LAC+USC MEDICAL CENTER
DEPARTMENT OF INFECTION PREVENTION AND CONTROL
POLICY & PROCEDURE

Subject: **MRSA ACTIVE SURVEILLANCE**	Original Issue Date: 1/2009 Supersedes: 4/2016	**Policy No.** IPC-08 **Effective Date**: Jan 2022

Departments Consulted:	**Reviewed & Approved by:**	**Approved by**:
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PURPOSE:

Oxacillin-resistant *Staphylococcus aureus* (ORSA), commonly referred to as "MRSA", remains an important healthcare-associated pathogen. Prevention of MRSA infections is an important priority. This policy outlines the procedures for identifying patients in designated high-risk groups who may be colonized with MRSA and at greatest risk of developing subsequent invasive MRSA infections. Identification of these select high-risk patients permits appropriate use of appropriate transmission-based precautions for the prevention of healthcare associated transmission of MRSA from one person to another. The procedures outlined in this policy ensure compliance with California Senate Bill No. 1058 (Medical Facility Infection Control and Prevention Act or "Nile's Law").

DEFINITIONS:

- **"MRSA Surveillance Culture**" refers to a routine nasopharyngeal (or groin in infants) swab of admitted patients to detect patient colonization with MRSA.
- **"Colonized"** refers to the presence of a potentially pathogenic organism detected from a patient specimen but *without* clinical signs or symptoms of infection (e.g. fever, leukocytosis, etc.)
- **"Infection"** refers to clinical signs and symptoms of infection from a pathogenic organism.
- Colonization does *not* always correlate with clinical infection requiring treatment. But in certain cases, transmission-based precautions may be warranted to prevent spread of a pathogenic colonizing organism to other patients and staff members. In other cases, use of cumbersome isolation precautions is associated with worse clinical outcomes (See Reference #3).

POLICY:

ADMISSION surveillance

- Active surveillance cultures for MRSA will be accomplished via a hospital Standardized Procedure.
- Active surveillance cultures for MRSA will be performed within 24 hours of hospital admission for the following high-risk patients:
    - Patients scheduled for inpatient surgery
    - Patients discharged from a General Acute Care Facility within 30 days prior to admission
    - Patients admitted to Intensive Care Units (direct and/or transfer from an outside facility)
    - Patients admitted to the Burn Unit
    - Patients admitted for inpatient dialysis treatment
    - All patients transferred from a General Acute Care or Skilled Nursing Facility
- Patients will not be placed on Contact Precautions for MRSA colonization or all MRSA infections (e.g. bacteremia) ***unless there is a purulent wound present whose drainage cannot be controlled/contained by the wound dressing measures currently ordered.***
- Patients with a positive surveillance or wound culture for MRSA, ***whose wound drainage cannot be controlled by dressings*** will be placed on Contact Precautions for the duration of their hospitalization.
- Surveillance-culture positive MRSA patients may be cohorted, if necessary, at the direction of the hospital Infection Control Preventionist (ICP).

DISCHARGE Surveillance
To identify patients at discharge who may be at high risk for invasive MRSA infections after discharge.

- Active surveillance cultures for MRSA will be performed at **discharge** on the following patients:
  - Unit 7D – patients who received dialysis and are MRSA negative
  - Unit 5D – Burn Ward patients who are MRSA negative

MEDICAL TREATMENT OF PATIENTS WITH POSITIVE MRSA ACTIVE SURVEILLANCE CULTURES:

Systemic antibiotic treatment is not recommended for colonized patients without signs of symptoms of infection. Use of antibiotics absent clinical infection is associated with undue patient harm and antibiotic resistance. Decolonization measures (e.g., chlorhexidine baths or other measures) may be considered on a patient-by-patient basis.

The LAC+USC Infectious Disease Consult Service and/or the Antimicrobial Stewardship Service will be involved in medical consultation for patients with MRSA bacteremia and other invasive MRSA infections.

TRACKING METHODS AND REPORTING:

Hospital Epidemiology will report the incidence of hospital MRSA infections at its monthly Infection Control Committee Meeting.

The Infectious Disease Consult Service will keep records of all patients with MRSA bacteremia and formal consultations.

REQUIREMENTS FOR NURSING

Education: nursing will read the MRSA policy and watch a direct observation of the procedure.

Training: nursing will receive training on how to use the culturette ESwab skit to collect the specimen.

Training Method: a written record of the education and training of the MRSA Active Surveillance standardized procedure will be maintained by individual Nurse Managers.

Patient Discharge Educational Material: patients who are surveillance-culture positive for MRSA and display signs and symptoms of infection (e.g., fever, leukocytosis, etc.) will receive verbal and printed, written instruction regarding aftercare and precautions to prevent the spread of the organism to others.

