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NHS

Community Infection Prevention and Control Policy for General Practice

(also suitable for adoption by other healthcare providers, e.g. Podiatry)

MRGNB, including CPE

(Multi-resistant Gram-negative bacteria, including carbapenemase-producing Enterobacterales)

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This Policy has been adopted by:

Organisation: .....

Signature: ..... Name: .....

Job title: .....

Adoption date: .....

Review date: .....

Any variation to this Policy should be risk assessed, evidence-based, authorised through local governance channels and documented below. The Community Infection Prevention and Control (IPC) Team, Harrogate and District NHS Foundation Trust, cannot endorse or be held responsible for any variations.

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1. Introduction

Antibiotic resistance is the ability of microorganisms to resist the effects of antibiotics normally used to treat the infections they cause. The increasing prevalence of antibiotic resistant microorganisms, especially those with multiple resistance, is an international concern. Refer to the 'Antimicrobial stewardship Policy for General Practice'.

Numerous bacteria are normally found in the bowel. Not all are resistant to antibiotics and not all will cause serious illness. Species of bacteria commonly found in the bowel include *Escherichia coli* (*E. Coli*), Klebsiella, Proteus, Pseudomonas, Enterobacter and Acinetobacter. Collectively these bacteria are referred to as Gram-negative bacteria (GNB) and are part of our 'good bacteria'. These bacteria, under certain circumstances can become resistant to antibiotics and are then referred to as multi-resistant Gram-negative bacteria (MRGNB).

Groups of MRGNB known as carbapenemase-producing Enterobacterales (CPE) have been identified over recent years. These resistant strains of bacteria carry a carbapenemase enzyme that destroys carbapenem antibiotics, the powerful group of antibiotics, such as imipenem, which is used in hospitals. Until now, these have been the 'last resort' antibiotics relied on when other antibiotics have failed to treat infections.
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2. Key points

- GNB are commonly found in the gastrointestinal tract, in water and in soil, and can be transmitted by contaminated hands and care equipment, often by the faecal oral route of transmission.
- Bacteria commonly achieve antibiotic resistance by producing an enzyme, which counters the effect of specific antibiotics.
- The genes that carry antibiotic resistance can spread to other bacteria and control of MRGNB requires comprehensive infection control and appropriate antibiotic prescribing and stewardship.
- MRGNB can cause urinary tract infections, pneumonia, bloodstream and surgical site infections.
- The majority of patients with MRGNB are colonised which means bacteria are present, but they do not have symptoms of infection. Colonisation is not harmful and can last for years.
- MRGNB are usually identified in urine specimens and when stool specimens are

specifically screened to detect them.

- Patients who are colonised with an MRGNB do not usually pose a risk to healthy people, but may be a risk to those who are vulnerable.
- People at increased risk of being colonised or infected with MRGNB are:
  - Those who in the last 12 months have:
    - Been an inpatient in any hospital, UK or abroad
    - Had multiple hospital treatments, e.g. dialysis, or have had cancer chemotherapy
    - Been previously identified as MRGNB positive (includes household and care home contacts of known cases)
    - Been admitted to a hospital augmented care or high-risk unit

  Or:

  - Based on local epidemiology:
    - Are immunosuppressed
    - Have had previous exposure to broad-spectrum antibiotic courses, particularly carbapenems in last month
    - Are resident in 'Long Term Care Facilities', particularly where higher levels of interventional care are provided, e.g. long-term respiratory ventilation

3. Routes of transmission

- Direct spread via hands of staff and patients.
- Care equipment that has not been appropriately decontaminated.
- Environmental contamination.

Although MRGNB can be spread via care equipment, the most common route is by contact with an infected or colonised patient. Therefore, good hand hygiene before and after direct contact with a patient is essential.

4. Treatment

Giving antibiotics to asymptomatic (colonised) patients to clear the organism is not recommended.

Treatment is only advocated for those patients who have clinical signs of infection. If required, advice on antibiotic treatment can be obtained from your local Consultant Microbiologist.

5. Clearance specimens

MRGNB clearance specimens, including faecal samples or swabs for CPE, are not routinely required. Repeat specimens should only be taken if the patient has clinical signs of an infection, e.g. pyrexia, pain on micturition.

