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Community Infection Prevention and Control Policy for Domiciliary Care staff

MRGNB, including CPE

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

MRGNB, INCLUDING CPE

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MRGNB, INCLUDING CPE

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MRGNB, INCLUDING CPE

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

1. Introduction

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

Trillions of bacteria normally live in the intestine (bowel). Not all are resistant to antibiotics and not all will cause serious illness. Bacteria commonly found in the intestine include *Escherichia coli* (*E. Coli*), Klebsiella, Proteus, Pseudomonas Enterobacter and Acinetobacter. Collectively these bacteria are referred to as gram-negative bacilli (GNB) and are part of our 'good bacteria'. However, under certain circumstances, they can become resistant to antibiotics and may require infection control management. When this happens, they are referred to as multi-resistant Gram-negative bacteria (MRGNB).

One of the more recently identified MRGNB is carbapenemase-producing Enterobacterales (CPE). These resistant strains of bacteria produce an enzyme that destroys the powerful group of antibiotics, such as imipenem, which is used in hospitals. Until now, these have been the 'last resort' antibiotics medics have relied on when other antibiotics have failed to treat infections.

2. Key points

- GNB are commonly found in the intestine, in water and in soil. They can be transmitted (spread) by contaminated hands and equipment used in care, often by the faecal-oral (hand-to-mouth) route of transmission.
- MRGNB are usually identified in urine specimens and when stool specimens are specifically screened to detect them.
- MRGNB can cause urinary tract infections, pneumonia and surgical site infections. However, the majority of service users with MRGNB are colonised which means bacteria are present, but they do not have symptoms of infection. If the service user does not have active infection, i.e. they are colonised, antibiotic treatment is not required.
- Colonisation with MRGNB may be long-term, service users who are colonised with MRGNB do not usually pose a risk to healthy people, but may

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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 CPE positive
  - Lived in the same household with known cases of CPE
  - Been admitted to an augmented care unit, e.g. adult critical/intensive care, burns unit

  Or:
  - Are immunosuppressed (immunity to infections is lowered)
  - Have had broad-spectrum antibiotic courses, particularly carbapenems, in the last month

3. Routes of transmission

- Direct spread from person-to-person, via hands of staff or service users.
- Indirect spread from:
  - Contaminated care equipment, e.g. hoists, wheelchairs, walking frames, that have not been cleaned appropriately
  - Contaminated surfaces that have not been cleaned appropriately

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

4. Antibiotic treatment

Giving antibiotics to asymptomatic (colonised) service users to clear the organism is not recommended because it is not causing an infection.

Antibiotic treatment is only advised for those service users who have signs of infection, e.g. raised temperature, pain on passing urine.

5. Clearance specimens

MRGNB clearance specimens, including stool samples or swabs for CPE, are not required for a service user in their own home or for service users living in

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supported living or a sheltered housing complex.

6. Precautions for MRGNB

'Standard infection control precautions' (SICPs) and, when required, 'Transmission based precautions' (TBPs), refer to the 'SICPs and TBPs Policy', should be taken by all staff, including:

- Strict hand hygiene on arriving and leaving the service users home, before and after direct contact with a service user or their surroundings, using either liquid soap and warm running water or alcohol handrub. Refer to the 'Hand hygiene Policy'
- Disposable apron and gloves should be worn for direct care or when handling items contaminated with blood and/or body fluids. These should be disposed of after each procedure and hands cleaned after disposing of each item of personal protective equipment (PPE), e.g. gloves, apron. Refer to the 'PPE Policy'
- Where there is a presence of wound drainage, diarrhoea or faecal (bowel movement) incontinence, there is increased potential for environmental contamination and subsequent risk of transmission
- Long sleeved fluid repellent gowns may be required if there is a risk of extensive splashing of body fluids to the uniform or workwear, e.g. dealing with a highly active ileostomy
- Service users should be encouraged to wash hands or use skin wipes after using the toilet and before eating and drinking
- For service users with profuse diarrhoea, enhanced cleaning of the toilet used by the service user should be undertaken
- Service users with MRGNB can socialise in and outside of their home without restrictions, unless they have diarrhoea or an active MRGNB infection
- To prevent contamination of hands, the sink and surrounding environment, staff should not rinse soiled linen and clothing by hand
- Soiled linen or clothing should be washed as soon as possible, separately from other items, on a pre-wash cycle in the service user's or communal washing machine, followed by a wash cycle on the highest temperature stated on the washing instruction label
- Non-soiled linen or clothing should be washed as soon as possible, separately from other items, in the service user's or communal washing machine at the highest temperature stated on the washing instruction label
- Waste should be securely bagged and tied, using a suitable plastic tie or secure knot, and disposed of as per local policy
- Before leaving the service user's home, staff and visitors should wash their hands with liquid soap and warm running water, drying them thoroughly using paper towels. The use of kitchen roll is acceptable, fabric towels should only

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be used on an individual person basis and laundered daily. Alternatively, alcohol handrub can be used

Refer to the 'Hand hygiene Policy' for further information on handwashing and the use of alcohol handrub.

