

Vancomycin Resistant *Enterococci* (VRE) Infection

Background Information

This surveillance module is primarily based on the Australian Infection Control Association (AICA) National Advisory Board (NAB) Surveillance definitions for Multi Resistant Organisms.

Aim

To provide a method for individual hospitals to measure VRE infections.

This surveillance module measures VRE infections (*not* colonisation) for the surveillance period.

Methodology

A VICNISS web based data collection form (web form) is to be completed for all VRE infections that meet the definitions below. A “user guide for web based data collection forms (web forms)” is available on the VICNISS website. This explains how to register and obtain access to web forms.

A VRE infection is defined as:

- A. A positive culture for VRE associated with a sterile site isolate, or
- B. A positive culture for the selected VRE associated with a non-sterile site isolate where VRE specific antibiotic therapy was administered by a clinician.

Patients that are given empirical therapy for a VRE infection on the basis of clinical suspicion and no other evidence other than previous positive screening swabs should not be included.

A VRE **colonisation** is defined as a positive culture for the selected VRE associated with a non sterile site isolate where VRE specific antibiotic therapy was **NOT** administered by a clinician.

All **NEW** VRE infections, even if the patient is previously known to be VRE colonised are to be collected.

Only one VRE infection is to be counted for an individual patient during a single admission.

A de-identified microbiology report (if available) should be forwarded with the completed form.

Data Analysis

Three monthly surveillance periods (reports) are analysed.

The following equation is used:

$$\frac{\text{No. of patients with a VRE infection for the surveillance period}}{\text{Total Occupied Bed Days (OBDs) for surveillance period}} \times 10,000$$

The numerator is multiplied by 10,000 in order to reduce confusion as this removes decimal points in the final answer. The rate is now expressed as the number of patients with a VRE infection per 10,000 OBDs.

Occupied Bed Days

OBDs are used as the denominator so that different time periods within the same hospital can be compared.

OBDs is the sum of all bed-days from the first day of the month to the last day of the month inclusive. It includes bed-days for the calendar period only. If a patient was either admitted or separated from the hospital during the period, the number of bed-days that will be included in the OBDs figure will be only those that were incurred during this period

Reference:

Australian Infection Control Association (AICA) National Advisory Board (NAB) (2002) Surveillance definitions for multi resistant organisms, *Australian Infection Control* Vol 7(3).

Vancomycin Resistant Enterococci (VRE) Surveillance Data Collection Form *(for Hospital Use Only)*

THIS DATA MUST BE SUBMITTED ELECTRONICALLY USING A VICNISS WEBFORM

This data collection form is to be completed **ONLY** for patients **ADMITTED** to an acute care hospital

If you have any queries regarding the completion of this sheet please contact VICNISS

VICNISS REQUIRED FIELDS

Hospital Details *(Optional datafields in grey text)*

Hospital Code Number:	Treating Unit:	Treating Ward:
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Patient Identification *(Do not attach a bradma label)*

MRN (UR No.):	Sex: M <input type="checkbox"/> F <input type="checkbox"/>	DOB: / /
Date Admitted to Hospital: / /	Discharge Date: / /	

Infection Details

Specimen Collection Date: / /	<input type="checkbox"/> Unknown
VRE Isolate: Van A <input type="checkbox"/>	Van B <input type="checkbox"/> Other <input type="checkbox"/>

Infection Detection

Please select one of the following definitions:

<input type="checkbox"/>	1. Definition 1 (healthcare associated) The patient's first positive specimen* was collected more than 48 hours after admission to hospital or within 48 hours of discharge from hospital.
Or:	
<input type="checkbox"/>	2. Definition 2 (healthcare associated) The patient's first positive specimen* was collected less than or equal to 48 hours after admission and one of the following key clinical criteria was met: <i>(please indicate below)</i>
<input type="checkbox"/>	Significant organism related infection is a complication of the presence of an indwelling medical device: Was the device inserted at this hospital? Yes <input type="checkbox"/> No <input type="checkbox"/>
<input type="checkbox"/>	Significant organism related infection occurs within 30 days of a surgical procedure where the significant organism is related to the surgical site: Was the procedure performed at this hospital? Yes <input type="checkbox"/> No <input type="checkbox"/>
<input type="checkbox"/>	Significant organism related infection was diagnosed within 48 hours of invasive instrumentation or incision: Was the instrumentation or incision performed at this hospital? Yes <input type="checkbox"/> No <input type="checkbox"/>
Or:	
<input type="checkbox"/>	3. Definition 3 (community associated) The patient's first positive specimen* was collected less than or equal to 48 hours after admission and none of the key clinical criteria in significant organism definition 2 were met.

