

# FACT SHEET

## Carbapenemase Producing Enterobacteriaceae (CPE)



### What is CPE?

- Carbapenems are a class of antibiotics that are used to treat severe bacterial infections
- Carbapenamases are enzymes that inactivate carbapenems (e.g., KPC, NDM, OXA, VIM)
- Enterobacteriaceae are a group of gram-negative bacteria found primarily in the lower gastrointestinal tract, such as E.coli and Klebsiella species, which can acquire the ability to produce carbapenemases.

### Why is CPE a concern?

- Individuals can be colonized with CPE for months to years, without showing symptoms, which makes it easier to spread
- CPE can transfer its resistance to other bacteria and spread outside of the GI tract causing serious infections
- CPE are difficult to treat due to their ability to inactivate many antibiotics
- Mortality in individuals with CPE infections is upwards of 50%

### How does CPE spread?

#### Direct or Indirect



contact transmission through:

- Poor hand hygiene and compliance
- Inadequate cleaning of shared equipment
- Fecal-oral route (bathrooms are an area of concern)

### Colonization vs Infection

#### How does CPE Present?

##### Colonization



- bacteria present
- no signs or symptoms

##### Infection



- bacteria present
- signs or symptoms present

NOTE: Colonized patients contribute to transmission, even without symptoms present.

### Preventing CPE Transmission



#### Routine Practices

- Perform 4 moments of hand hygiene
- Use PPE based on risk assessment

#### Screening & Signage



- Implement contact precautions for confirmed or suspected cases, dedicate private room when possible
- Screen residents per policy
- Document colonization status in care plan



#### Environmental Cleaning

- Clean/disinfect shared equipment between every use
- Dedicate washroom/commode and reusable equipment when possible
- Do not discard bodily fluids down the sink
- Perform enhanced sink and drain cleaning routinely to disrupt biofilms
- Use products with appropriate kill claim, required contact time, and proper method for application

### Reporting & IPAC Measures

CPE is reportable to your Public Health Unit.

- Reinforce hand hygiene, cleaning protocols, and ensure sufficient PPE supply available
- Consider cohorting staff and residents as directed

