

Overview – AHRQ Safety Program for MRSA and SSI Prevention

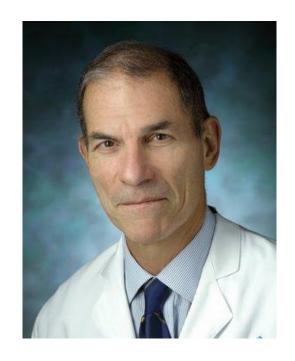
Surgical Services





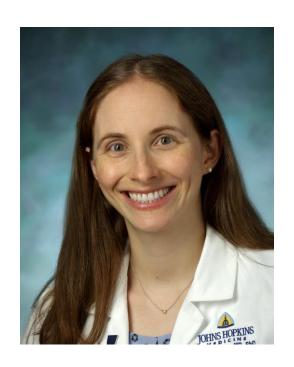


Presenters



Glenn Whitman, M.D.

Professor of Surgery & Director of Cardiovascular Surgical Intensive Care Unit, Johns Hopkins Hospital



Sara Karaba, M.D., Ph.D., M.H.S.

Assistant Professor of Medicine, Division of Infectious Diseases, Johns Hopkins School of Medicine



Sean Berenholtz, M.D., M.H.S., FCCM

Professor of Anesthesiology & Critical Care Medicine and Surgery, Johns Hopkins School of Medicine

Program email address: <u>MRSAPrevention@norc.org</u>

MRSA and Surgical Site Infections Are a Serious Threat

- Surgical site infections (SSIs) are one of the most common and most costly healthcare-associated infections (HAIs), accounting for nearly 1 million additional inpatient days, and \$3.3 billion in healthcare expenditures every year.¹⁻⁵
- Staphylococcus aureus is the leading causative organism of SSIs (17.5% of overall SSIs, 38.6% of orthopedic, 27.0% of cardiac).⁶
- SSIs caused by methicillin-resistant Staph aureus (MRSA) are associated with higher raw mortality rates, longer lengths of stay, and elevated costs of hospitalization compared with SSIs caused by other organisms.⁷

If you want to reduce MRSA and SSIs in your facility and strengthen team-based infection prevention practices, enroll in the AHRQ Safety Program for MRSA and SSI Prevention by December 2022.

AHRQ Safety Program Overview

Overarching Goal of the AHRQ Safety Program:

To prevent MRSA infections, including surgical site infections, among high-risk surgical patients.

Additional Goals:

- To strengthen the culture of safety and build capacity for team-based quality improvement activities.
- To provide technical assistance for the implementation of evidence-based infection prevention practices that help prevent surgical site infections

Funded and Guided by: AHRQ

Led by: • Johns Hopkins Medicine

NORC at the University of Chicago

AHRQ Safety Program Approach

Technical Interventions

Interventions
to prevent MRSA
and SSI among highrisk surgical
patients.

Adaptive Interventions

Comprehensive
Unit-based Safety
Program (CUSP) to
improve teamwork
and safety culture

