Let's Talk About...

Multiple drug-resistant organisms (MDRO)

Bacteria are germs that can make a person sick. Everyone has bacteria living on the skin, in the mouth, and in the intestines. These bacteria do not make them sick. This is normal and is called colonization. When a person is very sick, has surgery, or a serious injury, these bacteria can enter tissues. This can cause an infection that has to be treated with antibiotics. Most often, antibiotics work well to treat infections from bacteria. However, over time, certain bacteria can develop resistance to common antibiotics. This means the usual antibiotics cannot kill the bacteria. These bacteria are called **multiple drug-resistant organisms** or **MDROs**. Resistance happens when antibiotics are not used the right way. For example, when a person takes antibiotics to treat viruses like the flu, or when a person doesn't take all the antibiotics ordered by their doctor.

Enterococcus (EN-ter-oh-kock-us) and Staphylococcus (STAFF-ih-low-KOCK-us) are two bacteria commonly found on the body. Enterococcus is in the intestines and Staphylococcus is on the skin or in the mouth or nose. Both of these bacteria can become resistant. When they are resistant, they are called Vancomycin-resistant Enterococcus (VRE) and Methicillin-resistant Staphylococcus aureus (MRSA). There are other types of resistant bacteria, but these are the most common. Someone who has VRE or MRSA on their body is more likely to get an infection than people with normal bacteria on their body.

How are MDROs spread?

MDROs spread by direct contact (touch) from one person to another. Someone who has an MDRO living on their skin, but who does not have an infection, can still pass it to others.

MDROs can also spread by indirect contact. First, the person with an MDRO touches something for example equipment, toys, clothing, bed linens, bed rails, bathroom fixtures, or tables. Then someone else touches the surface later, before the surface is disinfected. Some of these bacteria can live for weeks on a surface that is not cleaned and disinfected.

How can I keep MDROs from spreading?

The most important way to prevent MDROs from spreading is hand hygiene. While you are in the hospital make sure that you, your family, and your child perform good hand hygiene. You can also make sure the hospital staff perform good hand hygiene before and after touching your child. Good hand hygiene can be washing with soap and water or using a hand sanitizer. *(See illustration on the next page.)*

What else can I do in the hospital to keep MDROs from spreading?

If your child has an MDRO now or had an MDRO before, then he will be placed in Contact MDRO Isolation. Your child's nurse will put a special sign on your child's door. This tells the hospital staff what to do when they enter your child's room or care for him.

The hospital staff will do the following:

- Practice hand hygiene (using soap and water or a hand sanitizer).

- Wear gloves when touching surfaces in the room.
- Wear a gown when in close contact with your child and his immediate area.
- Wear a mask when suctioning secretions from your child's airways.
- Carefully disinfect equipment, toys, and supplies right after taking them from your child's room.

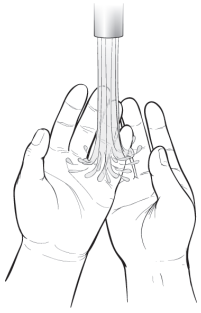
It also means:

- Most children with an MDRO can come out of the room as long as they have good hand hygiene and do not have contact with other patients and families in the hospital.
- Visitors and family need to have careful hand hygiene before going into the room. They also need to check with the nurse to ask if they need to wear a gown and gloves.

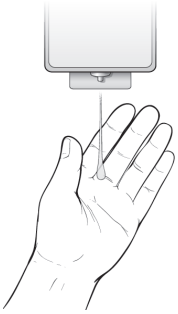
How will my child's doctor treat the MDRO?

Depending on the infection, your child's doctor will choose a treatment. Ask your child's doctor to find out how she will treat your child's infection. Most of the time, your child will receive antibiotics. Take

Hand washing with soap and water

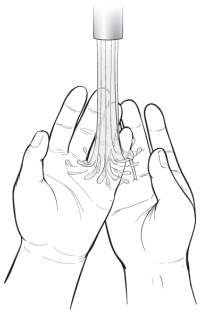


Wet hands with warm, running water.

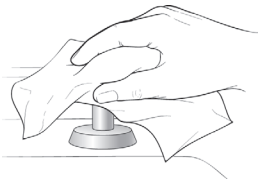


Apply liquid soap or use a clean bar of soap. Lather well.

