

Important Things to Remember

- Avoid unnecessary use of antibiotics.
- Limit the use of invasive devices.
- CRE is primarily spread from person-to-person through contact with an infected or colonized person, particularly contact with wounds or stool.
- Gowns and gloves should be used by healthcare providers and visitors when assisting with the personal cares of an infected resident.
- Daily cleaning with an EPA-registered, hospital grade disinfectant is important.
- Hand hygiene should be performed before and after caring for a resident; this includes performing hand hygiene after removing gloves. Use soap and water or an alcohol-based hand sanitizer.
- **HAND HYGIENE IS THE FIRST LINE OF DEFENSE!**



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For more information, visit the following websites:

CDC—CRE in Healthcare Settings

www.cdc.gov/hai/organisms/cre/index.html

CDC—Long Term Care Infection Control

www.cdc.gov/longtermcare/resident/index.html

CDC—Facility Guidance for Control of CRE

www.cdc.gov/hai/pdfs/cre/CRE-guidance-508.pdf

Recommendations for the Management of CRE in Long Term Care Facilities

www.health.state.mn.us/divs/idepc/dtopics/cre/hcp/rec.pdf

Guidance for Control of Carbapenem-resistant Enterobacteriaceae (CRE): 2016 Oregon Toolkit

www.oregon.gov/oha/PH/DiseasesConditions/DiseasesAZ/CRE1/cre_toolkit.pdf

Healthcare Infection Control Practices Advisory Committee (HICPAC)

www.cdc.gov/hicpac

Association for Professionals in Infection Control and Epidemiology (APIC)

www.apic.org

American Journal of Infection Control (AJIC)

www.ajicjournal.org/

North Dakota Department of Health

www.ndhealth.gov/disease/hai/

Prevention tips and care for the resident with Carbapenem-resistant Enterobacteriaceae



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What are Carbapenem-resistant Enterobacteriaceae (CRE)?

Carbapenem-resistant Enterobacteriaceae (also known as CRE) are a family of bacteria that are particularly difficult to treat as they have high levels of resistance to antibiotics. Carbapenems are antibiotics used for the treatment of infections known or suspected to be caused by multidrug-resistant bacteria.

The most common CRE are *Klebsiella* species and *Escherichia coli* (*E. coli*), which are a normal part of the human gut environment. *Enterobacter* species are common in North Dakota.

Healthy people usually don't get CRE; infections are most commonly seen in people with weakened immune systems and exposure to healthcare settings, such as hospitals or long-term care facilities. Residents who require devices like ventilators, urinary catheters, or residents taking long courses of antibiotics have the highest risk of developing CRE infections.

CRE can live in or on the body but not make a person sick. This is called **colonization**. A CRE **infection** means that the bacteria are in or on the body and are making the person sick.

Stop the Spread!

The best defense against the spread of CRE is good hand hygiene.

Hand hygiene should occur:

- Immediately after using the bathroom.
- Before and after all resident contact.
- Before and after contact with items in the resident's room.
- Immediately after removing gloves.

Visitors and healthcare providers should wear disposable gloves and a gown when providing direct care to a CRE-infected resident.

Residents should be in a private room when possible. Otherwise, they should be placed with a resident who has the same organism, who is not immunocompromised, or who does not have any wounds or indwelling devices.

Residents with CRE should have their own dedicated equipment, such as wheelchairs, walkers, blood pressure cuffs, whole blood glucose testing devices, etc.



Residents can attend activities and meals if secretions can be contained, they are afebrile, and any incontinence can be contained.

Residents should perform hand hygiene prior to leaving their room to attend activities and before all meals.

Treatment

Carbapenem antibiotics are often used as a “last resort” for the treatment of some infections. When a CRE infection occurs, antibiotics that can kill CRE are limited.

Combinations of antibiotics are often effective at treating the infection while slowing the rate of resistance.

Prescribed antibiotics should always be taken as directed and until completed.



Environmental Cleaning

To decrease the risk of transmission, facilities should perform daily cleaning that include areas near the resident (e.g., bed rails, room tray) to decrease the burden of organisms.

In addition, CRE have been found in sink drains in resident rooms. Surfaces around sinks should be cleaned and disinfected regularly and medical equipment should not be stored near sinks.

Laundry from infected residents should be handled using standard precautions, followed by hand hygiene.