

Multidrug-Resistant Organisms

Information for home health care and hospice settings

Multidrug-resistant organisms (MDROs) are microorganisms that are resistant to one or more classes of antimicrobial agents (antibiotics and antifungals). This means these antimicrobials can no longer be used to control or kill the microorganism. Infections caused by MDROs can be difficult to treat due to limited treatment options and can spread rapidly in a variety of health care settings, including home health and hospice settings.

What types of MDROs are there?

There are many different MDROs, and some are of more concern than others, such as carbapenemase-producing organisms (CPOs). CPOs have a resistance gene, which the organism uses to stop an antimicrobial drug from killing it. This gene is made by the organism and can be passed to other organisms. Another concerning MDRO is *Candida auris* (*C. auris*). *C. auris* is a potentially life-threatening type of fungus that is resistant to most antifungal medications and can live on surfaces for long periods of time making it difficult to get rid of once it is in the care environment.

What does it mean to be colonized or infected with an MDRO?

A person who is **colonized** with an MDRO has the organism in or on their body, but it is not making them sick. These organisms can live in a person's digestive system or on their skin for long periods. They can still pass the MDRO to others even if they are not sick. Someone who is colonized might later develop an infection and get sick. A person who is **infected** with an MDRO has the MDRO in or on their body, and it is causing symptoms such as fever, diarrhea, wound drainage, or fatigue.

Who is at greatest risk of acquiring an MDRO?

People who are at higher risk include those:

- Who frequently receive health care.
- With open wounds.
- Who require medical devices such as urinary catheters or central lines.
- With weakened immune systems or chronic health conditions.

How are MDROs spread in the home health care and hospice setting?

MDROs can spread through direct contact with patients who are colonized or infected with an MDRO or by the hands, clothing, or care equipment of home health care personnel (HCP). Some MDROs can also spread through contaminated surfaces in the patient's home environment.

Why is MDRO infection prevention and control (IPC) important?

The potential for rapid spread to others, increasing antibiotic resistance, and difficulty in treating infections underscore the need for IPC. More so, MDRO colonization or infections can cause severe health implications effecting quality of life and even cause death.

Home health care and hospice can be a unique care environment in which HCP have minimal control. Decreasing the risk of MDRO transmission can be achieved through key IPC strategies. **The following recommendations are not exhaustive, and implementation of all strategies may not be appropriate or feasible in all situations.**

✓ **Practice consistent hand hygiene with alcohol-based hand rub (ABHR) or soap and water.**

HCP should carry hand hygiene supplies, such as ABHR, soap, and paper towels to avoid using patient-owned supplies when possible. HCP may also choose to carry a small-size ABHR within their pocket for ease of use. If so, the ABHR should be in a separate, dedicated pocket.

Hand hygiene should be performed:

- Before and after contact with a patient.
- When moving from contaminated body sites to clean body sites while providing care.
- After touching blood, body fluids, non-intact skin, mucous membranes, or contaminated items (even when gloves are worn during contact).
- After removing gloves.
- After touching objects and medical equipment in the immediate patient-care vicinity.
- After coughing or sneezing into a tissue as part of respiratory hygiene.
- Before and after accessing patient care equipment from a medical bag.



✓ **Ensure all reusable non-critical equipment is cleaned and disinfected after use.**

When possible, use single-use, disposable, non-critical equipment or dedicate equipment to the patient. If re-useable equipment is used, thoroughly clean and disinfect the piece of equipment after each use using an Environmental Protection Agency (EPA)-registered disinfectant for the MDRO present.

Only bring supplies that are needed for the visit into the home and avoid bringing in medical bags whenever possible. Clean and disinfect the medical bag after the visit if brought into the home.

✓ **Follow appropriate precautions and personal protective equipment (PPE).**

Use standard precautions for all patient care encounters with an emphasis on hand hygiene, PPE use for high-risk activities that could result in the transfer of MDROs to hands and clothing of HCP (device care, wound care, toileting, providing hygiene), and cleaning and disinfection of the care environment and equipment. In addition, implement contact precautions per agency policy. Further guidance can be found in the [Guidelines for Prevention and Control of MDROs in Health Care Settings](https://www.dhs.wisconsin.gov/publications/p4/p42513.pdf) (PDF) (www.dhs.wisconsin.gov/publications/p4/p42513.pdf).

✓ **Schedule patients who are colonized or infected with an MDRO for last in the day, if possible.**

Patients who are colonized or infected with an MDRO should be scheduled last in the day to avoid spreading the MDRO to other patients under the agency's care.

✓ **Communicate the patient's MDRO status to those involved in their care.**

The patient's medical chart should be flagged so that other HCP know the patient's MDRO status and the proper precautions needed to provide safe care. When the patient is receiving health care outside of the home, HCP should inform the receiving health care provider of the patient's MDRO status so that proper precautions may also be taken at that facility.

✓ **Provide education to the patient and family about their MDRO status and steps to protect themselves and others.**

Educate patients and caregivers about their MDRO status and how they can protect themselves and those who live with them. Key concepts to review with patients and caregivers can be found in the [MDRO Fact Sheet for Patients, Residents, and Families \(PDF\)](http://www.dhs.wisconsin.gov/publications/p03148.pdf) (www.dhs.wisconsin.gov/publications/p03148.pdf). HCP are encouraged to provide this fact sheet to their patients and caregivers.

Caring for a patient with an MDRO may feel intimidating, but it doesn't have to be. The Wisconsin Healthcare-Associated Infections (HAI) Prevention Program and your local or Tribal health department are available to assist and advise you and your agency throughout the process.

Contact information for the HAI Prevention Program is available on the [program contacts webpage](http://www.dhs.wisconsin.gov/hai/contacts) (www.dhs.wisconsin.gov/hai/contacts).



Resources

- Association for Professionals in Infection Control and Epidemiology, [Adapting Essential Infection Prevention Practices for Home Healthcare Settings](http://www.apic.org/resource-library/?resourceId=287) (www.apic.org/resource-library/?resourceId=287)
- McGoldrick, M. (2014). [Bag Technique: Preventing and Controlling Infections in Home Care and Hospice](https://doi.org/10.1097/NHH.0000000000000003). *Home Healthcare Nurse*, 32(1), 39–45 (<https://doi.org/10.1097/NHH.0000000000000003>)
- Wisconsin Department of Health Services (DHS), [Recommendations for Prevention and Control of MDROs for Health Care Settings](http://www.dhs.wisconsin.gov/publications/p4/p42513.pdf) (www.dhs.wisconsin.gov/publications/p4/p42513.pdf)
- Wisconsin DHS, HAI: [Reportable Multidrug-Resistant Organisms webpage](http://www.dhs.wisconsin.gov/hai/reportable-mdro.htm) (www.dhs.wisconsin.gov/hai/reportable-mdro.htm)