Shropshire Community Health
NHS Trust

Document Details	
Title	Glycopeptide-Resistant Enterococci (GRE) also known as Vancomycin-Resistant Enterococci (VRE) Policy
Trust Ref No	1860-56775
Local Ref (optional)	
Main points the document covers	This policy details guidance on Glycopeptide-Resistant Enterococci (GRE) also known as Vancomycin-Resistant Enterococci (VRE)
Who is the document aimed at?	All staff who undertake direct patient care within Shropshire Community Health NHS Trust
Author	Head of Infection Prevention and Control
Approval Process	
Approved by (Committee/Director)	Infection Prevention and Control Governance Meeting – notified to Quality and Safety Operational Group
Approval Date	18 October 2019
Initial Equality Impact Screening	Yes
Full Equality Impact Assessment	No
Lead Director	Executive Director of Nursing and Quality/DIPC
Category	Clinical
Sub Category	Infection Prevention and Control
Review date	18 October 2022
Distribution	
Who the policy will be distributed to	IPC Governance Meeting Members
Method	Electronically to IPC Governance Meeting Members and available to all staff via the Trust website
Document Links	
Required by CQC	Yes
Other	

Amendments History		
No	Date	Amendment
1	18 Oct 2019	Policy Updated

Contents

Policy on a page

Glycopeptide-Resistant Enterococci (GRE) also known as Vancomycin-Resistant Enterococci (VRE)

This is only to be used as a summary. See full policy for detailed advice

New case

- Isolate the patient in a single side room with en-suite facilities or own commode
- Commence treatment if active infection
- Devices such as catheters and peripheral lines can act as reservoirs - the device must be reviewed for need
- Commence twice daily Tristel cleaning
- Provide the patient with relevant leaflets
- Commence isolation audit and then weekly afterwards
- Patient to remain in isolation unless IPCT advise otherwise
- Complete a Datix if unable to isolate and isolate in the bay – please inform the IPC team or Microbiologist out of hours

History of:

- Isolate the patient on admission in a single side room with en-suite facilities or own commode
- Commence twice daily Tristel cleaning
- Take a urine sample and wound swab if applicable on admission for screening
- Take a rectal swab, however staff must ensure there are no contraindications in doing so; a stool sample can be obtained instead

(All samples to be labelled as VRE screen)

- Review results; if positive treat as new case

Antibiotics to be reviewed if transferred in on therapy and must be clearly documented the notes the rationale

Before any surgical or invasive procedure is performed on patients with GRE/VRE, please discuss with a Consultant Microbiologist whether antibiotic prophylaxis is required. The Consultant Microbiologist can be contacted via the Shrewsbury and Telford Hospital (SaTH) switchboard on (01743) 261000.

Link for isolation priority can be found here:

http://www.shropscommunityhealth.nhs.uk/content/doclib/10430.pdf

Patient discharge terminal cleaning:

Please ensure the room and all equipment is thoroughly cleaned using Tristel to include door handle all surfaces, curtains to be trained, check radiators Estates may be required to complete an internal clean.

1 Introduction

Enterococci are bacteria that colonise the bowel of most people (carried in the bowel with no ill effects or signs and symptoms). There are many recognised species of enterococci, although Enterococcus faecalis and Enterococcus faecium account for approximately 90% of clinical infections. Enterococci are an increasingly common cause of healthcare associated infection. Infections can be caused by Vancomycin-Resistant Enterococci (VRE) however when the enterococci become resistant to both Vancomycin and Teicoplanin they are known as Glycopeptide-Resistant Enterococci (GRE). GRE/VRE can cause bacteraemia, wound infections, infections of the genito-urinary tract and abdominal infections. Enterococci, including GRE/VRE are opportunistic pathogens, with the capacity to cause more invasive infections in immunocompromised patients e.g. bacteraemia, intravenous device associated infection, wound infection, cholangitis, endocarditis and meningitis (Murray, 1990 and Moellering, 1992).

