BROCKTON AREA MULTI-SERVICES, INC.
MEDICAL PROCEDURE GUIDE

Subject: MRSA, VRE, ESBL Protocol
Date Developed: 6/2010
Date(s) Reviewed/Revised:

PURPOSE: To provide guidance for employees in order to prevent the spread of antibiotic resistant microorganisms: Methicillin Resident Staphylococcus Aureus (MRSA), Vancomycin Resistant Enterococci (VRE), and Extended-spectrum beta-lactamase (ESBL) among individuals, employees, and the environment. MRSA, VRE, and ESBL are bacteria that can colonize or infect people.

PROCEDURE:

Staphylococcus aureus is a type of bacteria (germ) that is commonly found on the skin and mucous membranes (such as inside the nose). Enterococci are bacteria that are part of the normal flora of the gastrointestinal and female genital tracts. These same bacteria may cause disease when:

- an open wound or nick in the skin allows them to enter the body (those who have had intra-abdominal or cardiothoracic surgical procedures are more susceptible to VRE)
- there is a place they can accumulate and multiply, e.g., alongside a catheter or any plastic prosthesis
- the body's resistance to infection is diminished
- other helpful bacteria have been destroyed by antibiotics

MRSA, VRE, and ESBL strains are not more virulent (more likely to cause disease/infection) than methicillin or vancomycin responsive strains of the bacteria. They are just harder to eliminate.

Transmission:

MRSA and ESBL are transmitted by direct person-to-person contact, usually on the hands of caregivers. Transmission mode is determined by the source of infection. If a person has no signs of infection, there is no need to test individuals for the presence of the bacteria.

While most cases of VRE come from the individual's own bowel flora, VRE can spread by direct individual-to-individual contact or on the hands of caregivers. VRE infection can be transmitted from contaminated articles by direct contact with such articles by an at-risk individual or indirectly by a staff person who does not comply with thorough hand washing, hygiene, housekeeping, and other infection control measures. VRE have been recovered from
bedrails, sheets, call buttons, telephones, horizontal surfaces, doorknobs, and equipment such as stethoscopes and thermometers.

Individuals with VRE in the stool may continue to shed the bacteria for weeks to months and treatment may not completely eliminate the organism.

**Management of the individual with MRSA/VRE/ESBL:**

The individual’s physician shall determine whether the MRSA/VRE/ESBL represents colonization or an active infection, and shall order treatment as necessary. Consultation with an infectious disease specialist may occur if indicated.

1. Treatment with antibiotics may be ordered as indicated for infected or colonized persons by their physician.
2. Management of severe infection usually requires hospitalization for treatment with antibiotics.
3. Cultures of infected or colonized (an individual that is asymptomatic, but is a carrier) sites may be recommended by the person’s physician.
4. It is customary that two negative cultures indicates the individual is free of infection or colonization.

**Special considerations for the individual with MRSA/ESBL:**

Participation in normal living activities and day habilitation participation should be encouraged as appropriate. The following may be considered:

1. Containment of any drainage from cultured sites.
2. The presence of invasive devices, such as G-tubes, catheters, etc.
3. Encourage good hand washing and personal hygiene.
4. MRSA positive individuals may share a bedroom with a low-risk individual (i.e., one who does not have tubes, catheters, wounds or decubiti, intravascular lines, and/or is not immuno-compromised), or with another MRSA or ESBL positive individual.
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5. If possible, MRSA and ESBL positive individuals can be considered for a private room if the person:
   - Has a respiratory colonization **and** has a productive cough or other oral/nasal secretions (e.g., excessive drooling, runny nose, sneezing, etc.)
   - Has a draining wound that cannot be contained
   - Does not understand or cannot cooperate

6. Decisions regarding placement and treatment shall be documented in the individual’s record and in the Medical Notes.

7. Individuals with MRSA or ESBL infection or colonization shall not be refused placement/services solely on the basis of his or her MRSA or ESBL status.

8. The Program Nurse is responsible for providing staff training including issues and concerns specific to the individual with MRSA or ESBL.

**Special considerations for the individual with VRE:**

Participation in normal living activities and day habilitation participation should be encouraged as appropriate. The following may be considered:

1. Containment of any drainage from cultured sites.
2. The presence of invasive devices, such as G-tubes, catheters, etc.
3. Encourage good hand washing and personal hygiene.
4. Individuals infected with VRE may share a bedroom with a low-risk roommate (i.e., one who does not have tubes, catheters, wounds or decubiti, intravascular lines, and/or not immuno-compromised) or with another VRE positive individual.
5. If possible, VRE positive individuals can be considered for a private room and should not socialize without one-to-one supervision if the person
   - has VRE isolated in stool **and** has uncontrolled diarrhea
   - has VRE isolated from stool and does not understand or cannot/will not cooperate with basic hygiene
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- has VRE isolated from a wound that cannot be covered or has drainage that cannot be contained

6. Decisions regarding placement and treatment shall be documented in the individual’s record and Medical Notes.

7. Individuals with VRE infection or colonization shall not be refused placement/services solely on the basis of his or her VRE status.

8. The Program Nurse is responsible for providing staff training, including issues and concerns specific to the individual with VRE.

Standard Precautions:

1. Hand washing and adherence to standard precautions remain the most important measures in controlling the spread of disease, including the spread of MRSA, VRE, and ESBL. Practice of standard precautions includes:
   - Thorough hand washing before donning gloves and immediately after gloves are removed.
   - Thorough hand washing between caring for individuals.
   - Use of gloves when caring for individuals whenever contact with wounds, sores, stool, mucous membranes, or other body substances is anticipated.
   - Use of gowns whenever care activities may generate splashes and sprays.
   - Masks and eye protections during any activities that may generate splashes and sprays.

2. Equipment
   - Equipment should be dedicated for the person infected with the bacteria whenever possible (e.g., thermometers, commodes, toilets etc.), especially when use of disposable equipment is not feasible.
   - Non-dedicated or non-disposable equipment shall be disinfected after every use by or exposure to the individual and prior to use by another individual using a bleach solution 1:100 dilution.
3. Housekeeping and Laundry

- Linens and personal clothing: minimal handling of soiled linens should be stressed. Staff involved in stripping beds or those who otherwise have direct contact with these materials should wear gowns and gloves. Soiled linens and clothing should be double bagged in the individual’s room, then washed with laundry detergent in warm water and dried in a hot dryer.
- If an individual is experiencing a gross amount of loose stool, a commode should be considered or separate bathroom if available.
- Ensure that personal items and all household surfaces are cleaned and disinfected after every use by or exposure to the individual with a bleach solution 1:100 dilution.
- Disposable mop heads and wipes should be used whenever possible when cleaning.
- Infectious waste should be double bagged in the room in which it was created.

An individual’s hands are to be washed with soap and water after every bathroom use, and before meals.

Monitor for signs and symptoms of worsening infection. Call the individual’s physician if the source of infection or individual does not appear to be getting better.

Call 911 if the person:
- Looks very sick
- Won’t wake up
- Has chills or is shaking or a high fever
- Is confused or disoriented
- Has low blood pressure and a fast heart rate
- Has a significant decrease in urine output