* The first positive specimen must be related to an infection and not colonisation

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Infection Detection <i>continued...</i>			
<i>Please select one of the following site options:</i>			
1. Sterile Site: <input type="checkbox"/>	→ Specific Site:	Blood <input type="checkbox"/> Tissue sample <input type="checkbox"/> <small>(collected by aseptic technique)</small>	Sterile body cavity <input type="checkbox"/> Other <input type="checkbox"/>
Or:			
2. Non-Sterile Site AND VRE Specific Antibiotic Therapy is Commenced: <input type="checkbox"/>			
	→ Specific Site:	Wound <input type="checkbox"/> Other <input type="checkbox"/>	Urine <input type="checkbox"/>
List Antibiotics Administered:			
Past History of Colonisation: <i>(optional datafield)</i> Yes <input type="checkbox"/> No <input type="checkbox"/>			
Organism & Sensitivity:			
	Sensitive	Resistant	Unknown
Ampicillin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Daptomycin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Linezolid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Penicillin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vancomycin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Root Cause Analysis Performed: <i>(Optional datafield)</i> Yes <input type="checkbox"/> No <input type="checkbox"/>			

Data Field Instructions – VICNISS Required Fields

Hospital Code Number

Enter 3 digit code number assigned by the VICNISS Coordinating Centre.

MRN (UR Number)

Enter hospital medical record number or any unique identification (ID) number.

Enter the UR number in exactly the same manner each time, that is, if patient ID numbers contain spaces, dashes, leading zeroes or alphabetic characters, e.g., 000-123-456 A always be consistent in recording them.

Sex

Tick 'M' (Male) or 'F' (Female).

DOB

Enter the Date of Birth using the format dd/mm/yyyy.

Date Admitted to Hospital

Enter the date of admission using the format dd/mm/yyyy

Date Discharged

Enter the date of discharge using the format dd/mm/yyyy

Specimen Collection Date

Enter the date of the first isolate associated with the VRE infection using the format dd/mm/yyyy. Tick unknown if for example a transferring hospital in the transfer history does not detail the date of the first isolate associated with the VRE infection.

Infection Detection

Place of acquisition

Tick box to indicate if VRE infection meets definition 1, 2 or 3. If definition 2 indicated, tick which key clinical criteria was met.

Definition 1 (Healthcare associated): The patient's first *VRE infection* was collected more than 48 hours after admission to hospital or less than 48 hours after discharge from hospital

OR

Definition 2 (Healthcare associated): the patient's first *VRE infection* was collected less than or equal to 48 hours after hospital admission AND one of the following key clinical criteria was met: [indicate relevant clinical criteria]

- VRE infection is a complication of the presence of an indwelling medical device (e.g. intravascular line, haemodialysis vascular access, CSF shunt, urinary catheter)

- VRE infection occurs within 30 days of a surgical procedure where the VRE infection is related to the surgical site
- VRE infection was diagnosed within 48 hours of a related invasive instrumentation or incision

OR

Definition 3 (Community associated): The patient's first *VRE infection* was collected less than or equal to 48 hours after admission and none of the key clinical criteria in definition 2 was met

Was Definition 2 clinical criteria a result of action from this hospital?

When Definition 2 is indicated further information is required.

If the Definition 2 clinical criteria can be attributed to this hospital indicate "yes" (e.g. Device was inserted at this hospital, surgical procedure was performed at this hospital).

If the Definition 2 clinical criteria cannot be attributed to this hospital indicate "no" (e.g. Device inserted at another health facility, surgical procedure performed at another hospital)

Site

1. Sterile Site

Tick box if sterile site.

A sterile site is a significant isolate obtained from the blood stream, a normally sterile body cavity (peritoneum, pleural or pericardial space or CSF) or a tissue sample collected by aseptic means. It does not include isolates in the respiratory or urinary tracts. (Infections in these non sterile sites are counted if MRO specific antibiotic therapy is administered by a clinician.)

If a patient with a non-sterile site MRO detection later develops a sterile site MRO detection during the same admission, this latter detection should be counted rather than the existing non-sterile site detection. Surveillance for non-sterile site MRO detections is inherently less accurate than detection of sterile site MRO detections.

Or:

2. Non Sterile Site AND MRO Specific Antibiotic Therapy is Administered by a Clinician

Tick box if Non Sterile Site.

VRE Appropriate Antibiotics Administered

Tick VRE appropriate antibiotics administered post specimen collection date.

If the isolate was a non sterile site and none of the listed VRE appropriate antibiotics are administered, the data collection form does not have to be submitted to VICNISS.

Organism and Sensitivity Matrix

For the primary organism according to the antibiotics listed tick either Sensitive (S), Resistant (R) or Unknown (U) according to the pick-list

Ampicillin
Daptomycin
Linezolid
Nitrofurantoin
Penicillin
Vancomycin