



**Community Infection Prevention and Control
Policy for Domiciliary Care staff**

**MRGNB
including
ESBL and CPE
(Multi-resistant
Gram-negative bacteria
including
Extended-Spectrum
Beta-Lactamase and
carbapenemase-producing
Enterobacteriaceae)**

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MRGNB INCLUDING ESBL AND CPE

This guidance document has been adopted as a policy document by:

Organisation:	Cumbria County Council
Signed:	
Name:	Pam Duke
Job Title:	Assistant Director Provider Services
Directorate:	People
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For further information and advice regarding infection prevention and control please contact:

<p>Fiona McCredie Head of Health Protection Public Health People Directorate Cumbria County Council Penrith Community Fire Station Carleton Avenue Penrith Cumbria CA10 2FA</p> <p>Tel: 01768 812539 Mob: 07900 668648 Email: Fiona.McCredie@cumbria.gov.uk</p>	<p>Debbie McKenna Health Protection Specialist Public Health People Directorate Cumbria County Council Cumbria House 107-117 Botchergate Carlisle Cumbria CA1 1RZ</p> <p>Mob: 07769 301904 Email: Deborah.McKenna@cumbria.gov.uk</p>
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Your local Public Health England Team:

Public Health England North West	Tel: 0344 225 0562 Option 2
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Community Infection Prevention and Control
Harrogate and District NHS Foundation Trust
Gibraltar House, Thurston Road
Northallerton, North Yorkshire. DL6 2NA
Tel: 01423 557340
email: infectionprevention.control@nhs.net
www.infectionpreventioncontrol.co.uk

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MRGNB, including ESBL and CPE

1. Introduction

The increasing number of antibiotic resistant micro-organisms, especially those with multiple resistance, is an international concern.

Antibiotic resistance makes infections difficult to treat. It may also increase the severity of infection, the period of infection, adverse reactions (due to the powerful alternative antibiotics) and length of hospital admission.

Many micro-organisms are normally found in the bowel. Not all are resistant to antibiotics and not all will cause serious illness. Species of bacteria commonly found include *Escherichia coli* (*E.Coli*), Klebsiella, Proteus, Pseudomonas Enterobacter and Acinetobacter. Collectively these bacteria are referred to as Gram-negative bacilli (GNBs) and are part of our 'good bacteria'. These bacteria, under certain circumstances, can become resistant to antibiotics and may require infection control management and are referred to as Multi-Resistant Gram-negative bacteria (MRGNB).

Some MRGNB contain beta-lactamases (extended spectrum beta lactamases or ESBL's) which can destroy/inactivate even broad spectrum antibiotics such as cefuroxime and cefotaxime.

The newest MRGNB known as CPE (carbapenemase-producing *Enterobacteriaceae*) produce an enzyme that destroys the powerful group of antibiotics, such as imipenem, which are 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

- Gram-negative bacteria (GNB) are commonly found in the gastro-intestinal tract (stomach and bowel), in water and in soil and can be found on the hands of people, in the environment and on equipment used in care.
- Multi-resistant Gram-negative bacteria (MRGNB) are found most frequently in service users who have received broad spectrum antibiotics and where service users have diminished immunity.
- MRGNB can cause urinary tract infections, pneumonia and surgical wound 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 a person has MRGNB in a stool or urine specimen and they do not have symptoms of infection, antibiotic treatment is not required.

- Someone who is colonised with MRGNB does not pose a risk to healthy people, but may be a risk to other vulnerable service users.

3. How is MRGNB spread?

- Direct - via hands. MRGNB are likely to be passed onto others via the faecal/oral (bottom to mouth) route, e.g. hands of staff that are not cleaned thoroughly after assisting a service user following a bowel movement, can carry the bacteria. The staff member can then ingest (swallow) the bacteria when they eat or drink, or pass it on to a service user they assist to eat or drink.
- Indirect - via contaminated equipment that has not been appropriately decontaminated.
- Indirect – via contaminated environment, e.g. surfaces in the service users home that have not been appropriately decontaminated.

