

## Multi-Drug Resistant Organisms (MDRO)

### What are multi-drug resistant organisms?

Multi-drug resistant organisms (MDRO) are common bacteria (germ) that have developed resistance to multiple types of antibiotics. These bacteria are present on the body of many people, including on the skin, in the nose or other moist areas of the body and in secretions. Antibiotic resistance often occurs following frequent antibiotic use or frequent exposure to a healthcare setting. For most healthy people these bacteria don't cause a problem.



MDRO can enter the body and cause infection. MDRO are most likely to enter the body if:

- There is an open wound in the skin or,
- There is an IV, catheter, or other invasive device in place, or
- The person has a suppressed immune system.

### What does MDRO mean?

MDRO stands for Multi-Drug Resistant Organisms. Most types of bacteria can be treated with antibiotics. Over time some types of bacteria have become resistant to certain antibiotics. This means the antibiotic does not work to treat the bacteria. Another antibiotic will need to be used to treat the bacteria. MDRO are more difficult to treat because they are resistant to certain antibiotics.

Examples of MDRO include:

- Methicillin resistant staphylococcus aureus (MRSA)
- Vancomycin resistant enterococcus (VRE)
- Pseudomonas aeruginosa resistant to multiple antibiotics.

### What is the difference between colonization and infection?

Colonization means the MDRO are present in or on the body but is not causing illness. Healthy people may carry the bacteria causing MDRO without becoming ill. Infection means the MDRO are present in or on the body and is causing illness. Symptoms of MDRO may vary depending on the part of the body that is infected.

Infection can occur in any part of the body. Infections may affect the skin, lungs urinary tract or bloodstream.

## How are MDRO diagnosed?

A culture of the suspected infected areas may be sent to the lab to identify the bacteria. When the bacteria is identified and is resistant to various antibiotics, then MDRO are diagnosed.

## How are MDRO spread?

MDRO are commonly spread by direct contact between people or with contaminated surfaces in the environment. This means MDRO are often spread by the hands. MDRO can be contracted in the hospital or community setting.

## How are MDRO treated?

MDRO are difficult to treat. Since the usual antibiotic does not work to treat MDRO other antibiotics are used. Even when the infection is treated MDRO are often still present on the skin or in the nose. This is why isolation is required during future hospital stays.

## What can be done to prevent or control the spread of MDRO at National Jewish Health?

When you visit National Jewish let the health care providers know if you/your child has a MDRO. Standard precautions are taken to prevent the spread of MDRO at National Jewish. Standard precautions means you/your child will follow these guidelines:

- You/your child will be in a private room during the stay at National Jewish. Movement outside the room is limited.
- Special cleanser is available in the room for hand washing. Hand washing is recommended before leaving the room.
- A gown and gloves are worn by people who enter you/your child's room if contact with body fluids is suspected. These are removed before leaving the room.
- A mask may need to be worn also, depending on you/your child's symptoms and culture results. In this case, a mask will need to be worn by the patient when leaving the room also.

These measures will help prevent the spread of MDRO. Remember, preventing the spread of MDRO is important, because MDRO can be difficult to treat.

In certain areas of National Jewish Health we may also initiate contact precautions in addition to standard precautions.

## What is good hand washing?

Although hand washing seems simple, make sure the hand washing is effective to prevent the spread

of MDRO. Use liquid soap and scrub your hands using plenty of lather for 10-15 seconds. Rinse your hands and dry them completely.

If you are away from soap and water, alcohol-based hand cleaners are also effective.

## What do visitors/family members need to know while at National Jewish Health?

In general, healthy people are at low risk for getting infected with MDRO. Good hand washing is recommended for family and visitors before leaving the room of a person infected with MDRO. Gloves and a gown should be worn if contact with body fluids is suspected.

## What precautions should family members take for infected persons at home?

Again, healthy people are at low risk for getting infected with MDRO. In the home, follow these guidelines:

- Caregivers should wash their hands with soap and water after contact with the infected person before leaving home.
- Towels used for drying hands should be used only once.
- Disposable gloves should be worn if contact with body fluids is suspected.
- Linens should be changed and washed routinely, especially if they are soiled.
- Let each health care provider know the patient is colonized/infected with MDRO.

Remember, preventing the spread of MDRO is important, because MDRO can be difficult to treat.

Visit our website for more information about support groups, clinical trials and lifestyle information.

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