Healthy people can carry GRE/VRE with no ill effects or signs and symptoms. This is called colonisation. People who are colonised do not need treatment. Although GRE/VRE colonisation appears to be more frequent than infection, it is essential that transmission of these bacteria is controlled as colonisation frequently precedes infection. It is important to control the transmission of GRE/VRE as when infections occur they can be difficult to treat.

2 Purpose

The policy is intended to provide guidance on the management of patients with Glycopeptide-Resistant *Enterococci* (GRE) and Vancomycin-Resistant *Enterococci* (VRE) within Shropshire Community Health NHS Trust.

3 Definitions

Term/ Abbreviation	Explanation / Definition
DIPC	Director of Infection Prevention and Control
Glycopeptides	Antibiotics: current drugs in this class are Vancomycin, Teicoplanin, Dalbavancin and Telavanacin
GRE	Glycopeptide-Resistant Enterococci
GRE/VRE Colonisation	GRE/VRE colonisation is defined as the presence, growth and multiplication of GRE/VRE in the stool/rectal swab or another site with no clinical signs of infection. Colonisation happens when a micro-organism becomes established in an environment or area without producing disease. Patients can remain colonised without symptoms for months, even years,
GRE/VRE Infection	GRE/VRE infection is defined as an invasion of tissues or bodily fluids with clinical signs and symptoms of infection or where GRE/VRE is found in sites that are normally sterile e.g. blood.
ICS	Independent Care Sector
IPC	Infection Prevention and Control
IPS	Infection Prevention Society
PPE	Personal Protective Equipment
RCA	Root Cause Analysis
SaTH	Shrewsbury and Telford Hospitals
SCHT	Shropshire Community Health NHS Trust
Tristel	Chlorine dioxide which cleans and disinfects
VRE	Vancomycin-Resistant Enterococci

4 Duties

4.1 The Chief Executive

The Chief Executive has overall responsibility for ensuring infection prevention and control is a core part of Trust governance and patient safety programmes.

4.2 Director of Infection Prevention and Control

The Director of Infection Prevention and Control (DIPC) is responsible for overseeing the implementation and impact of this policy, make recommendations for change and challenge inappropriate infection prevention and control practice.

4.3 Infection Prevention and Control Team

The Infection Prevention and Control (IPC) team is responsible for providing specialist advice in accordance with this policy, for supporting staff in its implementation, and assisting with risk assessment where complex decisions are required.

The IPC team will ensure this policy remains consistent with the evidence-base for safe practice, and review in line with the review date or prior to this in light of new developments.

4.4 Managers and Service Leads

Managers and Service Leads have the responsibility to ensure that their staff including bank and locum staff etc. are aware of this policy, adhere to it at all times and have access to the appropriate resources in order to carry out the necessary procedures.

Managers and Service Leads will ensure compliance with this policy is monitored locally and ensure their staff fulfil their IPC mandatory training requirements in accordance with the Trust Training Needs Analysis.

4.5 Staff

All staff have a personal and corporate responsibility for ensuring their practice and that of staff they manage or supervise comply with this policy.

4.6 Committees and Groups

4.6.1 Board

The Board has collective responsibility for ensuring assurance that appropriate and effective policies are in place to minimise the risks of healthcare associated infections.

4.6.2 Quality and Safety Committee

Is responsible for:

- Reviewing individual serious incidents/near misses and trends/patterns of all incidents, claims and complaints and share outcomes and lessons learnt
- Agreeing and escalating key risks/items of concern to the appropriate Directors and/or the Trust Board

4.6.3 Infection Prevention and Control Governance Meeting

Is responsible for:

- Advising and supporting the IPC team
- Reviewing and monitoring individual serious incidents, claims, complaints, reports, trends and audit programmes
- Sharing learning and lessons learnt from infection incidents and audit findings
- Agreeing and escalating key risks/items of concern to the appropriate Directors and/or the Quality and Safety Committee

