rub
  - Double gloving for intubation?
  - Hand sanitizer on gloves for task-dense activities?
  - “Wearable” hand sanitizer

- Environmental cleanliness and disinfection
  - Clean and dirty “zones”
  - Single-use laryngoscopes

SHEA Guidelines

- Medication cleanliness
  - Pharmacy-prepared infusions
  - Commercial prefilled syringes
  - Single-patient-use medication vials

- IV contamination
  - Scrubbing injection ports
  - Covering stopcocks with claves

Audience Feedback

Is there dedicated alcohol based hand sanitizer at the anesthesia workspace at your hospital?

a) Don’t know
b) Yes
c) Sometimes but not consistently
d) No or rarely

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Anesthesia & Infection Prevention

- Finding a local champion
- Recognizing differences between OR and other hospital environments
- Choosing your battles
- Inviting participation outside of the OR

Audience Feedback

What has your experience been working with your local anesthesiology department to implement infection control or stewardship measures?

a) None or minimal
b) Mostly positive
c) So-so
d) Mostly negative

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Wrap-Up

- Power of surveillance data and records of stewardship interventions
- Adapting surgical prophylaxis based on local data?
- SHEA guidelines: preventing spread of resistance in OR
- Engaging with anesthesiology in infection prevention

Additional Slides

Open Question to Audience

Is your hospital doing anything novel in infection prevention or stewardship related to surgical site infection?

Quality Improvement