



The Clatterbridge  
Cancer Centre  
NHS Foundation Trust

# Multi-drug resistant bacteria

Infection Control



A guide for patients and visitors

**This information is for patients or for families and visitors who would like to know more about multi-drug resistant bacteria.**

**This leaflet will answer some of the questions that patients frequently ask about multi-drug resistant bacteria, it will explain likely effects and ways of preventing these bacteria from spreading.**

## What are multi-drug resistant bacteria?

If an antibiotic is given to treat an infection, it kills any sensitive bacteria (germs), but resistant ones can survive and multiply as the antibiotic does not work against them. Some bacteria may be resistant to many different antibiotics and we call these multi-drug resistant.

Multi-drug resistant bacteria are often referred to by a series of letters beginning with the name or type of antibiotic the germ is resistant to and ending with the name of the bacteria. Some types of germs are able to produce a substance to inactivate certain kinds of antibiotics.

It can be very confusing because not everyone calls the bacteria the same thing.

### **Examples of Multi-drug resistant bacteria include:**

- **MRSA** - Meticillin-resistant Staphylococcus aureus
- **VRE** - Vancomycin-resistant Enterococcus. The same type of germ is also referred to as **GRE** (Glycopeptide-resistant Enterococcus)
- **ESBL** - Extended-spectrum beta lactamase-producing bacteria
- **CPE** - Carbapenemase-producing Enterobacteriaceae. These germs are sometimes referred to as **CPC** which stands for carbapenemase-producing coliform or **CRE** carbapenem-resistant Enterobacteriaceae



## What are the symptoms of multi-drug resistant bacteria?

Infections caused by multi-drug resistant bacteria can look, and feel, the same as infections caused by any other bacteria. People may feel unwell and may have a variety of signs and symptoms (such as swelling, drainage, fever) depending on where the infection is located. The main difference is that infections caused by multi-drug resistant bacteria can be more difficult to treat.

Many of the resistant germs are carried harmlessly in the intestines (bowel) but others may be carried harmlessly on, or in, a person's body. This is called being 'colonised'. People who are colonised do not look or feel different from other people, so the only way we can tell if you are carrying a particular germ is to screen for it.

## What is screening?

Screening for resistant bacteria involves rubbing areas of your body with a large cotton wool bud. This is called taking a swab. We usually need to take a swab from the skin in your groin area and from the inside of your nose. Sometimes we also need to take a swab from your bottom or back passage (anus) and from any wounds, drips or catheters. The swabs are then sent to the laboratory for testing.

If the result is negative, nothing further is required unless you are staying in hospital for some time. In that case, you may be asked to provide a sample on a regular basis, e.g. once a week, as a precautionary measure.

If the result is positive and we find out that you are harmlessly carrying multi-drug resistant bacteria, we can plan your care more safely. Doctors can choose the most effective antibiotics if you later develop an infection and we can use special precautions to stop the bacteria spreading to other people.

## Will having multi-drug resistant bacteria stop me having my treatment?

If you are already in hospital, your treatment will carry on as normal but you will be asked to move into a single room whenever possible for the duration of your stay.

We have to take a little extra care to protect you and other people to prevent the bacteria spreading. You will be cared for in a single room and your room will be cleaned every day with a special type of disinfectant. You may notice that hospital staff will wear gloves and aprons when they care for you and change your bed linen.

## Will I have to stay in hospital longer?

Unless you develop an infection, you won't need to stay in hospital any longer.

However, some of the antibiotics used to treat infections caused by multi-drug resistant bacteria can be only given by injection, so you might need to stay in hospital whilst the infection is treated.

## How did I get multi-drug resistant bacteria?

Unfortunately, it is often not possible to say exactly how or where someone came into contact with a particular germ. We know that people receiving lots of different antibiotics are more likely to develop resistant strains of bacteria, especially if the person does not finish a course of antibiotics.



## Is there a risk to my family?

It is important to prevent the spread of multi-drug resistant bacteria as infections caused by them can be more difficult to treat, since there are fewer antibiotics that work against them. We ask that any visitors follow our normal visiting guidelines available on the wards.

