

Multi-resistant Gram-Negative Bacteria (MRGNB) including CPO: Bitesize information for care homes



Introduction

Antibiotic resistance occurs when bacteria can resist the effects of antibiotics meant to kill them, making infections harder to treat. Resistant infections can lead to longer illnesses, more side effects from alternative treatments, longer hospital stays, and higher healthcare costs.

The gut normally has many types of bacteria, most of which are harmless and not resistant to antibiotics. Common ones include E. coli, Klebsiella, Proteus, and Pseudomonas. These are known as gram-negative bacteria (GNB) and are usually good for our health. However, in some cases, they can become resistant to antibiotics and cause infections that need specialist management. When they become resistant, they're called multi-resistant Gram-negative bacteria (MRGNB).

In recent years, **carbapenemase-producing organism (CPO)**, a new group of multidrug-resistant bacteria, have emerged. These strains produce an enzyme that breaks down carbapenems, strong antimicrobials, which are often used as a last resort in hospitals when other antibiotics fail.

Key Points

Gram-negative bacteria (GNB) is commonly found in the gastrointestinal tract, water, and soil and can be transmitted by contaminated hands and equipment in care homes.

Multi-resistant Gram-negative bacteria (MRGNB) are found mostly in residents who have received broad spectrum antibiotics and have lowered immunity.

MRGNB are likely to be passed on via the faecal oral route and are usually identified in stool and urine specimens.

The majority of residents with MRGNB are colonised and do not require antibiotics unless symptoms develop.

MRGNB can cause urinary tract infections, pneumonia and surgical site infections.

Residents who are colonised with MRGNB do not usually pose a risk to healthy people, but may be a risk to those who are vulnerable.

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

Precautions for MRGNB / CPO

Residents with an active MRGNB infection or diarrhoea:

Active MRGNB Infection Isolation

Residents with an active MRGNB infection or diarrhoea should be isolated using ['Transmission based precautions' \(TBPs\)](#) until no longer symptomatic.

Diarrhoea Isolation Criteria

If they have diarrhoea, they should be isolated until 48 hours symptom-free, refer to the ['Isolation Policy for Care Home settings'](#).

PPE

Staff should wear disposable apron and gloves when providing hands-on care. Hands should be cleaned after removing and disposing of personal protective equipment (PPE).

Residents colonised with MRGNB / CPO:

Do not require isolation. however, if they have diarrhoea, isolate until 48 hours symptom-free.

Colonisation with MRGNB may be long term, therefore, good hand hygiene practice and ['Standard infection control precautions' \(SICPs\)](#) should be followed by all staff at all times, to reduce the risk of transmission.

When present in urine, MRGNB is unlikely to present a risk if continent with no symptoms of UTI.

Residents can visit communal areas, socialise, and mix with others without restrictions.

[Effective hand hygiene](#) is essential after direct contact with residents or their surroundings. Residents should also be encouraged to wash their hands after using the toilet and before eating.

Disposable apron and gloves should be worn when in contact with body fluids

Normal [laundry procedures](#) are adequate. However, if laundry is soiled with urine or faeces, it should be treated as infected.

Any wounds should be covered with an appropriate dressing as advised by a healthcare professional.

[Waste](#) contaminated with body fluids should be disposed of as infectious waste.

There is no need to restrict visitors, but they should be advised to wash their hands or use alcohol hand rub on leaving.

Environmental Cleaning

Enhanced Cleaning During Isolation

Use a neutral detergent, followed by a chlorine-based disinfectant. Make a fresh solution daily.

Deep Cleaning After Isolation

Thoroughly clean the resident's room at the end of the isolation period.

For residents who are **colonised with MRGNB/CPO**, their room can be cleaned with a general purpose neutral detergent and warm water, a disinfectant is not required.

Referral or Transfer to Another Health or Social Care Provider

1 Prior to Transfer

An assessment for infection risk must be undertaken to ensure appropriate placement of the resident.

2 Transfer Documentation

Complete transfer documentation for all transfers, internal or external, with the [IHSCIC transfer form or patient passport](#).

3 No Special Transport Required

There are no special transport requirements for transfers.

Information for Residents, Family and Visitors

[Information](#) about the infection should be given to residents and/or family and visitors.

This guidance should be used in conjunction with the [Harrogate and District NHS Foundation Trust MRGNB \(including CPO\) policy for care home settings](#)