



Summary of MRSA Prevention Guidelines from the Association for Professionals in Infection Control and Epidemiology (APIC)

Healthcare-Associated Infections (HAIs) are infections that patients acquire while under the care of a healthcare institution. **Methicillin-resistant *Staphylococcus aureus* (MRSA)** is the most common HAI and a multi-drug resistant organism. MRSA infections increase patient morbidity, mortality and hospital costs. Of note:

- In 1972, MRSA accounted for only two percent of all *Staphylococcus aureus* HAIs reported to the Centers for Disease Control and Prevention (CDC). Today, MRSA accounts for more than 60 percent of *Staphylococcus aureus* infections.
- The MRSA death rate has been estimated to be more than 2.5 times higher than infections from *Staphylococcus aureus* that are susceptible to methicillin
- An analysis of 55 studies concluded that the cost of a MRSA HAI was \$35,367 compared with \$13,973 for a HAI.

The threat posed by MRSA cannot be overstated. Responding to this crisis faced by U.S. hospitals, the Association for Professionals in Infection Control and Epidemiology (APIC), an international organization representing more than 11,000 infection control experts, released an institutional guide of evidence-based, step-by-step instructions for developing and implementing a program to eliminate MRSA transmission in a hospital.

This summarizes components APIC recommends in a MRSA-transmission prevention program:

- **MRSA risk assessment**
 - Using past and current hospital surveillance data, this provides the infection control team with epidemiological MRSA data that directs development of a plan for MRSA surveillance, prevention and control.
- **MRSA surveillance program**
 - The surveillance program is based on risk assessment data, and outlines specific goals, actions/interventions, and evaluations. These include a consistent and comprehensive retrieval system for lab culture reports, collaborating with Microbiology Laboratory staff regarding specifics of MRSA testing, and communicating MRSA surveillance results to healthcare providers.
- **Hand hygiene**
 - Proper hand hygiene, involving gloves and frequent hand-washing or alcohol-based hand rubs, must include all levels of healthcare providers and other workers having patient contact.
- **Contact precautions**
 - Implemented once patients are confirmed to be colonized or infected with MRSA; extends to contaminated equipment, supplies and the patient's environment. These include placing MRSA patients in private rooms and the use of gloves and gowns and other precautions to avoid transfer of microorganisms to other patients or environments.

- **Proper environmental and equipment cleaning and decontamination**
 - Educating environmental and housekeeping staff on proper cleaning procedures is critical because MRSA can survive outside the human body for *up to 56 days* on patient charts, tabletops and cloth curtains.

- **Targeted active surveillance cultures (ASC)**
 - Depending on the hospital, this approach may involve testing of patients at high-risk for MRSA colonization or infection, or all patients being admitted to a hospital (ie, universal ASC). “High-risk” groups include:
 - Long-term care residents
 - Patients with recent or frequent hospitalizations
 - Dialysis patients
 - Athletes
 - Veterinarians
 - Those with a history of incarceration
 - History of IV drug use

 - Prompt identification of MRSA colonized patients and initiation of proper interventions preventing MRSA-associated infections, including
 - Isolation
 - Contact precautions
 - Decolonization, and treatment to minimize further MRSA transmission

 - Timing is a critical factor in successful infection control because rapid detection allows sooner implementation of proper precautions and treatment, minimizing risks of complications and transmission.

- **Cultural transformation**
 - Hospital-acquired MRSA infection or colonization is first and foremost a *cultural* problem of the hospital and must be addressed at that level. To accomplish a successful program, APIC recommends encouraging participation and support from all staff at all levels and tapping into the staff’s knowledge concerning the hospital culture.

 - When change comes from within an organization, as when staff members create solutions, cultural change is appropriate and lasting. Identification of staff with distinctive practices, that allow them to discover better solutions than their peers, will lead to better solutions for improving the program.

- **Involving hospital administration**
 - Leadership support from hospital administration is crucial to any MRSA prevention program. APIC recommends presenting success stories from other institutions to hospital leadership to strengthen the case for requested interventions and resources, as well as providing hospital leadership with:
 - Barriers or inadequate processes contributing to MRSA transmission risk
 - Prevalence and incidence rates of MRSA
 - Identification of any increasing trends
 - Current financial burden of facility’s hospital-associated infection
 - Relevant published data

 - Cost is one of the most common problems in efforts to prevent and control MRSA. Reasons given by administration include:
 - Additional supplies required for isolating patients (gowns, gloves)
 - Additional costs associated with isolating patients
 - Additional expenses from high-priced antibiotics

 - It is important to demonstrate to administrators that costs of the intervention can indeed be less than the cost of *not* adopting a MRSA control program.

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