

# Vancomycin Resistant Enterococci (VRE)

## Site Applicability

PHC Acute Care Sites, excluding mental health units/programs

## Practice Level

*Basic: Physicians, NPs, Nursing, Clinical Nurse Leader, Clinical Site Coordinator, Bed Placement Coordinator*

## Standards

In addition to Routine Practices, [Contact Precautions](#) will be initiated for all patients who have been confirmed positive for VRE or are known to be positive from any body site.

The patient will remain on Contact Precautions for the duration of hospital stay.

Admitted patients who are known to be VRE positive will have a “Disease Alert” appear in the banner bar of the patient’s Cerner chart that will indicate that the patient is positive for VRE.

[Screening for AROs in acute care](#) will be conducted using the Infectious Disease Risk Screening (IDRS) form in Cerner. The IDRS will be ordered on all admitted patients and completed by the admitting RN/RPN/LPN. The RN/RPN/LPN will take swabs of patients that are identified as high risk for [AROs](#) as identified from the IDRS ARO Risk Factors questions.

Screening swab for VRE will include a rectal or colostomy site swab, with fecal staining. Stool swab or perianal swabs are acceptable for NICU patients if rectal is contraindicated.

*If you are collecting a CPO swab at the same time, only one swab is required. You can place both the VRE and CPO labels on the same swab specimen.*

### Note:

- Admission swabs are not routinely required on patients that are already alerted for VRE in the Cerner system.
- Repeat VRE swabs and swabs of other sites are not required unless ordered by physician or directed by Infection Prevention and Control.

## Description of the Disease

Enterococci are common bacteria found in the gastrointestinal tract of 95% of healthy individuals. They may also be found in the vagina, oral cavity, perineal area, hepatobiliary tract and upper respiratory tract. Human feces contain the greatest amount of enterococci. Enterococci do not normally cause disease. Occasionally, enterococci can cause disease in severely immune suppressed patients and may contribute to wound and decubitus ulcer infections.

Enterococci are resistant to many antibiotics. VRE are enterococci that have also acquired a resistance to vancomycin, the drug of choice for treating multi-drug resistant gram-positive organisms. However, new drugs have become available which are useful in treating infections with VRE. VRE can spread from patient to patient - usually on the hands of personnel caring for the patient. Transmission may also occur via environmental surfaces.

## Signs & Symptoms

Positive VRE cultures may indicate either:

- Colonization: this occurs when the organism is recovered from a patient in the absence of clinical signs and/or symptoms or immune response. Common areas for colonization are the gastrointestinal tract and the female genital tract.
- Infection: this occurs when the organism enters a body site, multiplies in tissue and causes the clinical manifestations of disease, e.g., fever, draining wound or immune response.

## Incubation Period

Variable

## Period of Communicability

Variable, as VRE may be transmitted whether the patient is colonized or infected.

## Routes of Transmission

VRE can spread from one person to another through direct contact or through indirect contact with contaminated surfaces, equipment, and via contaminated hands.

## Populations at Risk

Patients at high risk for VRE infections include those who are undergoing complex or prolonged healthcare (such as patients in long-term acute care hospitals or ICUs) or patients with weakened immune systems (such as patients undergoing cancer treatment or with organ transplants).



## Assessment and Intervention

### Infection Control Precautions

- **Additional Precautions:** In addition to Routine Practices, [Contact Precautions](#) will be implemented for all patients with VRE. This includes previously known patients who were positive and new patients. The Infection Control Practitioner will flag the patient care record on the Cerner system for all patients known to be colonized or infected with VRE. The most responsible nurse will ensure Contact Precautions are ordered in Cerner and post the appropriate sign on the door (i.e., Contact).
- **Hand Hygiene:** Hands should be cleaned before and after every patient contact, as well as after touching potentially contaminated items in the environment (i.e. commodes). Using an alcohol based hand rub solution is preferred if hands are not visibly soiled.
- **Patient Placement:** Preferred accommodation in acute care for patients with VRE is a single room with a dedicated toilet and patient sink. The door may remain open. If single rooms are unavailable, patients may be cohorted with other patients who are also infected with VRE (but no other infections). If a private room or cohort is not available, please refer to the [Patient Placement Guidelines](#) or contact IPAC.
- **Equipment:** Clean and disinfect shared patient equipment routinely and between different patients. Clean commodes regularly and wipe touchable surfaces (armrest, seat and back) with disinfectant wipes between patients.
- **Environment:** All high-touch surfaces in the patient's room must be cleaned and disinfected at least daily. Following discharge of the patient, the room should have a terminal clean carried out prior to the next patient being admitted.
- **Visitors:** Education should be provided regarding hand hygiene, and visitors must perform hand hygiene before entry and on leaving the room. PPE (gown and gloves) is not required unless the visitor is providing [direct care](#).
- **Patient Transport:** The patient will remain in their room unless absolutely necessary. When the patient is required to leave the room for diagnostic or rehabilitative purposes:
  - Notify receiving department prior to transport of the precautions in place.
  - Encourage and/or assist patient to clean their hands.
  - Cover open wounds and/or lesions with a clean dressing as per Routine Practices, efforts will be made to contain body substances with leak proof garments.