Rub your hands together vigorously for at least 15 to 20 seconds. Be sure to scrub all surfaces of your hands and fingers.

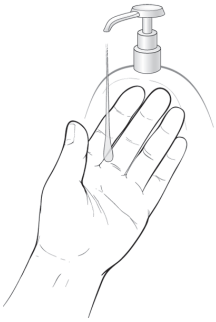


Rinse well. Dry your hands with a clean or disposable towel.



Use a towel to turn off the faucet.

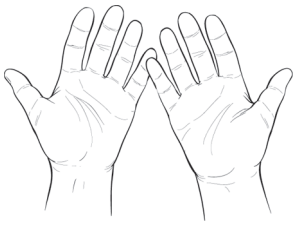
Hand washing with a hand-rub product



Use a product that contains at least 60% alocohol. Apply product to the palm of your hand. Read the product label to see how much to apply.

Be sure to over all sufaces of your hands and fingers.

Rub your hands together until they are dry.



antibiotics exactly as prescribed, both in the hospital and at home. Do not let your child skip antibiotic doses, even if the infection is getting better.

What do we need to do at home?

Even though your child's MDRO infection was treated, he may still be colonized with an MDRO (still have it on his body). Always tell your child's healthcare providers (such as doctors, nurses, and therapists) that your child has had an MDRO.

It is possible your child could get another infection caused by an MDRO. To prevent future infections, do the following:

- Clean your hands and your child's hands often. Make sure people who live with you clean their hands often, too. You can use soap and water or an alcohol-based hand sanitizer.
- Clean your hands before and after changing any wound dressings or bandages. Keep all wounds clean and change bandages as directed until the wounds heal.
- Make sure your child finishes any prescribed antibiotics. Do not stop before your child takes all the prescribed medicine. Make sure your child gets every dose.
- Household cleanliness is important. Use routine household cleaning and disinfecting products.

Frequently asked questions

Does colonization mean that my child's entire body have this bacteria?

- Different bacteria live on different parts of the body. If your child is colonized with an MDRO, these bacteria live in harmony with other bacteria on your child's skin or in his intestines.

Will my child always have an MDRO on his body?

- Colonization may be "transient". This means that your child may test positive for the organism (the MDRO is there). Then in the future your child may test negative (the MDRO is not there anymore).

Are other household members usually colonized too? Should we be tested?

- Because you live together in the same house, touch the same surfaces, share linens, and are generally close, you may be colonized with an MDRO too.
- It is not necessary to test the whole family.
- If you go to a hospital or clinic, you should tell your healthcare provider that someone in your household is colonized with an MDRO.

How contagious is my child?

- The only time you need to worry about your child being contagious is when he has an open wound, sore, or infection.
- The CDC (Center for Disease Control) recommends the following:
  - Keep draining wounds covered with clean, dry bandages.
  - Clean hands regularly with soap and water or a hand sanitizer. Always clean your hands right after touching infected skin or items that touched a draining wound.
  - Practice good general hygiene by bathing regularly.
  - Do not share items that may have wound drainage, such as towels, clothing, bedding, bar soap, razors, or athletic equipment that touches the skin.
  - If clothing touches wound drainage, launder it after use and dry it completely.
  - Always cover wounds with a clean dry bandage. If your child cannot cover the wound, do not let him do activities where he has skin-to-skin contact with other

people (such as athletic activities) until the wound heals.

Do I need to tell my child's school that he or she has an MDRO?

- No, this is not necessary. We all have bacteria, or germs, living on our skin. Usually bacteria is not spread with the kind of contact children usually have at school.
- Can my child swim in a public pool?
  - Usually swimming at the pool is just fine. But do not let your child go to a public pool if he has an active infection.

What if I have more questions?

If you have more questions about MDROs, please ask to speak to the Infection Prevention and Control Unit Coordinator on your child's unit or the Hospital Infection Preventionist. These nurses are happy to answer your questions and concerns.

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Pediatric Education Services, 801.662.3500 | LTA520407979 | Multiple drug-resistant organisms (MDRO) (11/11)