

Children's Hospitals & Clinics of MN
Guidelines for the Prevention and Control of
Methicillin Resistant Staphylococcus Aureus (MRSA) in Neonatal Areas
 (NICU-S, NICU-M, SCN, and ICC)

<p>Introduction</p>	<p>Infections with a Multi-Drug Resistant Organism (MDRO), such as MRSA, typically have similar symptoms as non-resistant organisms, but treatment options are much more limited, because MDRO strains are resistant to many of the antibiotics that could be used to treat them. MDROs can cause severe, life-threatening illnesses, especially in young children and the immunocompromised. Patients with an MRSA infection, for example, experience hospital stays that are up to 10 days longer than patients with a similar infection with a non-resistant strain, and are more likely to need critical care services. All of this adds up to increased risk for the patient and considerable additional costs.</p> <p>Colonization vs. Infection</p> <p>A distinction should be made between colonization and infection.</p> <ul style="list-style-type: none"> • A person who is colonized with a MDRO does not have any symptoms of infection but does have the MDRO living on them as part of their flora. A person who is colonized with a MDRO is at risk to develop an infection later on, and also serves as a reservoir from which the MDRO could spread to others. • A MDRO infection occurs when the MDRO invades the tissue, and results in signs and symptoms of infection.
<p>Guidelines for All Patients</p>	<p>It has been estimated that about 30% of healthy individuals are colonized with MRSA. Colonization with MRSA is commonly undetected; so all patients should be treated as though they may be colonized. Standard Precautions are essential to preventing the spread of MRSA. Standard precautions apply to all patients, no matter what their diagnosis or reason for visit:</p> <ul style="list-style-type: none"> • Perform hand hygiene before and after contact with the patient or their environment. • Gloves should be worn if hands are likely to contact blood or body fluids. • Use a mask and eye protection for all activities that are likely to generate splashes or sprays. • Wear a gown if blood or body fluids, from the patient, equipment, or environment are likely to contact your body or clothing. <p>Hands and equipment must be cleaned before going between bedsides.</p> <p>Certain items do migrate between patients (pens, pencils, etc...) Wipe these down between patients.</p> <p>Although clothing has not been shown to be a direct cause of transmission, specific organisms including MRSA can be cultured from cloth. Long sleeves should be considered potential transmitters/carriers and be pushed up or covered so they do not come into contact with the patient or their environment.</p>
<p>Routine Environmental Cleaning</p>	<p>RNs</p> <p>Once per shift, RNs are asked to use disinfectant wipes on:</p> <ul style="list-style-type: none"> • counter tops in patient room • touch points for IV pumps

- isolette latches
- monitor touch screen (lightly)
- hand-helds (phones & remotes)
- computer keyboard and mouse

Helpful but optional: other frequently touched surfaces/knobs/handles in the immediate patient care area.

ESAs

At least once per day, ESAs are asked to use disinfectant wipes on:

- Handles and knobs of sinks, drawers, cupboards, fridges
- Hard wired phone
- Chair arms
- Family area frequently touched surfaces (keyboards, chair arms, fridge handle, coffeepot handle, pop machine, etc.)
- Pyxis touch panels and scanner, tube system touch panel
- RNs phone programmer console
- Computer keyboards, mouse and phone in alcoves
- Bathrooms

On patient discharge, standard terminal cleaning should be done.

Room Supplies

When a patient becomes known to be positive, supplies should be used and the general par level reduced.

On discharge, Room supplies and bedside carts should be handled in the following way:

- Discard opened or unpackaged items, such as tape, cotton balls, or open diaper packages.
- Place all linens in laundry
- Place all packaged supplies from room cupboards and drawers in a plastic bag.
- Wipe down drawer fronts, handles and work surfaces on bedside cart.
- Remove cart and bag of supplies from room. If patient census and cart supply allows, the cart and supplies should be left unused 7 days.
- Place a new fully stocked bedside cart in the cleaned patient room.

(Note: although studies have found that MRSA can survive on surfaces for days and weeks, the amount of surviving organism isn't described and transmission potential is unknown. Returning carts to service after thorough cleaning and/or after a 3 day 'quarantine' would be acceptable to Infection Prevention if the 7 day 'quarantine' cannot be sustained.)

In Minneapolis, these steps will be completed by the ESA.

In St. Paul, these steps will be completed by the CSA.

Room curtains:

Children's Hospital's room curtains are made of antimicrobial fabric. No studies or community standard make clear the appropriate approach to bedside curtains.