### Lab Testing

- Screening swab for VRE will include a rectal or colostomy site swab, with fecal staining. Stool swab or perianal swabs are acceptable for NICU patients if rectal is contraindicated.
- Lab will send a notification to the unit when a specimen results positive for VRE.

### Treatment

- There are no clinically proven methods of decolonization for VRE.

- Usual wound care protocols will be followed. Intact skin around a wound or insertion site may be cleansed with an antimicrobial agent (i.e. aqueous chlorhexidine, Hibidil, Baxedin).

**Transfer/Discharge Planning**

- Notify the receiving facility, hospital, nursing home or community agency involved in the patient's care of their status.

**Outbreak Management**

- Direction will be provided to the unit/hospital staff, should the Infection Control Practitioner/Physician determine there is an outbreak of VRE.
- Environmental swabs are generally not recommended but if necessary are done under the direction of the Infection Prevention and Control Team.

**Documentation**

- Complete IDRS form on admission.
- Ensure order for Contact Precautions is in patient's Cerner chart and Disease Alert for VRE is present in Cerner banner bar.

**Patient and Family Education**

- [Patient Health Education Materials](#)

**Related Documents**

- [B-00-07-13029](#) - Contact Precautions - Infection Control
- [B-00-07-13001](#) - Antibiotic Resistant Organisms Screening - Acute Care
- [B-00-07-13087](#) - Patient Placement Guideline - Infection Control

**References**

- Centers for Disease Control. (2022). 2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings. Retrieved from <https://www.cdc.gov/infectioncontrol/pdf/guidelines/isolation-guidelines-H.pdf>
- Provincial Infection Control Network. (2013). Antibiotic Resistant Organisms Prevention and Control Guidelines for Healthcare Facilities. Retrieved from [https://www.picnet.ca/wp-content/uploads/PICNet\\_ARO\\_Guidelines\\_March2013.pdf](https://www.picnet.ca/wp-content/uploads/PICNet_ARO_Guidelines_March2013.pdf)
- Provincial Infection Control Network. (2014). Vancomycin Resistant Enterococci Screening and Isolation Practices in BC Healthcare Settings: A Discussion Paper. Retrieved from [https://www.picnet.ca/wp-content/uploads/VRE-Discussion-Paper\\_Revision-November-2014.pdf](https://www.picnet.ca/wp-content/uploads/VRE-Discussion-Paper_Revision-November-2014.pdf)
- Provincial Infectious Diseases Advisory Committee. (2012). Routine Practices and Additional Precautions in All Health Care Settings. Retrieved from [https://www.publichealthontario.ca/-/media/Documents/B/2012/bp-rpap-healthcare-settings.pdf?sc\\_lang=en](https://www.publichealthontario.ca/-/media/Documents/B/2012/bp-rpap-healthcare-settings.pdf?sc_lang=en)

- Provincial Infectious Diseases Advisory Committee. (2013). Screening, Testing and Surveillance for Antibiotic-Resistant Organisms (AROs) in all health care settings. Retrieved from <https://www.publichealthontario.ca/-/media/documents/A/2013/aros-screening-testing-surveillance.pdf>
- Provincial Infectious Diseases Advisory Committee. (2014). Best Practices for Surveillance of Health Care-Associated Infections in Patient and Resident Populations. Retrieved from <https://www.publichealthontario.ca/-/media/documents/b/2014/bp-hai-surveillance.pdf?la=en>
- Public Health Agency of Canada. (2017). Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health Care. Retrieved from <https://www.canada.ca/en/public-health/services/publications/diseases-conditions/routine-practices-precautions-healthcare-associated-infections.html>

## Definitions

**Antimicrobial-resistant organisms (AROs)** - A microorganism that has developed resistance to the action of several antimicrobial agents and that is of special clinical or epidemiological significance (e.g., MRSA, VRE, ESBL, CPO).

**Direct care** - Providing hands-on care, such as bathing, washing, turning the patient, changing clothing, continence care, dressing changes, care of open wounds/lesions or toileting. Feeding and pushing a wheelchair are not classified as direct care.



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