01.42 - Methicillin-resistant *Staphylococcus aureus* (MRSA) Control Plan

Audience

UTMB hospitals, including John and Jeanie Sealy hospitals, TDCJ, LCC, CLC, and ADC, and outpatient clinical sites

Surveillance

Active surveillance for MRSA/MSSA will occur in all adult Intensive Care Units (ICU), pediatric ICU (PICU) and neonatal ICU (NICU).

Screening will be performed via an anterior nasal MSSA/MRSA PCR swab. Patients will be screened at time of admission to any adult, pediatric, or neonatal ICU. NICU patients will continue to be screened every 2 weeks thereafter (see Appendix 1).

Isolation

Patients with draining skin and soft tissue wounds, and those with infected drains or devices: Adult and pediatric patients admitted with MRSA infections due to actively draining wounds or with drainage from devices (e.g. percutaneous drains, LVAD drivelines etc.) will be placed in Contact Precautions.

In addition to entering an isolation order, which is encounter-specific, the patient's electronic medical record (EMR) will be flagged. This flag will remain in place until removed by the infection control staff. Other healthcare facilities will be notified of patients infected with MRSA who are still under isolation precautions before transfer.

Patients with nasal colonization only or those with non-draining wounds, drains or devices: Patients who are otherwise admitted with non-draining MRSA infections or are only MRSA colonized (e.g. nasal PCR) will not be placed in Contact Precautions (exceptions: NICU and TDCJ Hospital Galveston). However, when handling patient's secretions, body fluids or body sites that are colonized with MRSA (e.g. nasal swab, sputum, urine), gloves must be worn, and hand hygiene must be performed.

Isolation Discontinuation

Contact precautions for adult and pediatric patients will be discontinued once the initial site of infection has resolved and there is no drainage from ongoing wounds, infected drain sites, or infected devices, etc. or the patient is discharged; whichever comes first. (exceptions- NICU and TDCJ Hospital Galveston).

Patients with actively draining wounds or with drainage from devices will be re-evaluated upon readmission.

Results are to be documented in the infection control flag as soon as they are available. The Infection Control and Healthcare Epidemiology staff are responsible for adding and deleting isolation flags.

Mother-Baby Unit

Infants born to mothers with active MRSA infection will be placed in Contact Precautions. Infants needing specialized care will be admitted to the appropriate nursery under Contact Precautions (see Appendix A).

NICU

Please see Appendix A attached to this policy for specific NICU guidance.

TDCJ Hospital Galveston

Any patient with an active MRSA infection (i.e. bacteremia, pneumonia, intrabdominal, skin/soft tissue, osteomyelitis etc.) will be placed in Contact Precautions. Patients may be cohorted in semi-private rooms after every effort has been made to provide a private room. Cohorting is acceptable only when neither patient is colonized or infected with another microorganism requiring isolation.

TDCJ Outpatient Clinics

Contact Precautions are required for those with actively draining wounds or with drainage from devices (i.e. percutaneous drains, LVAD drivelines etc.).

Outpatient Clinical Sites

During outpatient visits, healthcare workers should follow Contact Precautions for patients with MRSA infection who have actively draining wounds or with drainage from devices (i.e. percutaneous drains, LVAD drivelines etc.). If the primary MRSA infection has resolved or the patient is only colonized, follow Standard Precautions.

Decolonization

All high-risk patients, over 2 years of age, as listed below will undergo universal decolonization regardless of surveillance results:

- Adult ICU (MICU, SICU, BICU, NCCU, TDCU)
- Pediatric ICU
- Neonatal ICU
- Any patient with central line access including those used for hemodialysis, CRRT, and apheresis as well as internal jugular, subclavian, femoral, and peripherally inserted central catheter (PICC) lines
- All TDCJ inpatients
- Adult oncology/transplant wards
- Patients undergoing CABG and total/partial joint replacements

Nasal Decolonization

All patients meeting universal decolonization criteria as noted above will use twice daily intranasal ethyl alcohol (Nozin®) for nasal decolonization (exception- NICU). Nozin® does not require a nasal MRSA/MSSA PCR screening or a provider's order to initiate.

