

**DIVISION OF DEVELOPMENTAL DISABILITIES SERVICES
COMMUNITY SERVICES/ ADULT SPECIAL POPULATIONS**

Health Care Services Protocol # 5

Management of Methicillin Resistant Staphylococcus Aureus

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Medical Director's Approval Signature: _____

Date: _____

I. OBJECTIVE

The objective of this protocol is to outline infection control practices to prevent and/or control the transmission of Methicillin Resistant Staphylococcus Aureus (MRSA) and provide an informational resource for staff.

II. DEFINITIONS

MRSA- Methicillin Resistant Staphylococcus Aureus. Some staph bacteria are resistant to antibiotics. MRSA is a type of staph that is resistant to antibiotics called beta-lactams. Beta-lactam antibiotics include methicillin and other more common antibiotics such as oxacillin, penicillin and amoxicillin. While 25% to 30% of the population is colonized with staph, approximately 1% is colonized with MRSA.

Infection- is a condition whereby the bacteria has invaded a body site, is multiplying in tissue, and is causing clinical manifestations of disease, such as fever, suppurative wound, pneumonia or other respiratory illness or symptoms, or other signs of inflammation (warmth, redness, swelling). Infection is confirmed by positive cultures from sites such as blood, urine, sputum, or wound.

Colonization- is the presence, growth, and multiplication of the organism in one or more body sites without observable clinical symptoms or immune reaction. A 'carrier' refers to an individual who is colonized with MRSA. MRSA colonization can occur on the skin surface, wound or pressure ulcer surface, in the sputum, or in the urine. One of the most common sites of colonization in both health care worker and residents is the anterior nares.

Staph Aureus - often referred to simply as "staph," are bacteria commonly carried on the skin or in the nose of healthy people. Sometimes, staph can cause an infection. Staph bacteria are one of the most common causes of skin infections in the United States. Most of these skin infections are minor (such as pimples and boils) and can be treated without antibiotics (also known as antimicrobials or antibacterials). However, staph bacteria also can cause serious infections (such as surgical wound infections, bloodstream infections, and pneumonia).

III. STANDARDS

A. Transmission

All Staph Aureus, including MRSA, is commonly spread by skin-to-skin contact. The main mode of transmission of MRSA is via hands which may become contaminated by contact with a colonized or infected person, colonized or infected body sites of the personnel themselves, devices, items, or environmental surfaces contaminated with body fluids containing MRSA. MRSA is primarily spread through physical contact, not through air. MRSA is often found in hospitals, nursing homes and other health-care facilities. MRSA is also found in the community. Anyone can get infected with MRSA, even people who have not had recent medical care.

B. Risk Factors

Individuals may be at increased risk for MRSA if their body's immune system is weak and unable to fight off infections. Several factors may contribute to increased risk for MRSA infection in some people. The most common factors are having frequent contact with the healthcare system, having a chronic illness such as diabetes, cancer, HIV/AIDS, being very young or very old, frequent use of antibiotics, having an open wound, dermatitis, or skin lesions, living in a crowded environment, poor nutrition, and poor hygiene.

C. Diagnosis

MRSA is identified by a bacterial culture and antibiotic sensitivity of the suspected site of infection or colonization (i.e., blood, sputum, urine, wound, and exudates). Two criteria are necessary for the organism to be identified as MRSA. First, the organism is identified as Staphylococcus aureus or coagulase positive Staphylococcus species. Second, the antibiotic sensitivity test will show that the organism is resistant to oxacillin, methicillin, nafcillin, cephalosporins, imipenem, and/or other beta-lactams.

D. Treatment

Since MRSA is resistant to many antibiotics, it can be difficult to treat; however, some antibiotics can successfully cure MRSA. Antibiotic treatment will be ordered by the health care practitioner, the entire course of medication must be taken as prescribed. MRSA carriers usually do not need treatment.

E. Infection Control Guidelines to Prevent the Spread of Methicillin Resistant Staphylococcus Aureus

General

- Hand washing is the most effective way to stop the spread of MRSA. Caregivers should wash their hands with soap and water after physical contact with the infected or colonized individual and before leaving the home.

Proper Hand Washing Technique:

1. Wet hands with water
2. Apply soap
3. Rub hands together vigorously for at least 15 seconds, covering all surfaces of hands and fingers
4. Rinse hands with water and dry with disposable towel
5. Use towel to turn off faucet

- If there is no soap and water available, an alcohol based hand sanitizer may be used.

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Use of Alcohol-based Hand Sanitizer

1. Apply to palm of one hand, rub hands together covering all surfaces of hands and fingers until dry
 2. Volume will be based on manufacturers' guidelines
 3. Alcohol-based hand sanitizer designed for reducing the number of viable microorganisms on the hands will contain 60%--95% ethanol or isopropanol alcohol.
- Disposable gloves should be worn if contact with body fluids is expected and hands should be washed after removing gloves.
 - If the infection is in a wound, the area should be kept covered with a dry bandage. The bandage should be changed as ordered by the physician.
 - The individual's environment should be cleaned routinely and when soiled with body fluids. (Follow DDDS Community Services/Special Populations Disinfecting and Sanitizing Policy)
 - Individuals must not share towels, razors, toothbrushes, or other personal items.
 - Public sauna, hot tubs and pool should not be used by anyone diagnosed with MRSA.
 - When possible, dedicating the use of non-critical patient-care equipment and items such as stethoscope, thermometer, etc. to a single individual to avoid sharing between individuals.
 - Personal care services (i.e., haircut, manicure) should be avoided by anyone diagnosed with MRSA.
 - Infected or colonized individuals should be permitted to participate in group activities if draining wounds are covered, bodily fluids are contained, and the individual observes good hygiene practices as directed by the individual's physician.

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Linens

- Linens should be changed routinely and when ever soiled with wound drainage or body fluids.
- Healthcare staff must wear disposable gloves whenever handling soiled linen or clothing.
- When handling soiled linen hold the linen away from the body to prevent contaminating your clothing.
- If linens or clothing are contaminated with body fluids or wound drainage wash them separately from other clothing.
- Wash sheets, towels, and clothes with water and laundry detergent. Drying clothes in a hot dryer, rather than air drying, also helps kill bacteria in clothes.

Waste

- Contaminated waste items, such as bandages and tissues, can be thrown into a normal trash receptacle.
- To prevent others from coming in contact with this waste, make sure it is in a securely tied plastic bag.

IV. Staff Responsibility

- MRSA is considered to be a reportable communicable disease and falls under the Guidelines & Standards of the DDDS Communicable Disease Policy.
- MRSA shall be promptly reported to the assigned nurse. The assigned nurse in consultation with the Nurse Supervisor or State Nursing Administrator should review specifics of the case to assure proper follow up and that appropriate infection control measures are instituted.

V. References

1. Association for Professional in Infection Control & Epidemiology, Inc. (2007, March). *Guide to the elimination of methicillin-resistant staphylococcus aureus (MRSA) transmission in hospital settings*. APIC, Washington, DC
2. Community-Associated MRSA Information for the Public. (ND). Retrieved December 5, 2007 from: http://www.cdc.gov/ncidod/dhqp/ar_mrsa_ca_public.html
3. Guideline for Hand Hygiene in Health-care Settings. *MMWR 2002*; Vol. 51, No. RR-16.
4. Multidrug-Resistant Organisms in Non-Hospital Healthcare Settings. (2000, December). Retrieved October 10, 2007 from: http://www.cdc.gov/ncidod/dhqp/ar_multidrugFAQ.html