

# Multidrug-Resistant Organisms

## Information for health care 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 have the ability to spread rapidly, especially in health care 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 are particularly worrisome as carbapenemase enzymes can inactivate carbapenem antibiotics, as well as other beta-lactam antibiotics. Some CPOs can transfer this ability to inactivate carbapenem antibiotics to other bacteria, which can lead to the spread of antibiotic resistance.

### 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.

### How are MDROs spread in health care facilities?

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

### Why is MDRO infection prevention and control important?

The potential for rapid spread, increasing antibiotic resistance, and difficulty treating infections caused by MDROs underscore the need for timely response to the presence of MDROs. While infection prevention and control measures used to prevent transmission of MDROs depend on the type of health care facility and the prevalence of MDROs in the facility, **HCP play a role in key strategies for preventing the spread of MDROs.**



# What steps can HCP take to prevent the spread of MDROs?

## Practice consistent hand hygiene with alcohol-based hand sanitizer (ABHS) or soap and water.

Staff should perform hand hygiene **before and after** changing dressings, providing patient or resident care (such as bathing, dressing, or changing linen), and accessing indwelling devices. Patients and residents should also be encouraged to perform hand hygiene often.

## Increase the frequency of environmental cleaning and disinfection, especially high-touch surfaces.

Whenever possible, use single-use, disposable, non-critical equipment or dedicate equipment to one patient or resident. Thoroughly clean and disinfect all patient and resident care equipment after use.

## Follow appropriate precautions and ensure personal protective equipment (PPE) is used properly.

Contact precautions should be part of the standard of care for patients or residents colonized or infected with an MDRO. HCP should wear gown and gloves when interacting with the patient or resident or their environment. Further considerations for implementing contact precautions can be found in the DHS *Guidelines for Prevention and Control of MDROs in Health Care Settings* ([www.dhs.wisconsin.gov/publications/p4/p42513.pdf](http://www.dhs.wisconsin.gov/publications/p4/p42513.pdf)). Guidance specific for assisted living facilities are also available in the DHS *Recommendations for Prevention and Control of Targeted Multidrug-Resistant Organisms for Assisted Living Facilities* ([www.dhs.wisconsin.gov/publications/p-03250a.pdf](http://www.dhs.wisconsin.gov/publications/p-03250a.pdf)).

**For nursing homes only:** Enhanced barrier precautions (EBPs) should be implemented, when contact precautions don't otherwise apply, for residents who are colonized or infected with an MDRO or those with wounds or indwelling medical devices regardless of MDRO status. Health care personnel should wear gown and gloves during high-contact resident care activities. Further consideration for implementing EBPs can be found in DHS *Recommendations for Prevention and Control of Targeted MDROs in Wisconsin Nursing Homes* ([www.dhs.wisconsin.gov/publications/p03250.pdf](http://www.dhs.wisconsin.gov/publications/p03250.pdf)).

## Communicate a patient or resident's MDRO status when they are being transferred to or receiving care at another health care facility.

When a person who is colonized or infected with an MDRO is transferred to another health care facility, leaves the facility for an outpatient clinic visit, or receives other ancillary services, the receiving facility must be informed of the individual's MDRO status, so that proper precautions can be taken in those settings.

For more information, visit the Wisconsin Healthcare-Associated Infections Prevention Program MDRO webpage ([www.dhs.wisconsin.gov/hai/reportable-mdro.htm](http://www.dhs.wisconsin.gov/hai/reportable-mdro.htm)).

