

# United States Centers for Disease Control and Prevention issue updated guidance for tackling carbapenem-resistant enterobacteriaceae

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On 21 June, the United States (US) Centers for Disease Prevention and Control (CDC) released a report [1] and updated recommendations [2] that detail how states and healthcare facilities should deal with carbapenem-resistant *Enterobacteriaceae* (CRE), deadly germs that cause healthcare-associated infections. The report documents the first case of person-to-person transmission in the US of CRE with New Delhi metallo-beta-lactamase (NDM), first reported in 2007. CRE with NDM are of particular concern because these enzymes allow drug resistance to be transferred easily from one bacterium to another.

CRE are resistant to almost all drugs and can contribute to death in 40% of patients who become infected [3]. In response to this emerging threat, the CDC have urged healthcare facilities and US state health departments to take action and follow several key steps to protect patients.

Healthcare providers should:

- place patients currently or previously colonised or infected with CRE on contact precautions;
- wear a gown and gloves when caring for patients with CRE;
- perform hand hygiene - use alcohol-based hand rub or wash hands with soap and water before and after contact with patients or their environment;
- prescribe and use antibiotics wisely; and
- discontinue devices like urinary catheters as soon as no longer necessary.

*Klebsiella pneumoniae* carbapenemase (KPC) is the most common carbapenemase in the US and has spread throughout many regions [4]. Although the prevalence of CRE likely varies from region to region, a review of data from CDC's National Healthcare Safety Network found that in 2009-2010 in the US, about 13% of *Klebsiella* species reported from central line-associated bloodstream infections (CLABSIs) and catheter-associated urinary tract

infections (CAUTIs) were carbapenem-nonsusceptible. About 2% of *Escherichia coli* reported from CLABSIs and CAUTIs were carbapenem-nonsusceptible.

Genes coding for KPC can be transmitted between bacteria via mobile genetic elements, potentially facilitating transmission of these organisms. Organisms producing metallo-beta-lactamase (NDM, VIM, and IMP) have also been identified in the US but appear to be less common than KPC-producing organisms.

In healthcare settings, CRE are usually transmitted from person to person, often via the hands of healthcare personnel or via contaminated medical equipment. To control CRE, healthcare providers should ensure the use of appropriate infection control procedures, including personal protective equipment during and good hand hygiene following exposure to the patient's immediate environment, especially when draining urine from a catheter bag or changing wound dressings.

The CDC CRE website [5] at has information and resources for US patients, clinicians, healthcare facilities, and state health departments.

## References

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