

Question 7. Do you currently collect MRSA-related data (e.g., incidence, prevalence, compliance with prevention practices) in the unit(s) or populations in which you are intervening to reduce infections?

You indicated that you do not currently collect MRSA-related data. Collecting, measuring, analyzing and reporting information on your MRSA prevention activities is critical to ensure continued success. Outcome data, such as total MRSA bacteremia infection rate (defined below), enable you to monitor the success of your MRSA prevention initiative and allow teams to compare how they are doing in their prevention efforts to other units and hospitals. Additionally, as health care moves from fee-for-service models of care to value-based compensation, healthcare-associated infection (HAI) rates, including MRSA bacteremia rates, are important metrics for determining care reimbursement. Process measures, such as hand hygiene compliance rates, ensure that process interventions are being effectively implemented and point to areas that require continued enhancement or intervention. Lastly, sharing and highlighting data are crucial strategies to engage physicians, frontline staff and senior leaders in infection prevention efforts.

A. What Data to Collect and When to Collect it

- **Total MRSA bloodstream infections:** All MRSA burden.
 - **MRSA bloodstream infection rate:** Total burden of MRSA bloodstream infections based on the number of patients in a hospital or unit over a specific time period.
 - $(\text{Number of MRSA Infections as identified by positive bloodstream cultures}) / (\text{Total Patient Days}) \times 10,000 = \text{MRSA infection Rate per 10,000 patient days}$
 - **MRSA bloodstream infection standard infection ratio (SIR):** A measure used to track HAIs at the national, state and local levels and used by Centers for Medicare and Medicaid Services (CMS) for their value-based purchasing program. The SIR compares the actual number of infections to the expected/predicted number of infections.
- **Hospital-associated MRSA bloodstream infections:** Patients who have MRSA-positive blood cultures obtained more than 48 hours after admission to the hospital. This is a better proxy for hospital-attributable disease.
- **Environmental cleaning compliance rates:** Compliance with institutional standards for daily cleaning procedures and discharge cleaning procedures.
- **Hand hygiene and PPE compliance rates:** Compliance with institutional standards for hand hygiene and effective PPE use.

B. Strategies for Successful Data Collection

- Apply a consistent approach to data collection at all stages of your MRSA prevention efforts so that you can compare across time periods and units.
- Designate personnel responsible for data collection. This will typically be infection preventionists or members of the quality department.

- Review MRSA line lists to monitor your hospital’s MRSA bloodstream infections. Line lists for MRSA infections will give you a perspective on dates of onset of infection, locations within the hospital, and primary sites of infection, providing some insight into potential opportunities to intervene, such as a particular unit with a high prevalence of infection. To generate the line list we recommend using the date the MRSA blood culture tested positive. Such line lists are typically kept by infection prevention and/or can be obtained from your laboratory or electronic medical record.
- Regularly feed data back to the entire improvement team, senior leaders and frontline staff. Sharing data and highlighting successes will help empower staff and encourage continued improvement and commitment to the initiative.

Tools, Resources and Further Reading

- STRIVE Content:
 - [Using Audits to Monitor Infection Prevention Practices](#) (CBT 102)
 - MRSA Tier 1 Course ([MRSA 101](#), [MRSA 102](#))
- APIC Guide to the Elimination of Methicillin-Resistant *Staphylococcus aureus* (MRSA) Transmission in Hospital Settings, 2nd Edition. Arlington, VA: APIC, 2010. Available at: http://www.apic.org/Resource_/EliminationGuideForm/631fcd91-8773-4067-9f85-ab2a5b157eab/File/MRSA-elimination-guide-2010.pdf.
- [CDC Acute Care Facility Multidrug-resistant Organism Control Activity Assessment Tool](#)
- National Healthcare Safety Network (NHSN). Surveillance for *C. difficile*, MRSA and other Drug-resistant Infections. Centers for Disease Control and Prevention, CDC. December 15, 2016. Available at: <https://www.cdc.gov/nhsn/acute-care-hospital/cdiff-mrsa/>
- Calfee DP, Salgado CD, Milstone AM, et al. Strategies to prevent methicillin-resistant *Staphylococcus aureus* transmission and infection in acute care hospitals 2014 update. *Infect Control Hosp Epidemiol*. 2014; 35: 772-96.