



Community Infection Prevention and Control Policy for General Practice

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

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

MRGNB, INCLUDING CPE

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Organisation:

Signature: Name:

Job title:

Adoption date:

Review date:

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Contents

Page

1. Introduction.....	4
2. Key points	4
3. Routes of transmission	5
4. Treatment.....	5
5. Clearance specimens	6
6. Precautions for MRGNB.....	6
7. Environmental and care equipment cleaning.....	7
8. Referral or transfer to another health or social care provider.....	7
9. Information for patients and family	7
10. CPE card.....	7
11. Infection Prevention and Control resources, education and training.....	8
12. References	8
13. Appendices.....	9
 Appendix 1: Inter-health and social care infection control transfer Form.....	 10

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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.

2. Key points

- 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.
- 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.
- MRGNB can cause urinary tract infections, pneumonia, blood stream 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. MRGNB are usually identified in urine specimens. If the patient does not have active infection, i.e. they are colonised, antibiotic treatment is not required.

- Patients who are colonised with a 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 required. Repeat specimens should only be taken if the patient has clinical signs of an infection, e.g. pyrexia, pain on micturition.

6. Precautions for MRGNB

- '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.
- 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 (see Appendix 1, available to download at www.infectionpreventioncontrol.co.uk). 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. Information and factsheets are available to download at www.infectionpreventioncontrol.co.uk.

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.

11. 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 inspection 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.

12. 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 (2022, updated 2023) *National infection prevention and control manual (NIPCM) for England*

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

www.gov.uk/government/publications/actions-to-contain-carbapenemase-producing-enterobacterales-cpe

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

www.gov.uk/guidance/gram-negative-bacteria-prevention-surveillance-and-epidemiology#diagnosis-prevention-and-management

13. Appendices

Appendix 1: Inter-health and social care infection control transfer Form

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Inter-health and social care infection control transfer Form

The *Health and Social Care Act 2008: code of practice on the prevention and control of infection and related guidance* (Department of Health and Social Care, updated December 2022), states that "The provision of suitable accurate information on infections to service users, their visitors and any person concerned with providing further social care support or nursing/medical care in a timely fashion". This form has been developed to help you share information with other health and social care providers. The form should accompany the service user and, where possible, a copy filed in their notes.

Service user name: Address: NHS number: Date of birth: Service user's current location:.....	GP name and contact details:		
Receiving facility, e.g. hospital ward, hospice:			
If transferred by ambulance, the service has been notified: Yes <input type="checkbox"/> N/A <input type="checkbox"/>			
Is the service user an infection risk: Please tick most appropriate box and give details of the confirmed or suspected organism			
<input type="checkbox"/> Confirmed risk Organisms:			
<input type="checkbox"/> Suspected risk Organisms:			
<input type="checkbox"/> No known risk			
Service user exposed to others with infection, e.g. diarrhoea and/or vomiting, influenza: Yes <input type="checkbox"/> No <input type="checkbox"/> Unaware <input type="checkbox"/>			
If yes, please state:			
If the service user has a diarrhoeal illness, please indicate bowel history for last week, if known, (based on Bristol stool form scale):			
Is diarrhoea thought to be of an infectious nature? Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/>			
Relevant specimen results if available			
Specimen:			
Date:			
Result:			
Treatment information:			
Is the service user aware of their diagnosis/risk of infection?		Yes <input type="checkbox"/> No <input type="checkbox"/>	
Does the service user require isolation?		Yes <input type="checkbox"/> No <input type="checkbox"/>	
If the service user requires isolation, phone the receiving facility in advance:		Actioned <input type="checkbox"/> N/A <input type="checkbox"/>	
Additional information:			
Name of staff member completing form:			
Print name:			
Contact No:		Date	