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| Carbapenemase-producing organisms (CPOs) |
| Information for residential and aged care staff |
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*This fact sheet provides guidance to staff of residential and aged care facilities on how to provide care to residents infected or colonised with carbapenemase-producing organisms (CPO).*

## What are carbapenemase-producing organisms (CPOs)?

CPO are a group of bacteria (germs) that are resistant to many antibiotics, including a type of antibiotic called carbapenems. This means that many antibiotics no longer work against these bacteria, which can make infections difficult to treat.

## What does it mean to carry CPO?

Some people may carry CPO in their bowel or in a wound without symptoms. This is called ‘colonisation’. People who are colonised with CPO are at risk of CPO infection or spreading the bacteria to others.

Most people who are exposed to CPO do not develop infection or illness. However, CPOs can cause serious illness in people with a weakened immune system. These include, urinary tract infections, pneumonia, bloodstream infections and wound infections.

## How is CPO spread?

CPO bacteria are usually spread from person-to-person through direct contact with people infected with or carrying CPO or through contact with contaminated objects (for example, shared equipment) and environmental surfaces.

These bacteria are usually found in the gastrointestinal tract (in faeces), the genitourinary tract (in urine) and the respiratory tract (in sputum) as well as the on the skin or in wounds. The following risk factors are associated with an increased risk of spreading CPO:

* diarrhoea, faecal incontinence, colostomy, or ileostomy
* presence of a urinary catheter
* copious or uncontained respiratory secretions
* drainage from a wound/abscess
* residents who have difficulty complying with hygiene and self-care, for example residents living with dementia with wandering behaviours.

## What is the treatment for CPO?

Infections caused by CPO can be very difficult to treat as many commonly used antibiotics are not effective against it. Treatment should be directed by the treating clinician and guided by an infectious diseases specialist.

People who are colonised with CPO without having illness do not require antibiotic treatment.

## Who is at risk of acquiring CPO?

CPO infections are rare in Australia and are usually associated with overseas hospital admissions or healthcare, particularly in parts of Europe, North America, the Middle East and Asia. In Victoria there has been some CPO transmission linked to acute care hospitals.

Groups at increased risk of acquiring a CPO include:

* people have had prolonged admissions to hospitals
* people who have received medical care or aged care overseas in the previous 12 months
* people who have been treated with multiple or repeated courses of antibiotics
* people with a weakened immune system or underling long-term medical conditions
* people with an indwelling medical device such as a urinary catheter.

## As a staff member, am I at risk of acquiring CPO?

Healthy people are usually not at risk of getting a CPO. The most effective way to prevent you from picking up a CPO is to follow basic infection prevention and control (IPC) precautions such as hand hygiene. See the section below (How can I help prevent the spread of CPO in my facility?) for further information about the IPC precautions that will protect you and residents.

## Can we identify people at high risk of having a CPO via screening?

It is recommended that all new residents be assessed for the need to undertake CPO screening tests. Consider the need for CPO screening tests in any new resident who has had:

* an overnight stay in an overseas hospital or health service in the past 12 months
* an overnight stay in an overseas residential care facility in the past 12 month
* a “high-risk” admission to a health service in Australia, for example, shared a room with another patient with a CPO.

These people are at significantly higher risk of being colonised or infected with a CPO and should be screened. IPC precautions outlined below should be followed whilst awaiting the result. The precautions can be ceased if the CPO screening result is negative.

## What happens if a person undergoing CPO screening in a hospital is transferred to my facility?

When a transfer of a person requiring screening for CPO is planned from an acute hospital to a residential care facility, the transferring hospital should always undertake screening. If a hospital can reasonably wait for a result of screening, then a negative result can provide reassurance to the residential care facility (and a positive result can inform appropriate action). Residential care facilities should ideally have a screening result before accepting patients; however, a result is not needed for transfer to take place. A residential care facility should not refuse transfer of a patient awaiting a screening result. A person awaiting screening results is considered a suspected CPO case and IPC precautions for a CPO case should be followed until ‘cleared’.