See Attached:
Appendix 1: Nursing Procedure for Obtaining Active MRSA Surveillance Cultures
Appendix 2: English/Spanish discharge instructions

REFERENCES

1. CA Senate Bill 1058 Medical Facility Infection Control and Prevention Act (October 2008)
2. CDC Multidrug Resistant Organisms in Non Hospital Healthcare Settings (2008)
3. Almohanna MS et al. Long Term Impact of Contact Precautions Cessation for MRSA. *American Journal of Infection Control* (2021).
4. Swab Specimen Procedure, LAC+USC Dept of Nursing Services Procedure Manual 4/2019.

Appendix 1: Nursing Procedure for Obtaining Active MRSA Surveillance Cultures

- Ordering active surveillance culture: MRSA ADMIT *or DISCHARGE* culture.
- The RN or LVN will swab both anterior nares, (the NICU will obtain groin swabs) including the septum, using the equipment and procedure outlined below.

EQUIPMENT

- Culturette swab kit (ESwab Collection and Transport System)
- Clean exam gloves
- Patient label

SUPERVISION

- May be performed without supervision by Registered and Licensed Vocational Nurses
- RN's will initiate the collection of the nasal (or groin) swab by determining if a patient meets criteria.
- A physician's order is not required.

PATIENT CONDITIONS

- The patient's nares must be free from any condition that prevents clear access such as an anatomic deformity or facial trauma or fracture.

PROCEDURE

- Gather appropriate equipment (ESwab kit, gloves, patient label)
- Explain procedure to patient
- Wash hand and apply gloves
- Open collection pack and remove tube and swab peel pouch
- Remove swab from peel pouch and collect sample. **Do not touch swab below the PINK line.**
- Carefully insert the swab into the patient's nostril; the swab tip must be inserted up to 2.5 cm (1 inch) from the edge of the nares.
- Roll the swab in a 360° circle, 5 times, over the septal area of the nares.
- Using the same swab, repeat the procedure in the other nostril.
- Unscrew tube cap and insert swab. **Break the swab at its breakpoint indicated by the PINK line.**
- Replace the tube cap and secure tightly.
- Place the patient label on the tube.
- Remove gloves and wash hands.
- Choose **MRSA ADMIT** culture from lab order management.

SPECIMEN TRANSPORT & RECEIPT

- The specimen shall be properly labeled with a patient label and sent immediately to the Microbiology Lab in a specimen bag.
- The Microbiology Laboratory will consider positive MRSA surveillance culture results as **medically important** values and will follow established procedures for staff notification.

Appendix 2: MRSA Patient Discharge Education Instructions

MRSA (Methicillin-Resistant Staphylococcus Aureus)

What is MRSA?

Staph (staphylococcus aureus) bacteria are common germs. They are often found on the skin or in the nose. Often the bacteria cause no problem. Most often they can cause mild skin infections. But sometimes severe infections of the skin, lungs, blood, or other organs or tissues may occur. Some staph infections can be easily treated with common antibiotics. But one type of staph infection is harder to treat. This type is MRSA (methicillin-resistant staphylococcus aureus). It is called methicillin-resistant because the antibiotic (methicillin) that used to be an effective treatment for it, no longer works. MRSA is common in hospitals and nursing homes or long-term care facilities. It is becoming more common among healthy children and adults outside the healthcare system (called community-acquired MRSA). A person may have no symptoms but be a carrier. Or they may have an active infection with the bacteria.

Colonization. When a person carries the MRSA bacteria but is healthy, it's called being colonized. This person can spread MRSA to others but has no infection.

Infection. When a person gets sick because of the bacteria, it's called being infected with MRSA. This person can also spread MRSA to others. If not treated correctly, MRSA infections can be very serious. They can even cause death.

Who is at risk for MRSA?

Anyone can get MRSA. But there are factors that increase the risk. Some of these include:

- Recent or long hospital stay
- Having a surgical wound or IV (intravenous) line
- Having a weakened immune system
- Living in a nursing home or long-term care facility
- Recent antibiotic therapy
- Diabetes
- Kidney dialysis
- HIV infection
- Injection drug use or sharing needles
- Jail or prison time
- Living in a crowded facility, such as a dormitory
- Military service
- Sharing sports equipment, razors, or other sharp objects

How does MRSA spread?

People who are colonized with MRSA have MRSA in their noses or on their skin. They may not be sick themselves. But they can spread the germs to others. In hospitals and long-term care facilities, MRSA can spread from patient to patient on the hands of healthcare workers. It can also spread on objects, such as cart or door handles and bedrails. Outside healthcare settings, MRSA often spreads through skin-to-skin contact, shared towels or athletic equipment, or from close contact with an infected person.