	<p>Curtains as a transmission risk have not been demonstrated. CDC standards suggest 'periodic' cleaning per hospital policy.</p> <p>In Minneapolis, curtains are <u>not</u> removed and laundered after each MRSA patient. All room curtains are laundered by EHS twice per year.</p> <p>In St. Paul, curtains are removed and laundered by EHS following the discharge of MRSA patients.</p>
<p>Surveillance Testing Ordering MRSA PCR Testing in the EMR Specimen Collection</p>	<p>Please see MRSA Active Surveillance Procedure document for details on who, when, where and how to carry out MRSA surveillance testing.</p> <p>This document can be found at Starnet > Departments and Committees > Infection Prevention and Control > Topic Specific Info and Guidelines > MRSA Active Surveillance Testing Guidance</p>
<p>Precautions</p>	<p>For all patients, regardless of MRSA status:</p> <ul style="list-style-type: none"> • Glove for all patient contact (regardless of MRSA Status) <ul style="list-style-type: none"> ▪ Studies show that fewer organisms stick to gloves than to skin when having contact with a known MRSA patient. Gloving reduces the load of organisms on your hands. ▪ Studies also show that some MRSA remains on hands even after washing. Gloves provide an additional safety measure to reduce the potential load to the next patient. ▪ Significantly contaminated gloves should be removed before accessing things in the bedside cart. • Gown for all patient holding. <p>For MRSA patients - Contact precautions:</p> <ul style="list-style-type: none"> • Any patient who has MRSA indicated in the MDRO section of the banner bar must be placed in contact precautions. • Contact precautions means that all health care workers, regardless of role or reason for entering the room, must perform hand hygiene then don gloves and a gown before crossing the threshold into the patient's room, and must doff gown and gloves prior to exiting the room and then perform hand hygiene.
<p>Patient Assignments</p>	<p><u>For all Neonatal Units:</u></p> <ul style="list-style-type: none"> • MRSA patients should be grouped in one area of the unit to facilitate co-assignment. • MRSA patients should be cohorted as one (or more) patient assignment. • MRSA patients should not be co-assigned with non-MRSA patients, unless there is only one MRSA patient in the unit. • If there is only one MRSA patient in the unit, consider assigning him/her 1:1 if the unit is in a period of increased MRSA. • Buddy assignments should be done similarly if possible. <p><u>Rationale:</u> Physical co-location of MRSA patients increases compliance with precautions among all disciplines, and limits movement between MRSA and non MRSA patient rooms. It also facilitates grouping services to MRSA patients after or separate from services to other patients.</p>
<p>Responding to Emergencies</p>	<p>Use clinical judgment as to when safety may be jeopardized because of gloves, i.e. Retaping an ETT or finding an arterial pulse. Keep in mind that risking colonization of any organism is also a significant compromise of patient safety.</p> <p>In the event that a patient in contact precautions requires immediate intervention,</p>

	<p>and the patient's status will be compromised by the short delay associated with hand hygiene and donning gown and gloves:</p> <ul style="list-style-type: none"> • Get a quick squirt of foam and enter the patient environment, even with damp hands if there is no time for drying. • Or – Take a glove and use that as a barrier between your hand and the patient • If you need to enter the patient environment with ungloved hands or without a gown, hands should be thoroughly washed when immediate intervention is complete and gloves and a gown should be donned before proceeding with other cares.
<p>Discontinuing Testing or Precautions</p>	<p>MRSA surveillance testing may be discontinued once a patient is known to be colonized with MRSA, unless the provider is specifically seeking to clear a patient of MRSA.</p> <p>The Minnesota Department of Health has published specific criteria a patient must meet to be 'cleared' of MRSA. According to these criteria, patients who have long-term invasive devices, such as a trach, GT, or ostomy are not eligible for discontinuing Contact Precautions unless or until these devices are removed. The decision to discontinue Contact Precautions is made by Infection Prevention on a case-by-case basis. An Infection Preventionist should always be consulted about whether a patient may come out of Precautions for a MDRO. Please contact Infection Prevention (6-5555) if you would like us to review whether a patient is eligible for discontinuing precautions.</p>
<p>Visitor Guidelines</p>	<p>Note: MRSA is one type of Multiple Drug Resistant Organism (MDRO). This section should also be applied to patients and visitors with other MDROs such as Vancomycin Resistant Enterococcus (VRE)</p> <p>These guidelines apply to:</p> <ul style="list-style-type: none"> • MDRO (Multiple Drug Resistant Organisms) Positive Patients • MDRO Positive Visitors <p>These guidelines are intended to</p> <ul style="list-style-type: none"> • support closeness and breast feeding, • delay exchange of MDRO organisms until infant is less vulnerable, • prevent spread of organisms to the environment. <p>MDRO positive patient, or MDRO positive parent, household member or major caregiver:</p> <ul style="list-style-type: none"> • Place patient in contact precautions. We cannot know at what point an infant may become colonized from the household member. • Hand hygiene education is essential: proper technique; importance upon ENTRY and EXIT to bedside and if hands are contaminated during visit. • Counsel parent/visitor to avoid hand-nose contact and apply alcohol sanitizer after hand-nose contact. A mask should be worn if parent has any respiratory symptoms. • Visitors need to glove if they have a current lesion or cellulitis on their hands or forearms. Gloving at other times is optional. • Skin-to-skin kangaroo care and breastfeeding may be done per normal routines. The value of these activities outweighs the risk of transmitting the MDRO. Exception: if the mother has MRSA mastitis or draining lesions

