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- **Alert: Notification of Ontario's first case of New Delhi metallo-beta-lactamase 1 (NDM-1)**

**FROM:**

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**Alert: Ontario's first case of New Delhi metallo-beta-lactamase 1 (NDM-1)**

The first known case of NDM-1 in Ontario was recently identified in Peel. This is the third case in Canada. To-date there has been no documented patient-to-patient transmission.

Ontario's Chief Medical Officer of Health reinforces that there is no threat to the health of the public arising from this situation.

**Characteristics of New Delhi metallo-β-lactamase 1 (NDM-1)<sup>1</sup>**

- Bacteria-produced enzyme, highly resistant to currently used beta-lactam drugs
- Most commonly associated with *E. coli* and *Klebsiella pneumoniae*
- NDM-1 infections to date have been pneumonia (often ventilator associated), bacteremias and urinary tract infections.
- Primary risk factor is hospitalization in India or Pakistan

**Recommendations<sup>2</sup>**

Physicians and other health care providers are encouraged to:

- Screen all clients/patients for risk factors associated with antibiotic resistant organisms (ARO) upon admission to a health care facility or if local extended spectrum beta-lactamase (ESBL) incidence is high.
- Practice good hand hygiene using either an alcohol-based hand rub (ABHR) or soap and water before and after client/patient contact, as the most common mode of transmission of AROs is via hands of health care providers.
- Clean and disinfect medical equipment between clients/patients routinely.
- Follow routine practices including appropriate use of personal protective equipment (PPE).

Information from the Provincial Infectious Disease Advisory Committee (PIDAC) on the screening, testing and surveillance of AROs is available at:

[http://www.health.gov.on.ca/english/providers/program/infectious/diseases/best\\_prac/bp\\_staff.pdf](http://www.health.gov.on.ca/english/providers/program/infectious/diseases/best_prac/bp_staff.pdf)

For more information, please contact Peel Public Health at 905-799-7700.

**References:**

<sup>1</sup> Emergence of a new antibiotic resistance mechanism in India, Pakistan, and the UK: a molecular, biological, and epidemiological study, *The Lancet Infectious Diseases*, August 11, 2010

[http://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(10\)70143-2/fulltext](http://www.thelancet.com/journals/laninf/article/PIIS1473-3099(10)70143-2/fulltext)

<sup>2</sup> MOHLTC Provincial Infectious Disease Advisory Committee. Annex A: Screening, Testing and Surveillance for Antibiotic Resistant Organisms (ARO). May 2010 found at:

[http://www.health.gov.on.ca/english/providers/program/infectious/diseases/best\\_prac/bp\\_staff.pdf](http://www.health.gov.on.ca/english/providers/program/infectious/diseases/best_prac/bp_staff.pdf)