What are the symptoms of MRSA infection?

MRSA skin infections often start as small red bumps on the skin. They look like pimples or spider bites. The small bumps may get larger and become swollen, painful, warm to the touch, and filled with pus. A large version of this may be called a carbuncle. Fever may be present. MRSA can also start in other ways. And it can spread deeper into the body. There it can cause 1 or more of the following:

- Infections in bones, muscles, and other tissues
- An infection in one or both lungs (pneumonia)
- Infection of a surgical wound
- Infection in the bloodstream (bacteremia and sepsis)
- Infection of the lining of the heart (endocarditis)
- Infection of the urinary tract (bladder and kidneys)

How is MRSA diagnosed?

A sample of blood, urine, or infected tissue may be taken to diagnose a MRSA infection. A swab of the inside of the nose or another part of the body may be taken to diagnose colonization. The sample is then sent to a lab and tested for MRSA. If the infection affects bone, joint, or other organs, a blood test or biopsy may be done. Imaging studies, such as an X-ray or CT scan, may also be needed.

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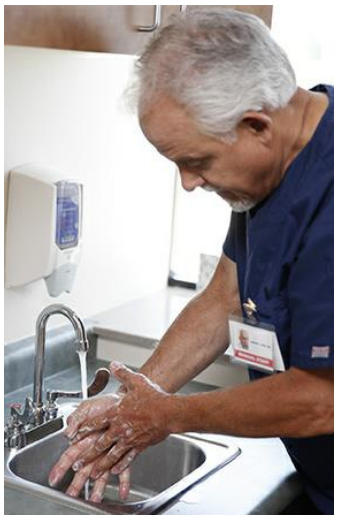
How is MRSA treated?

MRSA infections often need no antibiotics if the infection is limited to the skin and consists of only pimples or a small carbuncle. In that case many of them can be treated with warm soaks and drainage of any carbuncles. If there is spreading infection, MRSA is often treated with antibiotics. This is sometimes done together with draining the affected area. The antibiotic may be given by mouth in pill form. Or it may be given into a vein by an IV. People who test positive for MRSA infection or colonization may have a process called decolonization. A topical antibiotic is put inside the nose or in the nostrils to kill the bacteria. A special soap may be used to cleanse the skin. The person's environment and contacts will often need to be decolonized in the same way.

Can MRSA be prevented?

Hospitals and nursing homes help prevent MRSA by doing the following:



Handwashing: This is the single most important way to prevent the spread of germs. Healthcare workers should wash their hands with soap and water or an alcohol-based hand cleaner before and after treating each person. They also should clean their hands after touching any surface that may be contaminated.

Protective clothing: Healthcare workers and visitors may wear gloves and a gown when entering the room of a person with MRSA. They remove these items before leaving.

Private rooms: People with MRSA infections may be placed in private rooms or in a room with others who have the same infection. People with MRSA may have their own personal care items, such as thermometers and stethoscopes.

Monitoring: Hospitals watch the spread of MRSA and educate all staff on the best ways to prevent it.

People with MRSA can help prevent spreading it by doing the following:

- Ask all hospital staff to wash their hands before touching you. Don't be afraid to speak up!
- Wash your own hands often with soap and water. Or use an alcohol-based hand gel.
- Ask that stethoscopes and other tools be wiped with alcohol before they are used on you.
- Get tested for MRSA if you have a skin infection.

If you are taking care of someone with MRSA:

- Wash your hands well with soap and water before and after any contact with the person.
- Wear gloves when changing a bandage or touching an infected wound. Discard gloves after each use.
- Wash the person's bed linens, towels, and clothing in hot water with detergent or liquid bleach.

Everyone can help prevent MRSA by doing the following:

- Wash your hands often with clean running water and soap.
- Rub your hands together.
- Clean the whole hand, under your nails, between your fingers, and up the wrists.
- Wash for at least 20 seconds.
- Rinse, letting the water run down your fingers, not up your wrists.
- Dry your hands well. Use a paper towel to turn off the faucet and open the door.
- If soap and water aren't available, use an alcohol-based hand cleaner.
- Squeeze about a tablespoon of cleaner into the palm of one hand. Rub your hands together briskly.
- Clean the backs of your hands, the palms, between your fingers, and up the wrists.
- Rub until the cleaner is gone and your hands are completely dry.
- Keep cuts and scrapes clean and covered until they heal.
- Cover your nose and mouth when you cough or sneeze. Wash your hands or use an alcohol-based cleaner after.
- Stay away from the wounds or bandages of others.
- Don't share towels, razors, clothing, or sports equipment