## What specimen is collected to screen for CPO?

All residents being screened for CPO should have a **faecal specimen** collected. In addition, the following specimens should also be considered:

* residents with wounds: a swab of each wound
* residents with a urinary catheter: a urine sample

## What happens with the specimen tested for CPO?

The specimen is sent to your ‘normal’ laboratory to test for bacteria that may be resistant to some antibiotics. All confirmed CPO cases are notified to the Victorian Department of Health (the department). The department or their delegate will contact the residential facility to discuss any specific requirements, for example, completion of a surveillance form or further screening of contacts.

## How can I help prevent the spread of CPO in my facility?

To help prevent the spread of CPO there are basic IPC precautions that all staff should use at all times for all residents. These are called **standard precautions**. Sometimes additional precautions are required to prevent the spread of an infection or organism, these are called **transmission-based precautions**.

Transmission-based precautions are used in ***addition*** to standard precautions to prevent the spread of certain infectious organisms. **Contact precautions** are the additional IPC precautions required for residents confirmed as having CPO (colonised or infected).

For further information on the IPC precautions required for residents with a CPO, see the [Victorian guidelines on CPO for residential care facilities (2023)](https://www.health.vic.gov.au/infectious-diseases/carbapenemase-producing-enterobacteriaceae-management-guidelines) <www.health.vic.gov.au/infectious-diseases/carbapenemase-producing-enterobacteriaceae-management-guidelines>.

## Can residents with a CPO participate in group activities?

Yes. It is extremely important to maintain a resident’s ability to socialise and have access to rehabilitation opportunities. Residents with a CPO can continue to participate in group activities unless they are unwell (for example, diarrhoea). Any oozing wounds should be covered with a dressing that contains the wound ooze.

For residents with a CPO or those waiting for CPO screening results:

* Avoid use of toilets outside of their room. It is always best to toilet residents in their own toilet so as to minimise potential contamination outside their room. If the toileting of a resident does need to occur outside their own room the toilet must be cleaned immediately after its use or use a commode and ensure it is cleaned as well.
* Ensure strict hand hygiene by all residents if using equipment as part of a group session, and clean and disinfect equipment after use. Staff may need to assist residents with their hand hygiene.

Residents can attend a shared dining area and use regular dishes and cutlery. Dishes and cutlery used by residents with CPO can be processed in the usual manner.

## Communication with residents and their families

There is a need to communicate openly and effectively with residents and their families. A CPO Factsheet has been developed and should form the basis of discussions with residents, family and carers. The information sheet for residents, family and carers can be found on the [department’s website](http://www.health.vic.gov.au/infection-control) <www.health.vic.gov.au/infection-control>.

The issue of multiple-resistant organisms (or “superbugs” as they are commonly referred to in the media) can be a source of real anxiety for residents and cause inappropriate stigmatisation and excessive actions. It is of critical importance to listen to expressed concerns and speak realistically about risk. Involve family and friends if the resident consents and ensure that there is a good understanding of what has been explained. Ask them to repeat back to you their understanding of the issue and correct any misconceptions.

Resident confidentiality must be maintained. A finding of CPO in a resident’s sample is confidential resident information. Make sure the CPO case or guardian has told you who can be informed of the finding of CPO.

## Communication to other facilities

If the resident is transferred to another facility, for example, an acute care hospital; provide clear documentation that the resident has CPO, requires a single room with own ensuite, and contact precautions. An example of a transfer letter for residents with CPO can be downloaded from the [department’s website](http://www.health.vic.gov.au/infection-control) <www.health.vic.gov.au/infection-control>.

## Where can I get more information?

For further information refer to the Victorian Government, Department of Health, [Victorian guidelines on CPO for long-term residential care facilities](http://www.health.vic.gov.au/infection-control) (2023) <www.health.vic.gov.au/infection-control> or contact your facility manager or local IPC lead nurse.

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