- Approval of IPC related policies and guidelines

5 Risk Factors

Prevention of GRE/VRE requires the recognised risks to be avoided. Appropriate prescribing of antibiotics is essential and the use of Cephalosporins should be avoided if at all possible, especially in high risk areas and high risk patients. Please see the Shropshire Community Health NHS Trust (SCHT) *Clostridium difficile* policy and the Community Antibiotic Policy which advises the use of Metronidazole as opposed to Vancomycin for a first line treatment for patients diagnosed with *Clostridium difficile* diarrhoea or colitis as many identified risk factors for GRE/VRE are identified in patients with these symptoms:

- People who have been previously treated with the antibiotic vancomycin or other antibiotics for long periods of time
- People who are hospitalised
- People with weakened immune systems such as patients in intensive care units, people with renal failure or in cancer or transplant wards
- People who have undergone surgical procedures such as abdominal or chest surgery
- People with medical devices that stay in for some time such as urinary catheters or central intravenous (IV) catheters
- Contact with a known GRE/VRE positive patient

5.1 Indwelling Devices

Indwelling devices including urinary catheters and peripheral lines can act as reservoirs for GRE/VRE and the need for the indwelling device must be reviewed, with a view to it being re-sited or replaced if deemed necessary to enable the treatment of the infection. If the device is reviewed and still required, staff must contact the IPC team, Continence Team, (if urinary catheter), or Consultant Microbiologist for risk assessment and device management advice.

6 Infection Prevention and Control Precautions in Hospital

6.1 Transmission

The main routes of transmission of GRE/VRE between patients and health care workers are via hands and environmental contamination. Enterococci can contaminate the patient's environment and survive for several months. Surfaces, including commodes, bathrooms and patient equipment that come into contact with staff and patients may also be a source of contamination. Environmental contamination is increased when a patient has diarrhoea because GRE/VRE is carried in the bowel. Particular care is also needed when dealing with urine as patients can also have GRE/VRE in their urine.

6.2 Prevention

6.2.1 Admission Screening

GRE/VRE is identified from clinical specimens sent to the laboratory. It is commonly found in urine, faeces and wound swabs but may also be found in in the respiratory tract and in the blood.

Routine admission screening is **not** normally required. However, all patients known to have had active GRE/VRE infection or previous colonisation should be screened on admission to the community hospitals. This screening may be in the form of a rectal swab or faecal sample and should be obtained at the earliest opportunity. Ideally patients should be isolated until results have been received and reviewed.

It is the responsibility of the ward staff to ensure that the screenings samples are obtained and results checked and documented in patient's notes. If the patient had previously

tested positive for GRE/VRE then the IPC team must be informed when a patient is admitted, and also if any positive results are received as a result of inpatient specimens.

6.2.2 Prevention through Hand Hygiene

6.2.2.1 Staff

Hand hygiene is the most important procedure for preventing healthcare-associated infections. Hand decontamination using either liquid soap and water or alcohol based hand gel are effective methods to remove GRE/VRE. Strict hand decontamination after every contact with a patient and/or their environment with GRE/VRE is important.

6.2.2.2 Patients and visitors

All patients must wash their hands after using the toilet/commode, before meals and before taking medication. Moist hand wipes are provided for all patients to allow them to decontaminate their hands.

Visitors must always decontaminate their hands on leaving the isolation room or patient's bed space.

6.2.3 Prevention through Isolation

It is strongly recommended that patients who are colonised or infected with GRE/VRE should be moved immediately into a single room with a self-contained toilet and its own hand wash basin. If the room does not have its own toilet facilities then a commode or an identified toilet should be designated to that patient. Source isolation sign must be placed on the door of the room and the door kept closed. A risk assessment may need to be carried out and documented in the patient's notes if a patient is at risk behind a closed door.

If isolation in a single room is not possible because the single room capacity is exceeded, please liaise with the IPC team or, out of hours, contact SaTH switchboard on (01743) 261000 and ask to speak to a Consultant Microbiologist, to assess risk of moving a patient currently occupying a single room out, to accommodate the patient with GRE/VRE.