	<p>on the thorax, a blanket barrier is recommended during 'skin-to-skin' and breast milk should be pumped and discarded until the MRSA infection is effectively treated.</p> <ul style="list-style-type: none"> • Explaining the risks of MDRO colonization/infection is an MD responsibility, but should be reinforced by nursing as needed (see MRSA colonization PFEM available on the intranet.) <p>Other visitors (non household member) colonized with an MDRO</p> <ul style="list-style-type: none"> • Visiting is allowed if visitor is MDRO colonized (history of nasal carriage). If there is a current infection, visiting is not permitted. • The infant does not need to be in contact precautions. • Other guidelines as above apply.
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<p>Twins and Multiples</p>	<p>Twins / Multiples</p> <ul style="list-style-type: none"> • If one infant in a set of multiples is MRSA positive, all of the multiples should be placed in individual contact precautions. • <u>Philosophy</u>: exposure to colonizing organisms is inevitable within a family system. Early in the course of hospitalization when one or both infants are particularly vulnerable, it makes sense to delay that exposure. Later in the hospitalization, especially when infants are stable enough to begin breast-feeding, it is felt that preventing exposure becomes nearly impossible, and that the benefits of close interaction outweigh the risk of exposure. • Sharing a room is acceptable when both infants are weaned to cribs and breast feeding/bottling all feedings. This may be approaching the time of discharge. Delaying room sharing until this time is intended to assure a certain level of maturity for the MRSA negative infant before allowing closer proximity to the MRSA positive one, yet allowing parents to 'normalize' their infants' environment slightly as discharge approaches. • When sharing a room, delaying transmission to the MRSA negative infant should still be emphasized and promoted by educating and monitoring parents, careful attention to hand hygiene, continued individual contact precautions, dedicating equipment and thoroughly cleaning any equipment that must be shared (eg scales, breastpump). • Review the guidelines below with parents about how to interact with their multiples. • Guidelines for parents: <ul style="list-style-type: none"> ○ Perform excellent hand hygiene. Remove rings/watches. ○ Visit the MRSA negative infant first and then the MRSA positive infant/s. This is especially important if parents are doing skin-to-skin time. ○ Wrap either infant being held in a fresh blanket that has not been in infant's bed ○ If returning to the MRSA negative infant/s after holding the MRSA positive infant, wash hands very carefully. ○ Wear a mask for respiratory symptoms. Refrain from touching face, and/or do hand hygiene immediately afterwards. ○ When feedings begin, visiting the MRSA negative infant first may
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	<p>be impractical or impossible. Continue good hand hygiene between infants. Continue to wrap infants in a fresh blanket when holding.</p> <ul style="list-style-type: none"> ○ When both infants are in cribs and breastfeeding or bottling all feedings, infants may room together. Continue to use excellent hand hygiene and wrap infants in a fresh blanket when holding. ○ Parents are asked to inform us if they have skin abscesses, boils, cellulitis, infected eczema or chronic sinusitis. These conditions could be associated with MRSA. Cover skin lesions with a gown and/or gloves and mask for respiratory symptoms when visiting/holding. ○ Perform hand hygiene whenever exiting pt room. <ul style="list-style-type: none"> ● Co-assign as previously state above ● No special cleaning of mom’s breasts need to occur between infants. ● Discharged multiples may come back with the parent when visiting the hospitalized infant/s per standard visiting guidelines.
Decolonization	<p>Babies that have had MRSA positive nares or ETT culture, need to have a treatment course of Mupirocin topical ointment to the nares BID for 5 days. This should not be instituted until they are extubated, decannulated if trached, off of CPAP and highflow nasal cannula.</p>
Parent Education Resources	<ul style="list-style-type: none"> ● PFEM: Methicillin-Resistant Staphylococcus aureus – MRSA colonization ● PFEM: Methicillin-Resistant Staphylococcus aureus – MRSA infection (MDH) ● Parent Letter – Surveillance Memo informing parents of surveillance testing. For inclusion in parent welcome folders.