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Information Update and Reporting Requirements

October 31, 2016

TOPIC:

1. MERS-CoV (Middle East Respiratory Syndrome – Coronavirus)
2. Avian influenza A (H7N9) virus

ACTION REQUIRED:

- Enhanced vigilance, rapid notification and thorough infection prevention and control practice for severe acute respiratory (SARI) cases with links to affected areas in the preceding 14 days (i.e., residence, travel history or contact with someone with such history).

REPORTING:

- Notify your regional Medical Officer of Health (MOH) immediately of confirmed or probable cases of avian influenza A (H7N9) or MERS-CoV. For after hours reporting, call the MOH on call at: 204-788-8666.

TESTING:

- When submitting samples for diagnostic testing, clearly write "**Suspected MERS-CoV or A (H7N9)"** and call **204-945-6123** to alert the lab that the sample has been sent.

The Epidemiology and Surveillance Unit, Public Health Branch of Manitoba Health, Seniors and Active Living, continues to monitor reports regarding human cases of infection with MERS-CoV and avian influenza A (H7N9) virus. This is the second update for MERS-CoV and the fourth update on avian influenza A (H7N9).

As of September 30, 2016, there have been:

- 0 cases (confirmed or probable) MERS-CoV reported in **Manitoba**. Risk to Manitobans is **LOW.**
- 0 cases (confirmed or probable) MERS-CoV reported in **Canada**. Risk to Canadians is **LOW.**
- 1,806 cases (confirmed) MERS-CoV reported globally with a case fatality rate of 36%.

- 0 cases (confirmed or probable) A (H7N9) reported in **Manitoba**. Risk to Manitobans is **LOW.**
- 2 travel-related cases (confirmed) A (H7N9) reported in **British Columbia, Canada**. Risk to Canadians is **LOW.**

- 798 cases (confirmed) A (H7N9) reported globally with a case fatality rate of 40%.

MERS-CoV:

- Since September 2012, the World Health Organization has been notified of laboratory-confirmed cases of MERS-CoV from 27 countries. The majority of cases are reported from Saudi Arabia. All cases have had some link to the Middle East, although local transmission from recent travelers has been observed in France and the United Kingdom. An outbreak in South Korea, which began in May 2015, was the largest outbreak of MERS-CoV outside the Middle East and was linked to a single infected person who had traveled to the Middle East.
- Zoonotic transmission (from camels) is believed to be the starting point of most clusters of MERS-CoV cases. The incubation period for MERS-CoV ranges from 2-14 days. Human-to-human is the most common mode of transmission for MERS-CoV. While human-to-human transmission has been observed in households in affected countries, most human cases reported to date have resulted from human-to-human transmission in health care settings. It is not yet fully understood how the virus spreads but contamination through respiratory droplets plays an important role as well as aerosol-generating medical procedures. It is not clear what role mildly symptomatic and asymptomatic cases play in disease transmission.
- Co-infection of novel coronavirus with influenza A has also been reported.
- Limited evidence suggests that **nasopharyngeal swabs may not be as sensitive as lower respiratory specimens for detecting novel coronavirus infections.** Lower respiratory specimens such as sputum, endotracheal aspirate or bronchoalveolar lavage should be used when possible in addition to nasopharyngeal swab until more information is available. If initial testing of a nasopharyngeal swab is negative in a patient strongly suspected to have a novel coronavirus infection, consideration should be given to retesting using a lower respiratory specimen.

Infection Prevention and Control:

- Manitoba Health, Seniors and Active Living supports the national (PHAC) recommendations for infection prevention and control in health care settings and for patients presenting with suspected or confirmed infection or co-infection with the MERS-CoV in acute care settings.
- Manitoba Health, Seniors and Active Living's document *Routine Practices and Additional Precautions: Preventing the Transmission of Infection in Health Care* is available at: http://www.gov.mb.ca/health/publichealth/cdc/docs/ipc/rpap.pdf .
- Refer to *Infection Prevention and Control Guidance for Middle East Respiratory Syndrome Coronavirus (MERS-CoV) in Acute Care Settings* http://www.phac-aspc.gc.ca/eri-ire/coronavirus/guidance-directives/nCoV-ig-dp-eng.php and http://www.phac-aspc.gc.ca/eri-ire/algo-eng.php .

Surveillance:

Health care professionals are encouraged to maintain vigilance for cases of MERS-CoV infection, and notify the regional Medical Officer of Health (MOH) http://www.gov.mb.ca/health/publichealth/contactlist.html , or after hours, the Medical Officer of Health on call at 204-788-8666. Refer to case definitions (based on national case definitions for MERS-CoV) below.

MERS-CoV Case Definitions and Reporting Requirements:

Confirmed Case (laboratory-confirmed): REPORT TO MANITOBA HEALTH, SENIORS AND ACTIVE LIVING: Call regional MOH (after hours call the MOH on call 204-788-8666) and complete the *Emerging Respiratory Pathogens and Severe Acute Respiratory Infection (SARI) Case Report Form*: http://www.phac-aspc.gc.ca/eri-ire/coronavirus/assets/pdf/SRI_form-MRS-formulaire-eng.pdf and fax to the Surveillance Unit secure fax (204-948-3044).

