People recently hospitalised in India or Pakistan may have NDM bacteria and require isolation with contact precautions until cleared.

New Delhi metallo-beta-lactamase bacteria (NDM): Information for clinicians

Background
Antibiotic resistance is increasing worldwide. In some cases, bacterial infections are occurring resistant to all, or almost all, commercially available antibiotics.

What is NDM?
NDM (New Delhi metallo-beta-lactamase) is a beta-lactamase, an enzyme produced by bacteria which can destroy antibiotics. The significance of NDM is that it even destroys carbapenems, a class of antibiotics usually viewed as the most powerful against Gram negative bacilli. Therefore, they could be regarded as similar to, but more resistant than, extended-spectrum beta-lactamases (ESBL).

Which bacteria produce NDM?
NDM has been found to be produced by Gram negative bacteria such as *Escherichia coli*, *Klebsiella pneumoniae* and *Enterobacter cloacae*.

Who is at risk from NDM producing bacteria?
The vast majority of patients with NDM producing bacteria have recently travelled to India or Pakistan. Most of these people have been hospitalised in India, either for acute conditions or for elective plastic surgery (‘medical tourists’). There is potential for person to person spread in any hospital, just as with ESBL producing organisms.

How would NDM producers be identified?
NDM producing bacteria are resistant to carbapenem antibiotics like meropenem, imipenem or ertapenem. The susceptibility results of carbapenem antibiotics may be suppressed by microbiology laboratories and therefore not “visible” on the report. Verification of carbapenem susceptibility results should be sought from laboratories for Gram negative bacteria that are resistant to third generation cephalosporins (eg. cefotaxime). Specialised molecular biologic testing needs to be performed on carbapenem resistant bacteria to determine if the gene encoding NDM is present.

How can spread of NDM producers be avoided in Queensland hospitals?
All patients transferred from a hospital in India or Pakistan should be accommodated using contact isolation precautions until it is proven that they are not colonised with ESBL or NDM producing bacteria. The finding of meropenem resistant *Klebsiella, E. coli* or *Enterobacter*, in any patient, should also mandate use of contact precautions.

For information about specimen collection refer to the recommendations for multi-resistant Gram negative (MRGN) organisms in Queensland Health’s *Screening and Clearance of Multi-resistant Organisms (MRO) Guideline*

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