Local Adaptation
Tapping Into the Wisdom of Frontline Staff

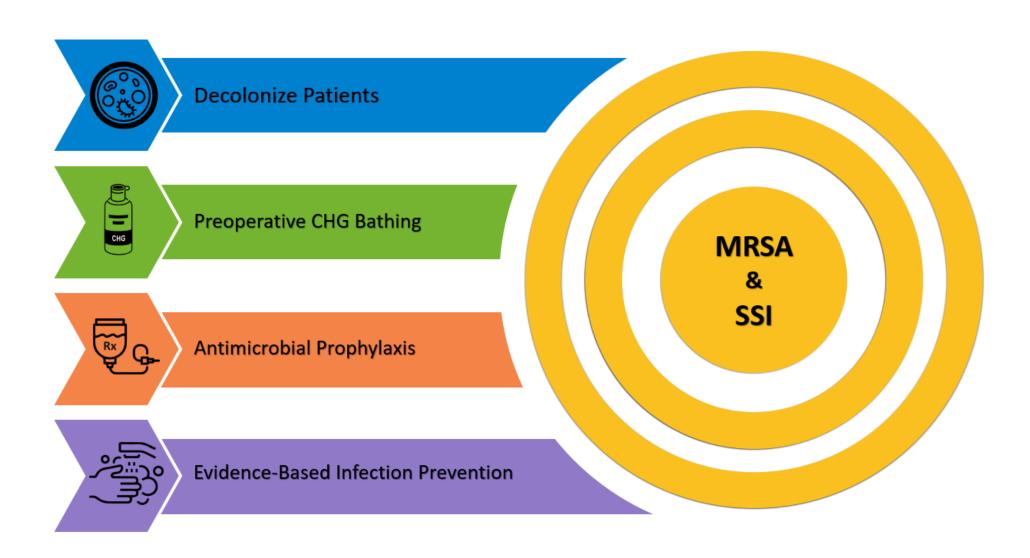
The Benefits of CUSP

- Facilitates communication and teamwork in the surgical environment
- Helps clinical teams improve patient safety
- Partners management and clinical staff efforts
- Implements clinical best practices



More info on CUSP is available here: https://www.ahrg.gov/hai/cusp/index.html

Target MRSA and Surgical Site Infections



AHRQ Safety Program Details

How Long Is the Program?

- 18-month program
- Begins January 2023
- Enrollment deadline is December 2022

Who Is Eligible To Participate?

- High-risk adult inpatient surgical services:
 - Neurosurgical
 - Orthopedic
 - Cardiac

How Much Does It Cost To Participate?

Free

How Much Time Does It Require?

Minimum of 3 hours per month

Will CME and CEU Credits Be Awarded for Participation?

 CME and CEU credits will be available for participating physicians and nursing staff

Procedure Types

- Neurosurgical
 - Spinal fusion
- Orthopedic
 - Hip joint replacement
 - Knee joint replacement
 - Spinal fusion
- Cardiac
 - Cardiac valve replacement
 - Coronary artery bypass graft
 - Surgeries that involve a median sternotomy

AHRQ Safety Program Timeline

Participation Timeline

November 2022– December 2022

- Assemble a multidisciplinary Comprehensive Unitbased Safety Program (CUSP) team within hospital
- Ensure members of team have access to the Safety Program website

January 2023-July 2024

- Participate in educational programs, including an orientation webinar and monthly to twice monthly educational webinars
- Meet at least once a month with Implementation Advisers (IAs)
- Meet regularly with CUSP team and implement evidence-based interventions
- Submit project data on monthly or quarterly basis (details on next slide)

May 2023

- Submit baseline infection data (January 2022–December 2022)
- Submit infection data for the first quarter of the project

Data Collection for Neurosurgical & Orthopedic Surgeries

Monthly Neurosurgical and Orthopedic Surgeries Data Submission

Electronic data pulls of monthly data on a quarterly basis from January 2023 to June 2024

Clinical Outcomes Data	Data Source
Number of surgical procedures performed for the following surgical procedure types: • Spinal fusion • Hip joint replacement • Knee joint replacement Service-level clinical outcomes for the above surgical procedure types • SSI events, overall and by severity (deep/organ space or superficial) • SSI events by MRSA and by Staphylococcus aureus (if available)	For these data points, your hospital will have the opportunity to confer NHSN data rights to the AHRQ Safety Program.