Probable Case: REPORT TO MANITOBA HEALTH, SENIORS AND ACTIVE LIVING: Call regional MOH (after hours call the MOH on call 204-788-8666) and complete the *Emerging Respiratory Pathogens and Severe Acute Respiratory Infection (SARI) Case Report Form*: http://www.phac-aspc.gc.ca/eri-ire/coronavirus/assets/pdf/SRI_form-MRS-formulaire-eng.pdf and fax to the Surveillance Unit secure fax (204-948-3044).

A person with an acute respiratory infection with clinical, radiological, or histopathological evidence of pulmonary parenchymal disease (e.g., pneumonia or Acute Respiratory Distresss Syndrome, {ARDS}); **AND**

- No possibility of laboratory confirmation for novel coronavirus either because the patient or samples are not available for testing; **AND**
- The person had close contact with a laboratory-confirmed case.

Person Under Investigation: NOTIFY CADHAM PROVINCIAL LABORATORY (CPL) THAT SAMPLE IS IN TRANSIT 204-945-6123 and label package with "Suspected MERS-CoV".

- A person with an acute respiratory infection, which may include history of fever and cough and indications of pulmonary parenchymal disease (e.g. pneumonia or the acute respiratory distress syndrome {ARDS}), based on clinical or radiological evidence of consolidation **AND** any of the following:
    - History of travel to, or residence in the Arabian Peninsula or neighbouring countries within 14 days before onset of illness.
    - History of close contact with a person with acute respiratory illness of any degree who had a history of travel to, or residence in the Arabian Peninsula or neighbouring countries within 14 days before onset of illness.
    - The disease occurs as part of a cluster that occurs within a 14-day period without regard to place of residence or history of travel, unless another etiology has been identified.
    - The disease occurs in a health care worker who has been working in an environment where patients with severe acute respiratory infections are being cared for, particularly patients requiring intensive care, without regard to place of residence or history of travel, unless another etiology has been identified.
    - Develops an unexpectedly severe clinical course despite appropriate treatment, *even if another etiology has been identified*, if that alternative etiology does not fully explain the presentation or clinical course of the patient.
- A person with an acute respiratory illness of any degree of severity who, within 14 days before onset of illness, had close contact with a confirmed or probable case of novel coronavirus infection, while the case was ill.

NOTE: Anyone meeting the "Person Under Investigation" case definition above should be investigated and tested for MERS-CoV.

Avian Influenza A (H7N9):

- The first case was reported to the World Health Organization (WHO) by China on March 31, 2013. Since then, many provinces in China have reported cases. Two travel-related cases in British Columbia were laboratory-confirmed on January 26, 2015 and January 29, 2015 and were the first cases reported in North America.
- The risk to Canadians remains low.
- Most human cases report a history of exposure to live poultry or their environment. Avian influenza A (H7N9) infection in humans has been predominantly reported among older adult males, an epidemiologic pattern very distinct from that of avian influenza A (H5N1) infections previously detected in China.
- The incubation period for avian influenza A (H7N9) has been reported as prolonged (median 6 days; range 1-15 days) compared to typical human influenza viruses. Exposure history based on the prior 14 days should be a reasonable and safe approximation.
- Limited human-to-human transmission may occur when there has been unprotected close contact with symptomatic cases. There is no evidence of sustained human-to-human transmission.
- Evidence suggests a seasonal pattern to avian influenza A (H7N9) infections in humans, peaking in winter months with sporadic cases in summer.
- Laboratory testing has confirmed that the avian influenza A(H7N9) virus is susceptible to the neuraminidase inhibitors oseltamivir and zanamivir, two antiviral medications that are available in the national Antiviral Stockpile and National Emergency Stockpile System should they be needed to treat Canadians.

Infection Prevention and Control:

- Manitoba Health, Seniors and Active Living's document *Routine Practices and Additional Precautions: Preventing the Transmission of Infection in Health Care* is available at: http://www.gov.mb.ca/health/publichealth/cdc/docs/ipc/rpap.pdf .
- Refer also to: *National Interim Infection Prevention and Control Guidance for Acute Care Settings – Avian Influenza A (H7N9)* http://www.phac-aspc.gc.ca/eri-ire/h7n9/guidance-directives/h7n9-ig-dp-eng.php .

Surveillance:

- Health care professionals are encouraged to maintain vigilance for cases of avian influenza A (H7N9) infection, and notify the regional Medical Officer of Health (MOH) http://www.gov.mb.ca/health/publichealth/contactlist.html , or after hours, the Medical Officer of Health on call at 204-788-8666. For links to the latest information on avian influenza A (H7N9), please visit: http://www.gov.mb.ca/health/publichealth/environmentalhealth/avian.html .

Avian Influenza A (H7N9) Case Definitions and Reporting Requirements:

- Refer to The Public Health Agency of Canada's *National Interim Case Definition: Avian Influenza A (H7N9) Virus 2013-09-23* http://www.phac-aspc.gc.ca/eri-ire/h7n9/case-definition-cas-eng.php .
- **Confirmed and probable cases must be reported to the regional Medical Officer of Health (after hours call the MOH on call 204-788-8666).** The Public Health Agency of Canada's *Emerging Respiratory Pathogens and Severe Acute Respiratory Infection (SARI) Case Report Form* http://www.phac-aspc.gc.ca/eri-ire/coronavirus/assets/pdf/SRI_form-MRS-formulaire-eng.pdf must also be completed and faxed to the Surveillance Unit secure fax (204-948-3044).

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