



Community Infection Prevention and Control Guidance for General Practice

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

MRGNB including ESBL and CPE

Version 1.00
December 2017

MRGNB INCLUDING ESBL AND CPE

Please note that the internet version 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.

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

Organisation:

Signed: 

Job Title:

Date Adopted:

Review Date:

If your organisation would like to exclude or include any additional points to this document, please include below. Please note, the Community IPC Team cannot endorse or be held responsible for any addendums.

Community Infection Prevention and Control
Harrogate and District NHS Foundation Trust
Gibraltar House, Thurston Road
Northallerton, North Yorkshire. DL6 2NA
Tel: 01423 557340
email: ipccommunity@hdfnhs.uk
www.infectionpreventioncontrol.co.uk

Legal Disclaimer

This guidance produced by Harrogate and District NHS Foundation Trust is provided 'as is', without any representation endorsement made and without warranty of any kind whether express or implied, including but not limited to the implied warranties of satisfactory quality, fitness for a particular purpose, non-infringement, compatibility, security and accuracy.

These terms and conditions shall be governed by and construed in accordance with the laws of England and Wales. Any dispute arising under these terms and conditions shall be subject to the exclusive jurisdiction of the courts of England and Wales.

Contents

Page

1. Introduction.....	4
2. Key points.....	4
3. Routes of transmission	5
4. Treatment.....	5
5. Clearance specimens	5
6. Precautions for MRGNB	6
7. Environmental cleaning	6
8. Transfer of patients between healthcare settings.....	6
9. Infection Prevention and Control resources, education and training.....	7
10. References	7
11. Appendices.....	7
 Appendix 1: Inter-Health and Social Care Infection Control Transfer Form	 8

MRGNB INCLUDING ESBL AND CPE

MRGNB INCLUDING ESBL AND CPE

1. Introduction

The increasing prevalence 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 length of severity of illness, the period of infection, adverse reactions (due to the need to use less safe alternative drugs), length of hospital admission and overall costs.

Many 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 include *Escherichia coli* (*E.Coli*), Klebsiella, Proteus, Pseudomonas Enterobacter and Acinetobacter. Collectively these bacteria are referred to as Gram-negative bacilli (GNB). These bacteria, under certain circumstances can become resistant to antibiotics and may require infection control management. They 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.

New MRGNB known as CPE (**carbapenemase-producing Enterobacteriaceae**) have recently been identified. 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

- Gram-negative bacteria (GNB) are commonly found in the gastro-intestinal tract, in water and in soil and can be part of the transient flora on the hands of staff and on equipment used in General Practice.
- Multi-resistant Gram-negative bacteria (MRGNB) are found most frequently in patients who have received broad spectrum antibiotics and where patients have diminished immunity.
- The bacteria commonly achieve antibiotic resistance by producing an enzyme, beta-lactamase. This 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 antibiotic policies.
- MRGNB are likely to be passed on via the faecal/oral route.
- MRGNB can cause urinary tract infections, pneumonia and surgical site infections. However, 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 stool and 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 MRGNB do not usually pose a risk to healthy people, but may be a risk to those who are vulnerable.

3. Routes of transmission

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

Although MRGNB can be spread via equipment, the most common route is by contact with an infected or colonised patient. Therefore, the importance of 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 because it is not causing an infection.

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

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

Colonisation with MRGNB may be long term, therefore, good hand hygiene practice and standard precautions should be followed by all staff at all times, to reduce the risk of transmission of infection.

- Patients attending for a procedure, e.g. wound dressing, where possible, should be scheduled at the end of the session to allow for environmental cleaning.
- 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.
- Hand hygiene is essential before and after direct contact with a patient using liquid soap and warm running water or alcohol handrub.
- Waste contaminated with body fluids should be disposed of as infectious waste (please refer to the 'Waste management guidance' for further details).
- No specific precautions are required for patients attending for a routine GP consultation. Personal protective equipment (PPE) should be worn if an examination is undertaken involving contact with body fluids.
- 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.

7. Environmental cleaning

- If a patient has attended for a procedure, the treatment couch and immediate area should be cleaned with detergent and warm water followed by a hypochlorite solution at a dilution of 1000 ppm, e.g. Haz tabs, Presept or a disinfectant wipe.
- If possible, it is recommended that patients with MRGNB attending for a procedure, are seen last on the clinic list to allow for adequate cleaning between patients.

8. Transfer of patients between healthcare settings

- If a patient requires hospital admission, the hospital staff should be informed of the patient's MRGNB status. This will enable a risk assessment to be undertaken to determine whether they should be isolated on admission.

- When transferring a patient between one healthcare environment to another, an Inter-Health and Social Care Infection Control Transfer Form should be completed (see Appendix 1). This must accompany the patient.
- There are no special transport requirements.

9. Infection Prevention and Control resources, education and training

The Community Infection Prevention and Control (IPC) Team have produced a wide range of innovative educational and IPC resources designed to assist your Practice in achieving compliance with the *Health and Social Care Act 2008* and CQC registration requirements.

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

- Over 20 IPC Guidance documents (Policies) for General Practice
- 'Preventing Infection Workbook for General Practice'
- 'IPC CQC Inspection Preparation Pack for General Practice'
- IPC audit tools, posters, leaflets and factsheets
- 'IPC Advice Bulletin for GP Practice Staff'

In addition, we hold educational study events in North Yorkshire and can arrange bespoke training packages and 'Mock IPC CQC Inspections'. Prices vary depending on your requirements and location.

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

10. References

Department of Health (2015) *The Health and Social Act 200: Code of Practice for the Prevention and control of healthcare associated infections*

Department of Health (2007) *Essential Steps to safe, clean care. Reducing healthcare associated infections (HCAI) in primary care trusts, mental health trusts, learning disability organisations, independent healthcare facilities, care homes, hospices, GP practices and ambulance services*

Public Health England (2015) *Toolkit for managing carbapenemase-producing Enterobacteriaceae in non-acute and community settings*

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				