



Healthcare Happenings: IPC Highlight

Vancomycin-resistant Enterococci (VRE)

WHAT IS IT?

Enterococci are bacteria that are normally present in the human intestines and in the female genital tract, and are often found in the environment, in soil and water. These bacteria can cause infections such as urinary tract infections (UTIs), bloodstream infections (BSI), or wound infections.

Vancomycin is an antibiotic that is often used to treat infections caused by enterococci bacteria. If enterococci develop resistance to vancomycin, they are called VRE.

In 2020, VRE had a threat estimate of 50,300 infections and 5,000 deaths in the United States. Those who are most likely at risk are people who have been previously treated with antibiotics (including vancomycin) for long periods of time, people who are hospitalized with indwelling medical devices or have undergone surgery, and those who are immuno-compromised.

The emergence of VRE was likely caused by the use of orally administered vancomycin for treating antibiotic-associated diarrhea in hospitals.

What you need to know

- Enterococci bacteria can cause infections such as UTI, BSI, or wound infections.
- Enterococci bacteria can become resistant to vancomycin (VRE).
- The emergence of VRE was likely caused by the use of orally administered vancomycin for treating antibiotic-associated diarrhea in hospitals.

TRANSMISSION

VRE is usually spread via the hands of health care workers. Health care worker hands can become contaminated after contact with people with VRE or with contaminated surfaces or equipment.

DIAGNOSIS AND TREATMENT

A diagnosis can be established by culture and susceptibility testing. A swab may be used around the rectum (perirectal) for colonization testing.

Specimens sent to the laboratory will be cultured and tested for susceptibility to a panel of antibiotics to determine which antibiotic will be the most effective to treat the infection. Appropriate antibiotics to treat VRE infections are identified by this testing. Some people will carry VRE on their body without it causing symptoms, which is called being colonized. Those who are only colonized with VRE do not require antibiotics.

REPORTING

VRE is not a reportable infection in any U.S. state and is not nationally notifiable. CDC tracks VRE infections using data from several sources, including the National Healthcare Safety Network Patient Safety Component. This surveillance system collects reports of VRE from healthcare associated infections, such as central-line associated bloodstream infections.

IPC RECOMMENDATIONS

TRANSMISSION-BASED PRECAUTIONS:

- VRE patients should be placed on **contact precautions** or **enhanced barrier precautions** (nursing homes/SNFs only) and in a **private room** for the duration of all current and future healthcare stays. Patients can be cohorted if they have the same organism and same resistance mechanism (if known).
- Patients may remain colonized for more than one year - **do not discontinue precautions when the infection has been treated.**
- Inter-facility transfer: Prior to patient transfer, the transferring facility should notify the receiving facility of VRE colonization or infection using the [PDPH inter-facility transfer form](#) or another established method that captures the same information.

DISINFECTION GUIDANCE:

- Reusable equipment should be dedicated to the colonized or infected patient whenever possible
- Shared reusable medical equipment should be disinfected **immediately** after use
- Disinfect with products that are effective against VRE
- Disinfect areas in close proximity to the patient, high-touch surfaces in the room, and surfaces around sinks and toilets daily
- Immediately clean and disinfect equipment or surfaces contaminated with blood, urine, feces, and other bodily fluids or infectious materials
- Terminal cleaning should consist of thorough wet cleaning and disinfection

References:

Vancomycin-resistant Enterococci (VRE) in Healthcare Settings. Centers for Disease Control and Prevention. <https://www.cdc.gov/hai/organisms/vre/vre.html>

Edmond, M. B., Ober, J. F., Dawson, J. D., Weinbaum, D. L., & Wenzel, R. P. (1996). Vancomycin-resistant enterococcal bacteremia: Natural history and attributable mortality. *Clinical Infectious Diseases*, 23(6), 1234–1239. <https://doi.org/10.1093/clinids/23.6.1234>

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