

Advice for Patients Multi-Drug Resistant Organisms (MDRO) including Carbapenemase- producing Organism (CPO)

What are Multi-Drug Resistant Organisms?

MDR Gram negative bacteria are bacteria (or germs) that are resistant to at least three different types of antibiotics. MRSA (Meticillin resistant *Staphylococcus aureus*) is a multi-drug resistant organism, but there are many other organisms that can become resistant and this information covers common organisms such as *Escherichia coli*, *Acinetobacter baumannii*, *Pseudomonas aeruginosa* and other organisms **that have** become resistant to three or more antibiotics. You may see these organisms referred to as Carbapenemase-producing Organism (CPO), Carbapenem Resistant *Acinetobacter baumannii* (CRAB) or simply MDRO.

Why does Multi resistance to antibiotics matter?

Some antibiotics e.g. Carbapenem antibiotics can only be given in hospital directly into the bloodstream. Until now, doctors have relied on certain antibiotics to successfully treat particularly 'difficult' infections when other antibiotics have failed to do so. In a hospital, where there are many vulnerable patients, spread of resistant bacteria can cause problems. If the bacteria get into the wrong place, such as the bladder, bloodstream or open wound they can cause infection which may be difficult to treat.

Does carriage of or infection with an MDRO need to be treated?

If a person is a carrier of an MDRO such as carbapenemase-producing organism (sometimes called CPO), they do not need to be treated. However, if the bacteria have caused an infection then antibiotics will be required as advised by a Consultant Microbiologist.

How might I 'pick up' an MDRO?

These bacteria can sometimes be found, living harmlessly, in the gut and on the skin of humans and this is called 'colonisation'. It can be difficult to say when or where you picked it up. However, there is an increased chance of picking up these bacteria if you have been a patient in a hospital abroad **or** in a UK hospital that has had patients carrying the bacteria, **or** if you have been in close contact with a carrier in hospital **or** in the community **or** you have had repeated courses of antibiotics. If any of these apply to you, and you need to be admitted to hospital, screening will be arranged and you may be accommodated in a single room at least until the results of the tests are known.

How will I be cared for while in hospital?

You may be accommodated in a single room whilst you are in hospital and on any subsequent admissions. You may be asked to provide a number of samples to send to the laboratory to check if you are carrying or have an infection with the bacteria. These will probably be taken on a weekly basis during your stay. The samples might include swabs e.g. the site an intravenous drip enters the skin, a rectal swab i.e. a sample taken by inserting a swab briefly just inside your rectum (bottom), and/or a sample of faeces. You may also be tested if you have been in close contact with a patient during your hospital stay who has later been found to have a resistant organism. You will normally be informed of the results within two to three days but none of these measures will hinder your care in any way.

How can the spread of MDRO's be prevented?

If a patient in hospital is carrying these bacteria they can get into the ward environment and be passed on by direct contact to another patient. For that reason, you may be accommodated in a single room to help prevent spread. Healthcare workers must wash and clean their hands regularly. They will use gloves and aprons (or gown) when caring for you. The most important measure for you to take is to wash your hands well with soap and water, especially after going to the toilet. You should avoid touching your medical devices (if you have any) such as your urinary catheter tube, any wound and your intravenous drip, particularly at the point where it is inserted into the body or skin. Visitors will be asked to clean their hands on entering and leaving the room and may be asked to wear gloves and apron (or gown) especially if they are assisting in your care. Effective environmental cleaning and good hand hygiene by all, staff, patients and visitors, can reduce the risk of spread significantly.

What about when I go home?

While there is a chance that you may still be a carrier when you go home quite often this will go away with time. No special measures or treatment are required; any infection will have been treated prior to your discharge. You should carry on as normal, maintaining good hand hygiene especially after using the toilet. If you have any concerns you may wish to contact your GP for advice.

Before you leave hospital, ask the doctor or nurse to give you a letter or card advising that you have had an infection or have been/are colonised with an MDRO and which MDRO you have had. This will be useful for your future care and it is important that you make health and social care staff aware of it e.g. when attending an outpatient appointment or being visited by the community nursing team. Should you or a member of your household be admitted to hospital, you should let the hospital staff know that you are, or have been a carrier and show them the letter/card.

Where can I find more information?

Do ask your doctor or nurse to explain this to you in more detail. They may also contact the Infection Prevention and Control Team for you if you need further information about the management of MDRO and CPO

The Public Health Wales and the Public Health England websites are another source of information:

<http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/CarbapenemResistance>

This information has been produced from the Public Health England Toolkit and with reference to the Guideline: Prevention and control of multi-drug-resistant Gram-negative bacteria: recommendations from a Joint Working Party. APR Wilson et al. Journal of Hospital Infection 92 (2016) S1-S44
<https://www.gov.uk/government/publications/carbapenemase-producing-enterobacteriaceae-early-detection-management-and-control-toolkit-for-acute-trusts>