Please refer to the isolation flowchart in SCHT Isolation Policy available on the SCHT website or by clicking this link
http://www.shropscommunityhealth.nhs.uk/content/doclib/10430.pdf

If isolation within a single sideroom cannot be achieved a DATIX form must be completed and isolation practices carried out within the bay

6.2.3.1 Isolation Practices Checklist

On commencement of isolation, ward staff must undertake the Isolation Practices Checklist and email a copy to the IPC team at ipc.team@shropcom.nhs.uk.

The Isolation Checklist is available from the IPC page of the Trust website – click here or paste this address into your browser
http://www.shropscommunityhealth.nhs.uk/rte.asp?id=11072.

This 'checklist' is to be used to give assurance that all precautions are in place to minimise the risk of cross infection.

6.2.4 Personal Protective Equipment (PPE)

- Staff must wear disposable apron for close patient/patient environment contact
- Staff must wear disposable gloves and apron when having contact with blood or bodily fluids

6.2.5 Visitors

Visitors should be discouraged from sitting on beds. Visitors only need to wear a disposable apron and disposable gloves if performing, or helping to perform, personal care tasks. Visitors must make sure their hands are decontaminated on arrival to and departure

from the ward, before assisting and following any personal and nutritional care. A leaflet is available on the SCHT website for patients, staff and visitors –

https://www.shropscommunityhealth.nhs.uk/content/doclib/13308.pdf

6.2.6 **Prevention through Environmental and Equipment Decontamination**

GRE/VRE may survive for many months and are often widely distributed in the ward setting. Patients' care equipment and the environment can easily become contaminated with the organism.

- Ensure the isolation room, bed space and patient care equipment is cleaned twice daily with chlorine dioxide (Tristel) and always after soiling.
- Monitoring and physiological equipment such as blood pressure cuffs, oxygen saturation monitor, thermometer, and stethoscope should all be designated single patient use where possible and thoroughly decontaminated with chlorine dioxide (Tristel) between uses.
- Commodes and toilets must be decontaminated with chlorine dioxide (Tristel) after each use including the arms and the underside of the seat.
- Ensure single patient use manual handling equipment is used, or if reusable is designated and laundered after use for the period of infection or in between if visibly soiled.
- Ensure hoists and stand aids are thoroughly decontaminated with chlorine dioxide (Tristel) between uses.
- Specific attention must be paid to all objects and surfaces which are touched frequently, e.g. apron and glove dispensers, door handles, toilet flush handles, telephones, light switches, keyboards and nurse call handsets.
- The isolation room and ward environment should not be cluttered as this inhibits effective cleaning.
- Terminal cleaning of a bed space, bay or ward area after the discharge, transfer or death of a patient with GRE/VRE should be thorough, using chlorine dioxide (Tristel) and include curtain changes, please contact Estates for radiators that require internal cleaning due to a build-up of dust that domestic services are unable to reach Link to I am clean tool: https://www.shropscommunityhealth.nhs.uk/ipc-leaflets (found under self audits and checklists)
- Terminal cleaning of mattresses should be carried out according to manufacturer's instructions.
- Toilet brushes should be replaced with new.

6.2.7 **Linen, Laundry and Patients' Personal Laundry**

Linen and laundry should be handled and segregated as per the SCHT Linen and Laundry Policy. Any soiled items **MUST NOT** be manually sluiced. Patients' relatives/carers should be encouraged to wash personal laundry at home. Patients' clothing should be placed within a patient specific linen bag that has an alginate tie to prevent relatives/carers having to handle the linen.

6.2.8 **Patient Crockery**

No special instructions apply; patients' crockery including water jugs can be washed in the dishwasher in the kitchen.

6.2.9 **Waste**

- All waste to be classed as infectious waste and disposed of in orange clinical waste bags.

- An enclosed, lidded and foot operated clinical waste bin should be kept inside the room.
- Sharps bins, as appropriate, should be kept inside the room.