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

4. Treatment

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

Giving antibiotics to colonised (have no signs of infection) service users is not recommended because the MRGNB are not causing an infection.

5. Clearance specimens

Clearance specimens, including stool samples for CPE, are not required for a service user in their own home.

6. Preventing the spread of MRGNB

- Use of standard infection control precautions at all times for all service users is essential to prevent the spread of MRGNB.
- Strict hand hygiene is essential after direct contact with a service user or their surroundings, using liquid soap and warm running water, or the use of alcohol handrub. Please refer to the 'Hand hygiene Policy for Domiciliary

Care staff' for further information on handwashing and the use of alcohol handrub.

- Service users in their own home can socialise in and outside of their home without restrictions.
- Service users should be encouraged to wash hands or use hand wipes after using the toilet and before meals.
- Disposable gloves and apron should be worn when in contact with body fluids.
- To prevent contamination of hands, the sink and surrounding environment, staff should not rinse soiled linen and clothing by hand.
- 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 advised on the label.
- Non-soiled clothing or linen should be washed as soon as possible, separately from other items, in the service user's or communal washing machine at the highest temperature advised on the label.
- Staff should ensure if the service user has any wounds, they are covered with a waterproof dressing.
- There is no need to restrict visitors, but they should be advised to wash hands or use alcohol handrub on leaving.

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

- Transfer to another Domiciliary Care Agency or a Care Home should, where possible, be deferred until the service user is no longer infectious (see section below).
- Non-urgent hospital outpatient attendances or planned admissions should be postponed if at all possible, please refer to the 'Patient placement and assessment for infection risk Policy for Domiciliary Care staff'.
- If the condition of an affected or an unaffected service user, living in a supported living or sheltered housing complex, requires urgent hospital attendance or admission, staff with responsibility for arranging a service user's transfer should complete the Inter-Health and Social Care Infection Control (IHSCIC) Transfer Form (see Appendix 1). The unit at the hospital they are attending and the transport service taking them, must be notified of the service users infection risk, prior to them being transferred. This ensures appropriate placement of the service user, please refer to the 'Patient placement and assessment for infection risk Policy for Domiciliary Care staff'.
- If a service user is fit for discharge from hospital and is symptom free, they

can be discharged back to their usual residence, e.g. home, supported living or sheltered housing complex.

8. Cleaning the environment

There are no special requirements for cleaning a service user's environment unless they have an active infection, e.g. diarrhoea, wound infection. In these cases, toilets, baths, showers and medical equipment, such as commodes, walking frames, wheel chairs, should be decontaminated with detergent and warm water, followed by disinfection with a chlorine-based disinfectant at 1,000 parts per million (ppm), e.g. household bleach, until the infection or diarrhoea has resolved. Please refer to the 'Safe management of care equipment Policy for Domiciliary Care staff' and 'Safe management of the care environment Policy for Domiciliary Care staff' for further information.

9. Information for service users and visitors

An information leaflet/factsheet about MRGNB should be available and provided as appropriate. Available to download at www.infectionpreventioncontrol.co.uk.

10. References

Department of Health (2015) *The Health and Social Act 2008: Code of Practice for the Prevention and control of healthcare associated infections*

Department of Health (2000) *UK Antimicrobial Resistance Strategy and Action Plan*

NHS England and NHS Improvement (March 2019) *Standard infection control precautions: national hand hygiene and personal protective equipment policy*

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

11. Appendices

Appendix 1: Inter-Health and Social Care Infection Control Transfer Form



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 2015), states that "suitable accurate information on infections be provided to any person concerned with providing further 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 patient and, where possible, a copy filed in the patient's notes.

Patient Name: Address: NHS number: Date of birth: Patient'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 patient 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				
Patient exposed to others with infection, e.g., D&V, Influenza: Yes <input type="checkbox"/> No <input type="checkbox"/> Unaware <input type="checkbox"/>				
If yes, please state:				
If the patient 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 patient aware of their diagnosis/risk of infection? Yes <input type="checkbox"/> No <input type="checkbox"/>				
Does the patient require isolation? Yes <input type="checkbox"/> No <input type="checkbox"/>				
If the patient 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:				