Our visiting guidelines include limiting the number of visitors around the bed to two people. We ask that visitors do not sit on patient's beds and children should not be allowed to crawl or play on the floor. We also advise that all visitors should clean their hands before, and after, visiting anyone in hospital, as this protects patients and prevents the spread of bacteria to others.

Multi-drug resistant bacteria can affect people who have certain long-term health problems, so if you have specific concerns about visitors, please discuss it with the staff looking after you.

If you are worried about family members doing your laundry, special bags are available for your clothing so your relatives/carers can put the bags directly into the washing machine at home. If you would like your soiled or used clothes to be placed in these bags, please ask your nurse.

## What about when I go home?

Whilst 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 as any infection will have been treated prior to your discharge. You should carry on as normal, maintaining good hand hygiene. If you have any concerns, you may wish to contact your GP for advice.

If any member of your close family requires hospital care in the future, it is advisable that they inform the doctors and nurses that they have been in close contact with someone identified with multi-drug resistant bacteria.

## How can I help?

Unfortunately, some bacteria can survive for a long period of time in the environment, on equipment, on bed sheets, curtains and other surfaces. It is important for patients to have high standards of hand hygiene and to change their clothing and towels daily, or sooner, if they become soiled.

After you are discharged from hospital, your GP will be informed about the multi-drug resistant bacteria, but if you need to visit any doctor, another clinic, hospital or nursing home you should let them know too.

## What is carbapenemase-producing Enterobacteriaceae (CPE)?

Carbapenems are a powerful group of broad-spectrum antibiotics which are sometimes used to treat serious infections caused by resistant strains of bacteria (germs). Carbapenemase is a substance produced by some germs to stop carbapenems from working. Some people refer to the bacteria as carbapenem-resistant Enterobacteria or CRE.

## What is vancomycin-resistant Enterococcus (VRE)?

VRE stands for vancomycin-resistant Enterococci. Enterococci are bacteria that normally live in the bowel. If these bacteria become resistant to the antibiotic vancomycin, they are known as VRE.

## What is Extended-spectrum beta-lactamase producing bacteria (ESBL)?

Extended-spectrum beta-lactamases (ESBLs) are enzymes that can be produced by bacteria making them resistant to several antibiotics.



## Who can I speak to if I have further questions?

Please speak to any of the ward staff caring for you.

The Infection Prevention and Control Team will listen confidentially to any comments and complaints so that we can learn from any mistakes and improve still further. You may write to us at the hospital or, if you would like to speak to an infection prevention and control nurse, you can contact us directly or your ward nurse can arrange a meeting.

### **Infection Prevention and Control Nurses**

The Clatterbridge Cancer Centre NHS Foundation Trust  
Clatterbridge Road,  
Bebington,  
Wirral, CH63 4JY

**Telephone: 0151 556 5726**

## Other sources of information

Ward staff will be able to provide you with leaflets regarding specific infections and generic infection prevention and control.

## Official websites

- Public Health England display information about many different infections. You can access this information using the A-Z function on their website at: <https://www.gov.uk/government/organisations/public-health-england>

## How we produce our information

All of our leaflets are produced by staff at The Clatterbridge Cancer Centre and this information is not sponsored or influenced in any way. Every effort is made to ensure that the information included in this leaflet is accurate and complete and we hope that it will add to any professional advice you have had. All our leaflets are evidence based where appropriate and they are regularly reviewed and updated. If you are concerned about your health in any way, you should consult your healthcare team.

We rely on a number of sources to gather evidence for our information. All of our information is in line with accepted national or international guidelines where possible. Where no guidelines exist, we rely on other reliable sources such as systematic reviews, published clinical trials data or a consensus review of experts. We also use medical textbooks, journals and government publications.

References for this leaflet can be obtained by telephoning 0151 556 5570.

If you need this leaflet in large print, Braille, audio or different language, please call 0151 556 5570.

**If you have a comment, concern, compliment or complaint, please call 0151 556 5203.**

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