

## Methicillin-Resistant *Staphylococcus aureus* (MRSA) and Vancomycin Resistant *Enterococcus*:

### Guidelines for Preventing Spread of Multidrug-Resistant Bacteria in a Health Care Setting<sup>1,2,3</sup>

#### Hand Hygiene

1. Health Care Workers (HCWs) should clean their hands with an antiseptic-containing preparation before and after all patient contacts.
2. Antiseptic soap and water hand washing is required when hands are visibly dirty or visibly contaminated with blood, body fluids, or body substances.
3. When hands are not visibly contaminated with blood, body fluids, or body substances, use of an alcohol hand rub containing an emollient should be encouraged. (Exception: *Clostridium difficile*)
4. Lotion compatible with (i.e., that does not inactivate) the antiseptic being used should be provided for use by HCWs in single use packets.
5. Monitoring of hand hygiene compliance and feedback to HCWs should be done to motivate greater compliance.
6. *Clostridium difficile* is a spore-forming organism and is not inactivated by alcohol antiseptic. Hand washing should be done, followed by antiseptic.

#### Barrier Precautions for Patients and HCW

1. Gloves should always be worn to enter the room of a patient on contact precautions for colonization or infection with antibiotic-resistant pathogens such as MRSA, VRE, VISA, or VRSA.
2. Gowns should always be worn as part of contact precautions when contact with patients and environmental surfaces is likely to occur, and for patients who are incontinent of stool, have diarrhea, or drainage of exudates from a wound that cannot be contained by a dressing. When there is no substantial contact with patients or environmental surfaces, only gloves need to be worn when entering the room.
3. Universal gown and glove use or universal gloving alone also can be considered for adjunctive control on high-risk wards among patients with surveillance cultures pending.

#### Antibiotic Stewardship

1. Avoid inappropriate or excessive antibiotic prophylaxis and therapy.
2. Ensure correct dosage and duration of antibiotic therapy.
3. Restrict the use of vancomycin (if possible and appropriate for care of the individual patient being treated) to decrease the selective pressure favoring vancomycin resistance.
4. To prevent the establishment of VRE intestinal colonization, decrease the use of agents with little or no activity against enterococci, such as third-generation and fourth-generation cephalosporins, in patients not known to be VRE colonized (if possible and appropriate for care of the individual patient being treated).
5. To prevent persistent high-density VRE colonization, decrease the use of anti-anaerobic agents in patients with known VRE intestinal colonization (if possible and appropriate for care of the individual patient being treated).
6. To help prevent persistent carriage of MRSA, avoid unnecessary antibiotic use.

7. Avoid therapy for decolonization except when suppression or eradication of colonization is being attempted using an evidence-based approach for infection prevention.

### **Control Measures for Community Acquired MRSA<sup>4</sup>**

Use standard precautions to control the spread of MRSA in community settings, including medical office exam room, as follows:

1. Wash hands frequently and carefully with antiseptic soap and warm.
2. Use gloves when managing wounds and carefully dispose of dressings
3. Launder potential contaminated linens in hot water (>160° F).
4. Clean contaminated surfaces with commercial disinfectant or a 1:100 solution of diluted bleach (1 tablespoon bleach in one quart of water).

**A patient colonized or infected with MRSA or VRE, should be educated about the risks involved.**

**Family caregivers, other family members, and visitors should take precautions for infected persons in their homes.** To minimize any risk of transmission, it is important that they be strongly encouraged to take the following precautions:

1. Caregivers, family members, and visitors should wash their hands with soap and water [or use instant antiseptics] after direct physical contact with the infected or colonized person, after leaving the patient's room, and before leaving the home.
2. Towels used for drying hands should be used only once.
3. Disposable gloves should be worn if contact with body fluids is expected and hands should be washed after removing the gloves. (If excessive contact with body fluids is expected, gowns should also be worn.)
4. Clothes and linens should be changed and washed if they are soiled, and on a daily basis.
5. The patient's environment should be cleaned twice a week, and when soiled with body fluids.
6. Notify doctors and other healthcare personnel who provide care for the patient that the patient is colonized/infected with a multidrug-resistant organism.

**NOTE:** With both health care setting and community acquired MRSA/VRE, dedicate the use of non-critical patient-care equipment to a single patient when possible (or cohort of patients infected or colonized with the pathogen requiring precautions) to avoid sharing between patients. If use of common equipment or items is unavoidable, then adequately clean and disinfect them before use for on another patient.

1. Muto, CA, Jernigan JA, Ostrowsky, BE, et al. SHEA Guideline for preventing nosocomial transmission of multidrug-resistant strains of *Staphylococcus aureus* and *Enterococcus*. *Infect Control Hosp Epidemiol* 2003;24:262-386.
2. Garner JS: the Hospital Infection Control Practices Advisory Committee. Guideline for Isolation Precautions in Hospitals, *Infect Control Hosp Epidemiol* 1996;17:53-80.
3. CDC. Recommendations for preventing the spread of vancomycin resistance. Recommendation of the Hospital Infection Control Practices Advisory Committee (HICPAC). *MMWR*. 1995;44 (RR12):1-13.
4. Philadelphia Department of Public Health, Division of Disease Control, Health Advisory. March 2003.

**VISA** – Vancomycin-intermediate *Staphylococcus aureus*

**VRSA** – Vancomycin-resistant *Staphylococcus aureus*