Glycopeptide Resistant Enterococci / Vancomycin Resistant Enterococci Management Procedure

(IPC Manual)

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1. **INTRODUCTION**

Multi drug resistant organisms are a growing concern for infection prevention and control and it is imperative that patients who have or are suspected of having one are managed safely and appropriately.

1.1 **Glycopeptide Resistant Enterococci (GRE) /Vanomycin resistant Enterococci (VRE) Gram Positive Bacteria**

Enterococci bacteria are frequently found in the bowel of normal healthy individuals. There are many different species of enterococci, but only a few have the potential to cause infections in humans. They can cause a range of illnesses including urinary tract infections, bacteraemia (blood stream infections) and wound infections.

GRE are resistant to glycopeptide antibiotics (vancomycin and teicoplanin). GRE are sometimes also referred to as Vancomycin-Resistant Enterococci (VRE).

Resistance to glycopeptide antibiotics reduces the therapeutic options for enterococcal sepsis; the reported transfer of resistance to Staphylococcus aureus is an important reason for controlling the spread of these organisms.

Refer to Appendix 42 for further guidance on multidrug resistant organisms and resistant antibiotics.

2. **PROCEDURE**

2.1 **Management of a patient with Glycopeptide Resistant Enterococci/Vancomycin-Resistant Enterococci**

When a patient is admitted the Healthcare Associated Infections (HCAI) Risk Assessment Template must be completed on SystmOne.

This will identify patients who:

1. May be colonised or infected
2. Meet the criteria for screening

In the community:

1. The patient may already be known to have GRE/VRE
2. GRE/VRE may be identified from specimens sent to the laboratory as the patient has clinical signs of infection e.g. diarrhoea, exudating wounds.

GRE/VRE is sometimes found in the faeces of people who have never been in hospital or have not recently been given antibiotics.

2.2 **Screening**

Routine screening for GRE/VRE is not advocated however, screening to
identify other colonised patients is recommended during outbreaks and will be performed on the advice of the Infection Prevention and Control Team (IPCT):

- Colonisation with GRE/VRE is more common than infection
- The most frequent site of colonisation is the large bowel, and faeces is the most useful screening specimen.
- Infection may be associated with intravenous or urinary catheters and management usually includes their removal.
- Staff gut carriage has not been implicated as a source of patient infection or colonisation and screening staff for stool carriage is not recommended.

2.3 Treatment for GRE/VRE

Treatment of individual patients is based on clinical assessment and discussion with a Microbiologist to determine whether antimicrobial therapy is required.

Stool carriage may persist for months or even years. Attempted clearance of colonisation with antibiotics is generally unsuccessful and is not recommended.

2.4 Isolation for GRE/VRE

The decision to isolate a patient with GRE/VRE should be based on risk assessment and clinical needs, in discussion with the Infection Prevention and Control Team.

Patients with GRE/VRE and diarrhoea or incontinence pose a high risk of GRE/VRE transmission and MUST be isolated.

Ideally patients colonised with GRE/VRE should be isolated in single rooms, with en-suite facilities, or if this is not possible, cohorted in bays on the ward. Other patients in the bay must not have wounds or invasive devices.

2.5 Isolation in the community

Isolation precautions are not required in the patient’s own home. Strict standard precautions must, however, be in place at all times, as with any patient cared for by staff.

2.6 Visitors to inpatient areas

Patient may continue to receive visitors. Any visitor must ensure that they wash their hands on leaving the isolation room and be instructed to use the alcohol hand rub outside the room.

Visitors are not routinely expected to wear gloves and aprons unless they are providing personal care. The IPCT/Consultant Microbiologist will inform staff if this changes due to resistance patterns.
2.7 Hospital and Community Care

2.7.1 Personal Protective Equipment

Staff must refer to the Personal Protective Equipment Procedure.

- Wear a disposable polythene apron if there is a risk that clothing may be exposed to blood, body fluids, secretions or excretions
- Wear a long-sleeved fluid-repellent gown if there is a risk of extensive splashing of blood, body fluids, secretions or excretions onto skin or clothing
- Use aprons or gowns as single-use items, for one procedure or one episode of direct patient care and ensure they are disposed of correctly
- Face masks and eye protection must be worn where there is a risk of blood, body fluids, secretions or excretions splashing into the face and eyes

2.7.2 Hand Hygiene

Staff must refer to the Hand Hygiene policy and procedure.

