Infection Control Micro-Learns User Guide

ABOUT THE MICRO-LEARNS

The Project Firstline Infection Control Micro-Learns are a series of guided infection control discussions that provide brief, on-the-job educational opportunities. Each micro-learn focuses on a single infection control topic and connects infection control concepts to immediate, practical value. Health care workers (HCWs) can easily apply the key points to their daily work and perform the recommended actions to keep germs from spreading.

USING THE MICRO-LEARNS

The micro-learns can be incorporated into existing opportunities where groups of health care workers gather, such as pre-shift “huddles” or team meetings. The sessions should be led or facilitated by an experienced team member with infection control expertise.

Each micro-learn package includes:

- **An adaptable discussion guide for the facilitator:** The discussion guide is not a script. Facilitators are encouraged to adapt the guide for their audience by including relevant and practical questions and ideas.
- **A job aid for the facilitator:** The visual job aid helps to reinforce the key messages of the micro-learn. Facilitators are encouraged to make the job aid available after the micro-learn session, such as in digital or hard copy form.

Notes for Facilitators

- Before presenting a micro-learn, check the policies and protocols at your facility and adapt the content accordingly.
- Build on your knowledge, experience, and awareness to connect the content to local context or relevant recent events so your audience can apply the concepts confidently.
- The micro-learns reinforce infection control concepts when risks are observed in patients or in the patient environment, not necessarily in visitors or other staff members.

Carbapenemase-producing Organisms (CPOs) Micro-Learn Discussion Guide

Use the talking points below and accompanying job aid to engage your team in short, focused discussion. Adapt to meet your needs.

INTRODUCE THE TOPIC

Share information about the topic that your audience should know:

- CPOs are bacteria that produce carbapenemase enzymes. These enzymes inactivate carbapenem antibiotics.
  - The genes that produce these enzymes can be easily shared with other bacteria, fueling the spread of **resistance**.
  - Very few antibiotics are effective against CPOs.
- **Resistant -** means the germs are not killed by medication and the infection continues to spread within a person.
- Spread can happen whether a patient has an active infection or is just a carrier of a CPO (colonization).
- **Colonization -** patients can carry CPOs on their body and not show signs or symptoms of illness or infection.

EXPAND THE TOPIC

Share additional information about what your audience should know on the job:

- CPOs include carbapenem-resistant Enterobacterales (CRE), *Pseudomonas aeruginosa* (CRPA), and *Acinetobacter baumannii* (CRAB) that harbor carbapenemase genes (e.g., blaNDM, blaKPC).
- CPOs usually spread from person to person.
- To prevent CPO transmission in healthcare settings remember to:
  - Follow proper hand hygiene protocols
  - Adhere to proper transmission-based precautions
  - Thoroughly clean and disinfect patient room and equipment
  - Communicate prevention methods to staff, patient and visitors
  - When transferring a patient colonized or infected with CPOs, notify accepting facilities and units of the patient's CPO history

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DISCUSS WITH YOUR TEAM

Find out how your audience feels about the topic:

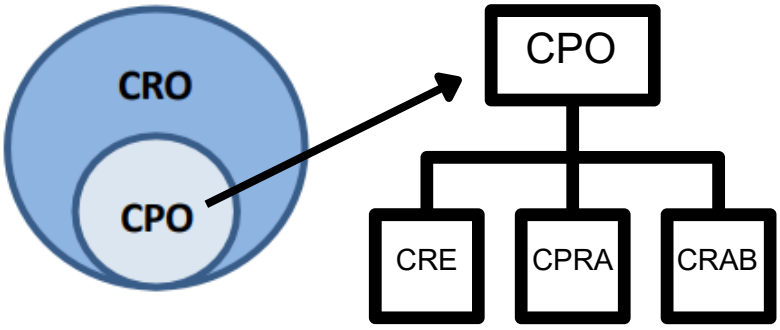
- Are you familiar with the transmission-based precautions required for a patient with active or colonized CPOs*?*
- Do you know what specific cleaning product in your facility is effective against CPOs?
- Can you list a few ways CPOs can spread in your facility?
- Do you understand why CPOs are a threat in healthcare facilities?
- What ways can you prevent the spread of CPOs?

WRAP UP AND REINFORCE

Reinforce key takeaways:

- CPOs can cause outbreaks in healthcare settings, tend to be more difficult to treat, and are associated with poorer patient outcomes and high mortality.
- If you are caring for a patient with a CPO colonization or infection, make sure to properly clean your hands.
- Carbapenems antibiotics are the last line drug to treat resistant infections. Thoroughly clean and disinfect any shared or reusable equipment with an EPA-registered disinfectant that kills CPOs using correct contact time.
- Ensure that an appropriate sign is present on the patient's door to alert healthcare personnel and visitors of recommended precautions for CPOs.
- CPOs are considered a multidrug-resistant organism (MDRO) and a urgent threat to public health.

Carbapenemase-producing Organisms (CPOs) Micro-Learn Discussion Guide



Carbapenem-resistant organisms (CROs) are resistant to at least one carbapenem antibiotic.

A subset of CROs are carbapenemase-producing organisms (CPOs).

How Does it Spread?

Directly and indirectly through contaminated surfaces, objects, and/or medical equipment in healthcare facilities:

- Doorknobs, bedrails
- Blood pressure cuffs
- Glucometers
- Nursing carts / crash carts
- Missed hand hygiene moments
- Inappropriate use or not wearing PPE when indicated

Patient Risk Factors

Hospital patients and long-term care facility residents that are at risk:

- Receive complex medical care
- Have invasive devices (i.e. urinary catheters or breathing tubes)
- Have severe or chronic wounds
- Use of broad-spectrum antibiotics or antifungal use
- Healthcare stay or international travel

Colonization

Healthy people usually do not get infections due to CPOs. But these bacteria can colonize body sites and cause no symptoms. Healthcare providers refer to this as '**colonization**.'

Early detection and implementation of infection prevention and control strategies are necessary to prevent further spread of CPOs.

NJHealth New Jersey Department of Health

Infection Control Practices for Reducing CPOs in Healthcare Settings

Healthcare workers should always practice proper hand hygiene

Patient care environment should be properly cleaned using EPA-registered one-step hospital-grade disinfectants

Use contact or enhanced barrier precautions for suspected and confirmed infections

Clean all mobile and reusable equipment after patient use

Ensure timely identification of patients infected or colonized with CPO

Family members and patients should be encouraged to perform hand hygiene often

Patients should be placed in a single-room or cohorted according to facility policy and procedure

Provide ongoing education and observation-based audits