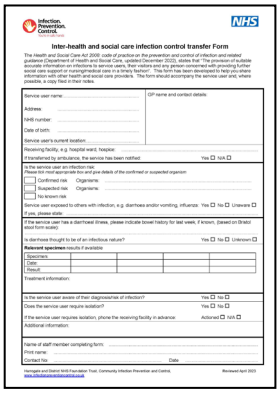
7. Care equipment and environmental cleaning

- There are no special requirements for cleaning a service user's care equipment and environment unless they have an active infection, e.g. diarrhoea, wound infection. In these cases, toilets, baths, showers and care equipment, such as commodes, walking frames, wheelchairs, should be cleaned with general purpose neutral detergent, e.g. washing up liquid, and warm water, and then disinfected with 10 mls of household bleach diluted in 1 litre of cold water or alternative product, as per manufacturer's instructions, until the infection or diarrhoea has resolved.
- Diluted chlorine-based disinfectant solutions, such as household bleach, become less effective after 24 hours. When a solution is made, the date and time should be recorded and the solution disposed of after 24 hours.
- To ensure that microorganisms are killed, always leave chlorine-based disinfectant solutions for the contact time as per manufacturer's instructions.

Refer to the 'Safe management of care equipment Policy' and 'Safe management of the care environment Policy' for further information.

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

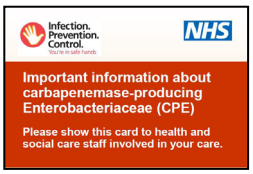
- Prior to a service user's transfer to and/or from another health or social care facility, an assessment for infection risk must be undertaken.
- Staff with responsibility for arranging a service user's transfer should complete the relevant documentation, e.g. patient passport or an Inter-health and social care infection control transfer Form (available to download at www.infectionpreventioncontrol.co.uk/resources/inter-health-and-social-care-infection-control-transfer-form/ and can be completed electronically). Due attention should be paid to service user confidentiality.
- There are no special transport requirements.



Inter-health and social care infection control transfer Form

9. Information for service users and visitors

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



Some areas issue a CPE leaflet and card to service users who have tested positive for CPE. The card is provided so the service user can present it at any consultation with a healthcare professional or admission to hospital. This will alert the healthcare worker/admitting unit to the 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/.

10. Infection Prevention and Control resources, education and training

See Appendix 1 for the 'MRGNB: Quick reference guide'.

The Community Infection Prevention and Control (IPC) Team have produced a wide range of innovative educational and IPC resources designed to assist Domiciliary Care in achieving compliance with the *Health and Social Care Act 2008*: *code of practice on the prevention and control of infections 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:

- 24 IPC Policy documents for Domiciliary Care staff
- Preventing Infection Workbook: Guidance for Domiciliary Care staff
- IPC audit tools, posters, packs, leaflets and factsheets
- IPC Bulletin for Domiciliary Care 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.

11. 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*

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and related guidance

NHS England (Updated 2024) *National infection prevention and control manual (NIPCM) for England*

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

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

12. Appendices

Appendix 1: MRGNB, including CPE: Quick reference guide

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MRGNB, including CPE: Quick reference guide for Domiciliary Care



What are MRGNB?

- Gram-negative bacteria (GNB) live in the intestine (bowel) as part of our good bacteria. Under certain circumstances they can become resistant to antibiotics, which makes them difficult to treat, these are called MRGNB.
- MRGNB can cause urinary tract, wound and chest infections. The majority of service users with MRGNB are colonised which means the bacteria are present, but they do not have an MRGNB infection.
- MRGNB colonisation may be long-term, service users who are colonised do not usually pose a risk to healthy people, but may be a risk to the vulnerable.
- MRGNB are transmitted (spread) via contaminated hands (staff and service users), inadequately cleaned care equipment and from environmental contamination.

IPC precautions for service users with MRGNB, including CPE

- Strict hand hygiene on arriving and leaving the service users home, before and after direct contact with a service user or their surroundings, using either liquid soap and warm running water or alcohol handrub.
- Disposable apron and gloves for direct care or when handling items contaminated with blood and/or body fluids. These should be disposed of after each procedure and hands cleaned after disposing of each item of PPE.
- Service users should be encouraged to wash hands or use skin wipes after using the toilet and before eating and drinking.
- For service users with profuse diarrhoea, enhanced cleaning of the toilet used by the service user should be undertaken.
- Service users with MRGNB can socialise in and outside of their home without restrictions, unless they have diarrhoea or an active MRGNB infection.
- Soiled clothing or linen should be washed as soon as possible, separately from other items, on a pre-wash cycle in the service user's or communal washing machine followed by a wash cycle on the highest temperature stated on the washing instruction label.
- Waste should be securely bagged and tied, using a suitable plastic tie or secure knot, and disposed of as per local policy.

For further information, please refer to the full Policy which can be found at www.infectionpreventioncontrol.co.uk/domiciliary-care/policies/

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