

VRE (Vancomycin-Resistant Enterococci)

Enterococci are bacteria that are normally present in the human intestines and the female genital tract and are often found in the environment. These bacteria sometimes can cause infections. Vancomycin is an antibiotic that is often used to treat infections caused by enterococci. In some instances, vancomycin is no longer able to kill enterococci. These enterococci are then called vancomycin-resistant enterococci (VRE). Most VRE infections occur in hospitals.

Transmission

The following individuals are at an increased risk of becoming infected with VRE:

- People who have been **previously treated with vancomycin** and combinations of other antibiotics, such as penicillin and gentamicin
- People who are **hospitalized**, particularly when they receive antibiotic treatment for long periods of time
- People with **weakened immune systems**, such as patients in intensive care units or in cancer or transplant wards
- People who have **undergone surgical procedures**, such as abdominal or chest surgery
- People with **medical devices** that stay in for some time, such as urinary catheters or central intravenous catheters

Symptoms

The symptoms of VRE can vary. Among the infections that can be caused by VRE are urinary tract infections, bloodstream infections, and wound infections. The period between being infected and developing symptoms is variable and not well understood. A person can have a VRE infection more than once.

Diagnosis

Diagnosis is made by laboratory testing.

Treatment

Most VRE infections can be treated with antibiotics other than vancomycin. The treatment of VRE is determined by laboratory tests to determine which antibiotics are effective. For people who get VRE infections and have urinary catheters, removal of the catheter when it is no longer needed can help eliminate the infection. People who are colonized (bacteria are present, but they have no symptoms of an infection) with VRE do not usually need treatment. If you have further questions, please contact your health care provider.

Prevention

If you or someone in your household has VRE, you can protect yourself by:

- **Keeping your hands clean** to avoid getting sick and spreading germs that can cause infections. Patients and their caregivers should wash their hands with soap and water or use alcohol-based hand sanitizer, particularly:
 - After using the bathroom
 - Before and after handling medical devices or caring for wounds

- Before preparing food
- **Frequently cleaning areas, such as bathrooms**, that may become contaminated with VRE
 - Use a disinfectant or a mixture of one-fourth cup of bleach and one quart of water to clean those areas and surfaces that are touched frequently.
- **Wearing gloves if hands may come in contact with body fluids that may contain VRE**, such as stool (poop) or bandages from infected wounds
 - Always wash your hands after removing gloves.
- **Informing healthcare providers if you or someone you care for has VRE** so that appropriate precautions can be taken to prevent the spread
- **People should be educated on the proper precautions to not spread the infection** to others and follow good hygiene/hand-washing principles.
- **If a wound is involved the wound needs to be covered** and any drainage contained.

Exclusion Guidance

Individuals with VRE should not be excluded from work, school, or child care unless the general exclusions apply.

For additional information about VRE, contact the North Dakota Department of Health and Human Services', Public Health Division, at 800.472.2180.

Resources:

1. CDC. (2019, November 13). *VRE in Healthcare Settings*. Centers for Disease Control and Prevention. <https://www.cdc.gov/hai/organisms/vre/vre.html>
2. Kimberlin, D. W., Barnett, E. D., Lynfield, R., Sawyer, M. H. (2021) *Red Book: 2021-2024 Report of the Committee on Infectious Diseases*. 32nd ed. American Academy of Pediatrics. [Non-Group A Streptococcal and Enterococcal Infections] [pages 713-717].

08/23/24