VANCOMYCIN-RESISTANT ENTEROCOCCI (VRE)

What is VRE?

Vancomycin-resistant enterococci (VRE) are a type of bacteria that have developed resistance to many antibiotics, especially vancomycin. These bacteria live in the gastrointestinal tract. If a person has an infection caused by VRE it may be more difficult to treat.

VRE can cause infections of the urinary tract, the bloodstream, wounds associated with catheters or surgical procedures, or other body sites.

Some people can carry enterococci or VRE in their bodies without it causing any harm or symptoms of infection. This is called colonization.

How does VRE spread?

VRE is typically spread in health care facilities such as hospitals, which is why proper infection prevention and control practices at these facilities is so important.

If a person is colonized or infected with VRE, the bacteria can be spread to other people through direct contact (usually from the hands of health care workers) or indirectly through contact with shared items or surfaces (e.g., toilet seats, taps, etc.).

VRE can survive for weeks on equipment and surfaces such as door and equipment handles, and handrails and bedrails if they are not properly cleaned and disinfected.

What are risk factors for VRE infection?

VRE infection is more likely to develop among the elderly, individuals who are hospitalized and those with severe disease or weakened immune systems.

Other factors that increase the risk of getting VRE infection include:

- Previous hospitalization or transfer between health care facilities
- Critical illness
- Severe underlying disease or weakened immune system
- Use of urinary catheters
- Exposure to (or contact with) a patient/resident with VRE
- Use of antibiotics, particularly vancomycin

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How is VRE treated?

If a person has the bacteria present in their body (colonization) but has no symptoms of an infection with VRE, they do not usually need treatment.

If a person has a VRE infection and it is detected early, it can usually be treated effectively with antibiotics other than vancomycin. Laboratory testing of a VRE sample can determine which antibiotics will successfully treat the infection.

What can be done to prevent the spread of VRE?

HAND HYGIENE

Proper hand hygiene is one of the most effective ways to reduce the risk of getting colonized or infected with VRE.

Practice good hand hygiene before and after contact or care with patients/residents.

Proper hand hygiene techniques include washing hands for 15 seconds with soap and running water or applying alcohol-based hand rub (70-90% ethanol or isopropyl alcohol) to all areas of your hands (use a thumb-sized amount) and rubbing hands until they are dry.

Hands should be cleaned:

- After using the bathroom
- After blowing your nose
- Before eating and drinking
- Before and after touching dressings or wounds
- When hands are visibly dirty (soiled)
- Before entering or leaving a resident/patient room

It is also important to educate and remind patients/residents about the proper way to perform hand hygiene.

ADDITIONAL MEASURES

Additional measures need to be taken in the health care facility to stop VRE from spreading to other people. The following measures should be taken for a colonized or infected individual:

- Private room accommodation is preferred (the door can remain open)
- Hand hygiene is performed by everyone who enters and leaves the room
- Long-sleeved gown and gloves are worn by everyone who provides direct care

- The proper steps for putting on and taking off personal protective equipment are followed
- Signage is placed on the door to remind anyone entering the room what measures need to be taken
- Equipment is dedicated to the patient/resident or adequately cleaned and disinfected after each use if it is shared. This includes transport equipment (e.g., wheelchairs)
- The room and equipment used in the room is cleaned and disinfected daily
- The room is terminally cleaned upon discharge or after Additional Precautions have been discontinued. Fresh supplies should be stocked

References

https://www.canada.ca/en/public-health/services/infectious-diseases/nosocomial-occupational-infections/vancomycin-resistant-enterococci.html

https://www.publichealthontario.ca/-/media/documents/a/2013/aros-screening-testing-surveillance.pdf