

Multi-Drug Resistant *Gram Negative Bacteria* (MDR-GNB)

Important Information for Patients and Visitors

What are MDR-GNBs?

MDR-GNBs are germs that cause infections (e.g. pneumonia, meningitis, bloodstream infections, and surgical site infections) that are not killed by some of our best antibiotics. Recently, the number of infections caused by MDR-GNB has increased. The most frequently isolated MDR-GNBs include *Klebsiella* species, *E. coli*, *Acinetobacter* species, and *Enterobacter* species. When patients are infected with them, there are few antibiotics available to help. CRE (Carbapenem-resistant Enterobacteriaceae) is another type of MDR-GNB (e.g. *Klebsiella* species and *E.coli*). CRE bacteria are resistant to some "last resort" antibiotics called carbapenems. Because they are so hard to treat, MDR-GNB can pose serious risks to patients, and so they require additional infection prevention measures to prevent spreading.

What is antibiotic resistance?

Antibiotics are medications used to treat infections caused by bacteria. When these medications are no longer able to kill the bacteria, we call this "antibiotic resistance". Antibiotic resistance is a growing problem, in part because of antibiotic overuse.

How are MDR-GNBs spread?

- MDR-GNBs are often found in the bowel movements of people who are infected or colonized (have a MDR-GNB in your bowel, but show no signs of infection). People become colonized when they touch equipment or surfaces that are contaminated with stool and then touch their mouth and swallow the organism.
- MDR-GNBs also can be spread when the organism is on the hands of the patient or the health care worker.

How are MDR-GNBs diagnosed?

MDR-GNBs are detected through lab tests (known as bacterial cultures) ordered by your health care provider.

How do we prevent the spread of MDR-GNBs?

- Practice good hand hygiene. Wash thoroughly with soap and water or clean by using an alcohol-based hand rub (ABHR). Make sure others do as well.
- Follow **contact isolation** precautions for patients who are colonized or infected with a MDR-GNB. A sign will be placed outside the patient's room to alert everyone about the special precautions that need to be taken. Health care providers will clean their hands and wear gloves and gowns when entering the room and remove them when exiting.
- Equipment is exclusively dedicated to the patient, if possible. Equipment that must go between patients must be sanitized thoroughly before use.

How do you get rid of MDR-GNBs?

If you are colonized you will not be treated. You will only be treated if an active infection is present. Because MDR-GNBs are resistant to many commonly used antibiotics, only special antibiotics can be used for treatment.

What about family and visitors?

Everyone should clean their hands upon entering and before leaving your room. Visitors should wear gown and gloves to enter and should not visit or have contact with other patients while in the hospital.

What are the risk factors for acquiring an MDR-GNB infection? They include the following:

- Recent stay in an intensive care unit
- Weakened immune system
- After transplant surgery
- Premature birth
- Frequent/long term antibiotic therapy
- Indwelling urinary catheter present
- Surgical procedures

Everyday tips for when you go home:

Good hand hygiene

The key to preventing transmission is frequent and thorough hand hygiene. Both the person with a MDR-GNB, and others in the household should use ABHR or soap and water. When soap and water are used, wash for at least 15 seconds. Repeat before and after contact with the patient, their environment, or any items that they have touched. Hands should also always be washed before preparing or eating food.

Toileting/Grooming

Wash your hands thoroughly with soap and water after using the bathroom. The toilet should be cleaned daily with a clean cloth and a disinfectant. Always discard the cloth when done.

Household cleaning

Clean surfaces in bathrooms, kitchens, and other areas on a regular basis with household detergent/disinfectants such as Lysol or a bleach solution.

Laundry

Clothing, bed linens and towels should be washed separately in hot water with detergent and dried using the "hot" setting on the dryer.

If you have questions or concerns please contact: Infection Prevention - 585-275-7716

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