6.2.10 **Patient Movement**

- The transfer and movement of patients should be reduced to a minimum. Where patients need to attend departments for essential investigations, they should be 'last on the list' unless earlier investigation is clinically indicated.
- The receiving area must be notified of the patient's GRE/VRE status, and the patient called for only when the department is ready for them. This will ensure patients are not held unnecessarily in communal waiting areas.
- Ambulance staff should be advised of the patient's GRE/VRE status to allow appropriate precautions to be taken.
- There is no reason to keep stable patients in hospital with this infection or colonisation. However, GRE/VRE can also spread in residential and nursing homes.
- All staff transferring patients to other healthcare providers must complete the infection risk section of the health economy transfer of care summary form.
- Patients may need to leave their rooms to receive therapy. Staff are advised to undertake a risk assessment based on the individual patient's circumstances. Patients should be left until 'last on the list' and the IPC team contacted for further advice if required. The IPC team recognises the value of such therapies but staff need to be aware that there may be occasions when patients may not be allowed to leave their rooms to receive therapy.

6.3 Patient Discharge

Ward staff must liaise with the Independent Care Sector (ICS) to informof GRE/VRE infection or colonisation prior to discharge and complete the relevant discharge information. In most care homes, residents will occupy a single room but staff and visitors must adhere to standard precautions, advise care homes to contact their IPC team for guidance if they have concerns.

6.3.1 Discharge to Own Home

If patients are being discharged to their own homes but require the input of community services e.g. district nurses etc. then ward staff must liaise to advise of GRE/VRE infection or colonisation prior to discharge and complete the relevant discharge information.

6.4 Prophylaxis

Before any surgical or invasive procedure is performed on patients with GRE/VRE, please discuss with a Consultant Microbiologist whether antibiotic prophylaxis is required. The Consultant Microbiologist can be contacted via the Shrewsbury and Telford Hospital (SaTH) switchboard on (01743) 261000.

6.5 Treatment

There is no treatment to clear colonisation of GRE/VRE but if treatment is required for infection please discuss treatment options with a Consultant Microbiologist via SaTH switchboard on (01743) 261000

6.6 Clearance Samples

Clearance samples or swabs are not required. IPC may request screens for long stay patients should issues arise with isolation.

7 Infection Prevention and Control Patient Management in Patient's Homes

When visiting a patient's home, ICS setting or asking a patient to visit a community clinic setting, patients who have tested positive for GRE/VRE should, if possible, be scheduled as the last visit/patient of the day.

7.1 Standard Precautions

Standard infection prevention and control procedures should be used as for any other patient. Any exposure to bodily fluids must be treated as potentially infectious in line with standard precautions including hand hygiene and wearing of PPE. Patients and their household contacts should be reminded of the importance of good hand hygiene practices in their own home.

7.2 Spillages

Spillages of body fluids should be removed using disposable paper towel and the surface washed thoroughly with detergent and warm water, wearing disposable apron, disposable gloves and eye protection where splashing may occur.

7.3 Clinical Waste

Continence products, wound dressings and other clinical waste should be double bagged and disposed of in the patient's wheelie bin or clinical waste stream, if available.

7.4 Linen and Patients' Personal Laundry

A patient's personal laundry, own bed linen and bed clothes can be washed in a domestic washing machine on the hottest setting the fabric will tolerate (as on the care label). It may be preferable to wash these items separately to other household laundry. Any soiled items should not be manually sluiced.

8 Consultation and Approval Process

8.1 Consultation Process

This policy has been developed by the IPC team in consultation with Consultant Microbiologist and Infection Prevention and Control Doctor; Public Health England; Medicines Management, and Infection Prevention and Control Governance Meeting members.

A three week consultation period was allowed and comments incorporated as appropriate.

8.2 Approval Process

The IPC Governance Meeting will approve this policy and its approval will be notified to the Quality and Safety Committee.

9 Dissemination and Implementation

This policy will be disseminated by the following methods:

- Managers informed via Datix who then confirm they have disseminated to staff as appropriate
- Staff – via Team Brief
- Awareness raising by the IPC team
- Published to the Staff Zone of the Trust website

The web version of this policy is the only version that is maintained. Any printed copies should therefore be viewed as 'uncontrolled' and as such, may not necessarily contain the latest updates and amendments. When superseded by another version, it will be archived for evidence in the electronic document library.