6. Infection prevention and control measures

- 'Standard infection control precautions' (SICPs) and, where required, 'Transmission based precautions' (TBPs) should be used for patients confirmed or suspected to have MRGNB. Colonisation may be long-term, therefore SICPs and TBPs should be followed by all staff at all times, to reduce the risk of transmission of infection. Refer to the 'SICPs and TBPs Policy for General Practice'.
- When a patient is confirmed or suspected to have MRGNB infection or colonisation, staff should apply contact TBPs on a risk assessment basis, particularly where there is a presence of wound drainage, diarrhoea or faecal incontinence. In these situations, there is increased potential for environmental contamination and subsequent risk of transmission.
- For all patients with profuse diarrhoea, appropriate medical management and enhanced cleaning of any toilet facilities used by the patient should be undertaken.
- Patients with MRGNB attending for a procedure, e.g. wound dressings, where possible, should be scheduled at the end of the session to allow for environmental cleaning.
- Prior to any examination or treatment, a risk assessment to determine the personal protective equipment (PPE) required should be undertaken, e.g. wear disposable gloves and apron when in contact with a patient's body fluids, e.g. wound, urine. These should be disposed of after each procedure and hands cleaned. Refer to the 'PPE Policy for General Practice'.
- If a patient is confirmed or suspected to have MRGNB infection or colonisation, long sleeved fluid repellent gowns should be worn if there is a risk of extensive splashing of body fluids to the uniform, e.g. dealing with an ileostomy.
- Hand hygiene is essential before and after direct contact with a patient using liquid soap and warm running water or alcohol handrub.
- Patients with MRGNB should be encouraged to wash their hands or use skin wipes after using the toilet and before meals.
- Do not dispose urine specimens into hand wash sinks. Refer to the 'Specimen collection Policy for General Practice'.
- Waste contaminated with body fluids should be disposed of as infectious waste, refer to the 'Safe disposal of waste, including sharps Policy for General Practice'.

7. Environmental and care equipment cleaning

If a patient has attended for an examination or procedure, reusable medical devices, care equipment, the treatment couch and immediate area, should be cleaned and disinfected, refer to the 'Safe management of care equipment Policy for General Practice' and 'Safe management of the care environment Policy for General Practice'.

8. Referral or transfer to another health or social care provider

- If it is necessary to refer or transfer a patient to another health or social care provider, e.g. ambulance service, hospital, they should be informed of the patient's MRGNB status prior to the transfer. This will enable a risk assessment to be undertaken to determine the appropriate infection prevention and control measures to be taken, e.g. transported without other patients, isolated on admission.
- Staff preparing to transfer a patient to another health or social care provider should complete a patient passport or the Inter-health and social care infection control transfer Form (available to download at www.infectionpreventioncontrol.co.uk/resources/inter-health-and-social-care-infection-control-transfer-form/). This should accompany the patient. Refer to the 'Patient placement and assessment for infection risk Policy for General Practice'.
- SICPs and TBPs should be followed whenever transferring a patient, whether they have a confirmed infection or not.
- The completed transfer documentation should be supplied to the receiving health or social care provider and a copy filed in the patient's notes.
- Ensure that care equipment used to transfer the patient, e.g. wheelchair, is decontaminated in accordance with the 'Safe management of care equipment Policy for General Practice'.

9. Information for patients and family

Information about MRGNB should be given to patients and/or family. A factsheet is available to download at www.infectionpreventioncontrol.co.uk/resources/mrgnb-factsheet-information-for-service-users-in-the-community/.

10. CPE card

Some areas now issue patients who are positive for CPE, either colonised or infected, with a 'CPE card'. The card is provided so the patient can present it at any consultation with a healthcare professional or admission to hospital. This will alert the healthcare worker/admitting unit to the patients' history of CPE and help to ensure that local IPC

policies are followed. A leaflet and card are available to download at www.infectionpreventioncontrol.co.uk/resources/cpe-your-cpe-card-how-to-use-it-and-information-for-you-leaflet/.

11. Investigation of bacteraemia cases

Your local Community IPC Team may use the Patient Safety Incident Response Framework (PSIRF) for bacteraemia cases for the purpose of learning and improving patient safety. The General Practice may be requested to supply relevant information for this process.

12. Infection Prevention and Control resources, education and training

The Community IPC Team have produced a wide range of innovative educational and IPC resources designed to assist your General Practice in achieving compliance with the *Health and Social Care Act 2008: code of practice on the prevention and control of infection and related guidance* and CQC registration requirements.

These resources are either free to download from the website or available at a minimal cost covering administration and printing:

- 27 IPC Policy documents for General Practice
- Preventing Infection Workbook: Guidance for General Practice
- IPC CQC assessment preparation Pack for General Practice
- IPC audit tools, posters, leaflets and factsheets
- IPC Bulletin for General Practice Staff

In addition, we hold educational study events in North Yorkshire.

Further information on these high quality evidence-based resources is available at www.infectionpreventioncontrol.co.uk.

13. References

Department of Health and Social Care (Updated December 2022) *Health and Social Care Act 2008: code of practice on the prevention and control of infections and related guidance*

NHS England (Updated September 2025) *Patient Safety Incident Response Framework*

NHS England (Updated 2025) *National infection prevention and control manual (NIPCM) for England*

Public Health England (2017) *Gram-negative bacteria: prevention, surveillance and epidemiology*

UK Health Security Agency (September 2022) *Framework of actions to contain carbapenemase-producing Enterobacterales*