

## HICMR INFORMATION SHEET 2: OCTOBER 2008

### VANCOMYCIN RESISTANT ENTEROCOCCUS (VRE)

#### 1. What Is Vancomycin; Enterococci and VRE

- **Vancomycin** is an important antibiotic because it is used in healthcare facilities as the main treatment for a range of serious infections.
- **Enterococci** are bacteria that are naturally present in the intestines of most humans and animals. Enterococci are normally harmless.
- **VRE**. Some strains of enterococci have become resistant to Vancomycin and are no longer able to be treated with Vancomycin. These resistant strains are called "Vancomycin Resistant Enterococci" or VRE for short. There are two types of VRE based on the resistance genes (vanA and vanB). Both are found in two different species of enterococci (*Enterococcus faecium* and *Enterococcus faecalis*).

#### 2. Why Is VRE Important and Who Is At Risk??

- ❖ If a patient is already hospitalised with a serious disease that weakens their immune system, requires broad spectrum antibiotics or has catheters or intravenous lines insitu, the VRE may spread and infect wounds, the blood or the urinary tract. VRE can only be treated with one or two very new antibiotics.
- ❖ People in good health are not at risk of VRE. Serious VRE infections can occur in patients who are already in the healthcare facility with previous serious illnesses such as cancer, kidney disease or transplants. Such patients have usually been an inpatient for an extended period.
- ❖ Patients, who have been previously treated with Vancomycin and some other types of antibiotics, are at an increased risk of becoming ill or colonized with VRE.
- ❖ Healthy people may carry VRE in their intestines or genital tract without sickness, and without knowledge of the fact. However, without continued exposure to antibiotics VRE cannot compete against normal bacteria and usually spontaneously disappears without disease or illness.

#### 3. VRE In Australia

- While VRE infections are rare, VRE has been found in healthcare facilities in nearly every Australian state and territory.
- Occasionally there have been outbreaks of VRE associated illness in hospitals.
- VanB strains of VRE are the commonest problem in healthcare facilities in Australia.
- References:
  - NHMRC: EAGAR: Vancomycin resistant Enterococcus fact sheet. [www.nhmrc.gov.au/about/committees/expert/eagar/vre.htm](http://www.nhmrc.gov.au/about/committees/expert/eagar/vre.htm)
  - Individual State Health Dept Guidelines for Multi-resistant organisms.

For further information, refer to the HICMR IC Policy:  
*Multi-Resistant Organisms (MROs), Including MRSA and VRE.*

#### 4. How Is VRE Spread?

- ✓ The most common way VRE can be spread is via hands of patients, staff and visitors.
- ✓ Staff can spread VRE-by poor hand hygiene (HH) practices, eg. touching the patient who is colonised or infected and/or the patient's environment/equipment, and not performing HH before attending to the next patient, or touching a colonised/infected patient and/or their environment and not performing HH or changing gloves between specific procedures, eg. washing patient then accessing IV line.
- ✓ Patients who are colonised or infected with VRE can spread VRE by not washing their hands regularly, particularly after going to the toilet, touching their own wounds/IV lines, etc.

#### 5. Appropriate Precautions Required for Pts with VRE

- ✚ Perform HH each time you enter and leave the patient's room, including before and after every patient contact; before and after contact with patient's environment and equipment, before and after any aseptic procedure, and before and after glove use. Nb. HH/wearing of gloves should be procedure and site specific. Refer to HICMR Info Sheet: Hand Hygiene Initiative, WHO 5 Moments of Hand Hygiene posters, and HICMR IC Policies *Standard Precautions, Additional Precautions*.
- ✚ Gloves and gowns should be used when contact with blood or other moist body fluids is anticipated.
- ✚ Patients should be placed in a single room with ensuite, and educated re HH. Visitors should also be informed and perform HH prior to entering/leaving the room.
- ✚ Patient rooms should be regularly cleaned during their stay, with attention to high touch surfaces. The room should also be cleaned on discharge with Hypochlorite.
- ✚ Equipment should be dedicated to the patient, or cleaned thoroughly between patient use.
- ✚ Crockery, cutlery and waste should be treated as normal.