10 Advice and Training

10.1 Advice

Individual services' IPC Link Staff act as a resource, role model and are a link between the IPC team and their own clinical area and should be contacted in the first instance if appropriate.

Further advice is readily available from the IPC team or the Consultant Microbiologist via the SaTH switchboard on (01743) 261000.

10.2 Training

Managers and service leads must ensure that all staff are familiar with this policy through IPC induction and updates undertaken in their area of practice.

In accordance with the Trust's mandatory training policy and procedure the IPC team will support/deliver training associated with this policy.

Further training needs may be identified through other management routes, including Root Cause Analysis (RCA) and Post Infection Review (PIR) following an incident/infection outbreak or audit findings. By agreement additional ad hoc targeted training sessions will be provided by the IPC team.

10.3 Monitoring Compliance

Compliance with this policy will be monitored locally by managers and by the IPC team.

Completion of IPC mandatory training, which includes Standard Precautions will be monitored by the Organisational Development Department and reported to the IPC Governance Meeting and Organisational Development and Workforce Group.

The IPC team will monitor IPC related incidents reported on the Trust incident reporting system and liaising with the Risk Manager advice on appropriate remedial actions to be taken.

11 References

B.D. Cookson, M.B. Macraeb,*, S.P. Barrettc , D.F.J. Brownd ,C. Chadwicke , G.L. French. F, P. Hateleyg , I.K. Hoseinh , J.J. Wadei WORKING PARTY REPORT Guidelines for the control of glycopeptide-resistant enterococci in hospitals Journal of Hospital Infection (2006) 62, 6–21

Fraise, A. P. and Bradley, C. (eds) (2009) Ayliffe's control of Healthcare-Associated Infection. 5th Edn London, Edwards Arnold.

Garvey.M.I, Bradley.C.W, Casey.A, Clewer.V, Holden.E, (2017) Using a vanA polymerase chain reaction to detect environmental contamination during a vancomycin-resitant enterococci outbreak, Journal of Hospital Infection, 97, pp418-423

Melo-Christino, J., Resina, C., Manuel, V., Lito, L. and Ramirez, M. (2013) *First case of infection with vancomycin-resistant Staphylococcus aureus in Europe*. The Lancet. 382, (9888), p205

Moellering, R. C. (1992) Emergence of *Enterococcus* as a Significant Pathogen. Clinical Infectious Diseases; 14: 1173 – 1176

Monteserin.N and Larson.E (2016) Temporal trends and risk factors for healthcare-associated vancomycin-resistant enterococci in adults, Journal of Hospital Infection, 94 pp236-241

Murray, B. E. (1990) The Life and Times of the Enterococcus. Clinical Microbiology Rev; 3: 46 – 65

Public Health England 2014 Glycopeptide Resistant Enterococci, Frequently Asked Questions.

http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/EnterococciSpeciesAndGRE/GeneralInformation/

Roghmann, M., Qaiumi, S., and Johnson, J. A. et al. (1997) Recurrent vancomycin-resistant *Enterococcus faecium* bacteria in a leukaemia patient who was persistently colonised with Vancomycin-Resistant enterococci for two years. Clinical Infectious Diseases 24: 514

Wilson.H.J, Khokhar.F, Enoch.D.A, Brown.N.M, Ahluwalia.J, Dougan.G, Torok.M.E (2018) Point-prevalence survey of carbapenemase-producing Enterobacteriaceae and vancomycin-resistant enterococci in adult patients in a university teaching hospital in the UK, Journal of Hospital Infection, 100, pp35-39

Zhou. M.J, LI.J, Salmasian.H. Zachariah.P, Yang.Y-X, Freedberg.D.E (2019) The local hospital milieu and healthcare-associated vancomycin-resistant enterococcus acquisition, Journal of Hospital Infection, 101 pp 69-75

12 Associated Documents

This policy should be read in conjunction with SCHT:

- Community Antibiotic Policy
- Cleaning and Disinfection Policy
- Hand Hygiene Policy
- Isolation Policy
- Linen and Laundry Policy
- Standard Precautions Policy
- Waste Management Policy