Nozin® will be applied intranasally to the anterior nares per package instructions every 12 hours for the duration of the inpatient stay

Daily documentation by nursing for each application of Nozin® should be placed in the EHR.

Skin Decolonization

All patients meeting decolonization criteria (except neonates <35 weeks corrected gestational age) will require skin decolonization with daily body washes with chlorhexidine gluconate (CHG) 2% unless contraindicated due to allergy. Non-ambulatory patients will be washed with CHG impregnated wipes by the nursing staff.

Daily documentation by nursing for each CHG bathing should be placed in the EHR

Reference

Popovich KJ, Aureden K, Ham DC, Harris AD, Hessels AJ, Huang SS, Maragakis LL, Milstone AM, Moody J, Yokoe D, Calfee DP. SHEA/IDSA/APIC Practice Recommendation: Strategies to prevent methicillin-resistant *Staphylococcus aureus* transmission and infection in acute-

care hospitals: 2022 Update. Infect Control Hosp Epidemiol. 2023 Jul;44(7):1039-1067. doi: 10.1017/ice.2023.102. Epub 2023 Jun 29. PMID: 37381690; PMCID: PMC10369222.

Appendix A: Neonatal ICU Infection Control Plan for MRSA/MSSA

Purpose: To control healthcare associated transmission and infection due to methicillin-resistant and methicillin-susceptible Staphylococcus aureus (MRSA and MSSA) in UTMB neonatal ICUs.

Audience: Healthcare workers at UTMB neonatal ICUs at Galveston and Clear Lake campuses

Surveillance:

1. Conduct weekly surveillance for MRSA/MSSA using PCR molecular test- the test order will be placed by the NICU practitioners/physicians **every Tuesday morning**. The nasal swabs will be collected by bedside nurses in the morning and submitted to the microbiology laboratory. The results will be available within 24 hours and will be visible to all providers in EPIC EMR.
2. Infection control team will identify patients with MRSA and MSSA clinical culture results daily.

Isolation:

1. All MRSA and MSSA positive (colonized and infected) patients will have an identifiable contact precautions flag in EPIC EMR.
2. Contact isolation precautions include hand hygiene, gown and gloves. This will be practiced by everyone, including staff, volunteers and visitors, who enter the patient room under MRSA/MSSA contact precautions.
    i. All MRSA positive patients will be cohorted separately and placed in contact isolation. The isolation room will have 'Group 1' Contact Isolation signage specifically to visually identify MRSA contact isolation room.
    ii. All MSSA positive patients will be cohorted separately and placed in contact isolation. The patient isolation room will have 'Group 2' Contact Isolation signage specifically to visually identify MSSA contact isolation room.

Isolation Discontinuation:

1. Patients colonized with MRSA or MSSA will be removed from contact isolation after <u>two</u> consecutive weekly negative PCR tests.
2. Patients with clinical infection due to MRSA or MSSA will be removed from contact isolation after resolution of clinical infection AND two consecutive weekly negative PCR tests.
3. If the neonate is discharged and subsequently admitted to Pediatrics, the Contact Precautions flag will be removed under the following circumstances:
    i. The isolation was for colonization only and no subsequent clinical isolate was positive for MRSA.

Routine Decolonization:

1. Daily 2% CHG bathing will be performed for patients greater than or equal to 35 weeks corrected gestation age who are positive for MRSA/MSSA while in contact isolation.
2. During outbreaks of invasive MRSA/MSSA infections (2 clinical cases/month, or 1 case/month for 3 consecutive months, or as determined by the infection control team), decolonization will be instituted using intranasal mupirocin administration (once daily for 5 days).

Environmental Controls:

1. Perform daily thorough cleaning of all touch surfaces in the room using approved disinfectant.
2. Perform terminal cleaning after a room is vacant when the MRSA/MSSA + patients are discharged.
3. Perform hand hygiene for all patient encounters regardless of MRSA/MSSA colonization.