- The most important measure to control the spread of all organisms, including multi resistant organisms is scrupulous attention to hand hygiene
- Staff must adhere to the bare below the elbow guidance
- Staff must decontaminate their hands thoroughly using liquid soap and water or soapy hand wipes if hand washing facilities are not available, followed by alcohol based hand rub

2.7.3 Environmental and Equipment Cleaning

Staff must refer to the Cleaning and Decontamination of the Environment and Patient Equipment Procedure.

- Equipment and the patient’s environment may become contaminated with multi resistant organisms and this risk is increased if patients have colonised respiratory secretions, open wounds or diarrhoea
- The environment must be kept clean and uncluttered to minimise dust accumulation and to facilitate effective environmental cleaning
- Encourage patients/family/carers to keep the environment clean

2.7.4 Waste Disposal

Staff must refer to the Waste Policy.

- Waste must be disposed of as hazardous / infected.

2.8 Transfer/Discharge of Patients

Transfer of patients with multi resistant organisms should be minimised to reduce the risk of spread, but this should not compromise other aspect of
patient’s care. All transfers should be discussed with a member of the IPCT prior to transfer.
If a patient with a multi resistant organism is transferred to another health-care institution the receiving clinical staff and IPCT must be informed. The ambulance service should be notified as well.

In general, multidrug resistant organisms do not present a risk to healthy people in the community or patients in residential or nursing homes who do not have catheters, wounds or other lesions.

2.9 Death of a patient
No special precautions are required. Standard precautions are sufficient.

3. DEFINITIONS/EXPLANATION OF TERMS USED

*Acinetobacter* - a bacterium that causes infections such as pneumonia, particularly in people who have a compromised immune system

Antimicrobial - capable of destroying or inhibiting the growth of disease-causing microbes

*Carbapenems* - are a group of powerful antibiotics, used to treat severe infections. They include meropenem, ertapenem, doripenem and imipenem

*Carbapenemases* - Enzymes produced by some bacteria which cause destruction of the carbapenem antibiotics, resulting in resistance – health professionals sometimes use this enzyme abbreviation only

Colonised/Colonisation – *when a microbe establishes itself in an environment such as a body site without causing an infection*

Endoscope - *a long slender medical instrument used for examining the interior of hollow organs including the lung, stomach, bladder, and bowel*

*Enterobacter* - any of a class of Gram-negative rodlike bacteria that occur in the gastrointestinal tract

*Escherichia coli* - genus of Gram-negative rodlike bacteria that are found in the intestines of humans and many animals

Fomites - objects or substance capable of carrying infectious organisms, such as germs or parasites, and hence transferring them from one individual to another.

Gram negative and positive bacteria. Gram staining is a method of staining used to distinguish and classify bacterial species into two large groups (gram-positive and gram-negative). Gram-positive bacteria are more receptive to antibiotics than Gram-negative

HCAI - Healthcare Acquired Infection. HCAI are acquired as a result of
healthcare interventions.

Infection - the invasion of an organism's body tissues by disease-causing agents (pathogens), their multiplication, and the reaction of host tissues to the infectious agents and the toxins they produce

*Klebsiella* – a Gram-negative bacteria found in the respiratory, intestinal, and urinogenital tracts of humans and animals, which can cause pneumonia and urinary infections

Pathogenic - able to cause or produce disease

*Pseudomonas* - any of a genus of rodlike Gram-negative bacteria that live in soil and decomposing organic matter: many species are pathogenic to plants and a few are pathogenic to man

*Staphylococcus aureas* - a spherical Gram-positive bacterium typically occurring in clusters and including many pathogenic species, causing boils, infection in wounds, and septicaemia

Sepsis - the presence of pus-forming bacteria in the body

Septicaemia - blood poisoning, especially that caused by bacteria or their toxins

4. RESPONSIBILITIES, ACCOUNTABILITIES AND DUTIES

4.1 Refer to the home page, section 4, of the Infection Prevention and Control Policy Manual

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5. LINKS TO ASSOCIATED POLICIES/DOCUMENT

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6. REFERENCES/FURTHER READING


Multi-Resistant Gram Negative Bacteria – Prevention and Control Policy, Doncaster and Bassetlaw Hospitals NHS Foundation Trust. Accessed on line 22.08.2018


Public Health England (2013) Acute trust toolkit for the early detection,
management and control of carbapenemase-producing Enterobacteriaceae.


7. **APPENDICES**

(Please see IPC Policy Manual webpage for Appendices not attached to this procedure)

The appendices can be accessed via this link: [https://www.rdash.nhs.uk/46192/infection-prevention-and-control-manual/](https://www.rdash.nhs.uk/46192/infection-prevention-and-control-manual/)

- Appendix 42 Multidrug resistant organisms and antibiotic resistance