Implementation Data Collected

- Hospital Survey on Patient Safety Culture (HSOPS) baseline and at end of project
- Infrastructure Assessment (Gap Analysis Tool) baseline and at end of project
- Implementation Assessment (Team Checkup Tool) monthly

Data Collection for Cardiac Surgeries

Monthly Cardiac Surgery Data Submission

Electronic data pulls of monthly data on a quarterly basis from January 2023 to June 2024

Clinical Outcomes Data	Data Source
Number of sternotomy procedures performed and surgical site infections following sternotomy procedures, as reported to the Society of Thoracic Surgeons (STS) and available through the STS National Database: • SSI events, overall and by severity (deep/organ space or superficial) • Hospital readmission for infection and other select reasons	Your hospital will be provided clear instruction for how to reuse data submitted to STS and generate queries for outcomes used in this evaluation.
If you also report SSIs to NHSN, please submit NHSN data regarding the number of cardiac bypass graft surgeries (CABG) and for SSI events following CABG: • SSI events, overall and by severity (deep/organ space or superficial) • Organisms causing each SSI following CABG (MRSA, MSSA or other)	Your hospital will have the opportunity to confer NHSN data rights to the AHRQ Safety Program for these data points.

Implementation Data Collected

- Hospital Survey on Patient Safety Culture (HSOPS) baseline and at end of project
- Infrastructure Assessment (Gap Analysis Tool) baseline and at end of project
- Implementation Assessment (Team Checkup Tool) monthly

Benefits of Participating

- Expert coaching in MRSA SSI prevention and CUSP
- Support for data collection, reporting, analysis, and feedback
- Access to Implementation Advisors
- Teamwork tools and guides
- Monthly office hours

- Peer-to-peer learning with other participating facilities
- Monthly/twice monthly webinars
- Facilitator guides
- Posters
- Summary sheets
- Educational material for patients and families



Anticipated Outcomes of Participation

- Reduced MRSA infections
- Reduced overall SSIs
- Improved team-based infection prevention practices (decolonization, CHG bathing, and antimicrobial prophylaxis)
- Enhanced communication and teamwork regarding prevention of MRSA infections and SSIs
- Improved teamwork and patient safety culture



Thank you.

We look forward to working with you on improving the delivery of high-quality care for all patients across the United States.

To learn more and enroll, visit:

http://safetyprogram4mrsaprevention.org

Or email: MRSAPrevention@norc.org

The deadline to enroll is **December 2022**

References

- 1. Magill SS, Edwards JR, Bamberg W, et al. Multistate point-prevalence survey of health care-associated infections. N Engl J Med. 2014 Mar 27;370(13):1198-208. PMID: 24670166.
- 2. Franker LM, Pretet M, Douglas B, et al. Preoperative prevention of surgical-site infection in spine surgery. Orthop Nurs. 2021 Sep-Oct 01;40(5):276-280. PMID: 34583372.
- 3. Chang BH, Hsu YJ, Rosen MA, et al. Reducing three infections across cardiac surgery programs: a multisite cross-unit collaboration. Am J Med Qual. 2020 Jan/Feb;35(1):37-45. PMID: 310046400.
- 4. Anderson DJ, Podgorny K, Berríos-Torres SI, et al. Strategies to prevent surgical site infections in acute care hospitals: 2014 update. Infect Control Hosp Epidemiol. 2014 Jun;35(6):605-27. PMID: 24799638.
- 5. Climo MW, Sepkowitz KA, Zuccotti G, et al. The effect of daily bathing with chlorhexidine on the acquisition of methicillin-resistant *Staphylococcus aureus*, vancomycin-resistant Enterococcus, and healthcare-associated bloodstream infections: results of a quasi-experimental multicenter trial. Crit Care Med. 2009 Jun 1;37(6):1858-65. PMID: 19384220.
- Centers for Disease Control and Prevention (CDC). Surgical site infection (SSI) event. In: National Healthcare Safety Network (NHSN) Patient Safety Component Manual. Atlanta, GA: Centers for Disease Control and Prevention (CDC); 2021. https://www.cdc.gov/nhsn/pdfs/pscmanual/9pscssicurrent.pdf.
- 7. Weigelt JA, Lipsky BA, Tabak YP, et al. Surgical site infections: causative pathogens and associated outcomes. Am J Infect Control. 2010 Mar;38(2):112-20. PMID: 19889474.
- 8. Pronovost P, Weast B, Rosenstein B, et al. Implementing and validating a comprehensive unit-based safety program. J. Patient Safety. 2005. 1(1):33-40.