

Date: 2 May 2018

To: Physicians – South Zone

From: Medical Officers of Health – South Zone

RE: Communicable Disease Advisory – MERS-CoV and Zika Virus

Middle East Respiratory Syndrome (MERS-CoV)

MERS-CoV, a novel coronavirus related to SARS, is an emerging viral pathogen that can cause Severe Acute Respiratory Infection (SARI). **Healthcare providers must be prepared to identify and institute precautions for all patients with acute respiratory infection and consider SARI in returned travellers or individuals in contact with them.**

NOTE: The zone MOH is your point of first contact in all suspect cases of MERS-CoV.

SARI Clinical Presentation:

Illness criteria: Fever (over 38.0°C) AND new onset (or exacerbation of chronic) cough or breathing difficulty AND clinical and radiological evidence of pulmonary parenchymal disease requiring hospitalization.

Exposure criteria: History of travel to countries where emerging respiratory illnesses such as MERS-CoV or variant influenza strains have been reported OR close contact with a confirmed or probable case within the 10-14 days prior to symptom onset.

Actions:

- Implement Infection Prevention and Control (IPC) measures **immediately**, including **contact and droplet precautions** for any patient meeting the exposure and illness criteria.
- Implement **airborne precautions if aerosol-generating medical procedures (AGMP) are performed**. Wear fit-tested and fit-checked N95 respirator/mask and use engineering controls (negative pressure room).
- **Contact your Zone Medical Officer of Health (MOH)** for notification and testing.

Laboratory Testing:

All requests for SARI testing at ProVLab must be coordinated through the local MOH. You will be advised about specimen transport accordingly.

Collect the appropriate clinical specimens and write “Suspect MERS-CoV” or “Suspect variant influenza” on ProVLab requisitions:

- One nasopharyngeal swab (in viral transport media) for respiratory panel
- One throat swab (in viral transport media)
- One or more lower respiratory specimens as clinically indicated and possible: Sputum (consider induced sputum (using airborne precautions) if patients do not have a productive cough and cannot produce a sputum sample), or endotracheal secretions or bronchoalveolar lavage (BAL) in sealed sterile containers. Do not send specimens in traps with tubing.

Refer to ProVLab Guide to Services for more information:

<http://www.albertahealthservices.ca/assets/wf/plab/wf-provlab-guide-to-services.pdf>

Zika Virus (ZIKV)

ZIKV is a mosquito-borne flavivirus related to yellow fever, dengue, west nile, and japanese encephalitis viruses. ZIKV infection can cause microcephaly, other congenital abnormalities, fetal death as well as neurologic complications such as Guillain-Barré syndrome. **Note: The zone MOH is your point of first contact in all suspect ZIKV cases.**

ZIKV Clinic Presentation:

Illness criteria: Rash and/or fever with one or more of the following symptoms (not explained by other medical conditions): Arthralgia or myalgia; Non-purulent conjunctivitis; Headache or malaise

Exposure criteria: Travel to an area with Zika virus circulation within 2 weeks of symptom onset OR epidemiological link (e.g., sexual, blood transfusion, vertical) to a probable or confirmed case of Zika virus infection

Actions:

- ZIKV cases should use condoms during sex to prevent disease transmission during the period of communicability, which can be up to 6 months for males. If planning pregnancy, women with ZIKV should wait at least 8 weeks after symptom onset, and men testing positive should wait at least 6 months after symptom onset
- ZIKV cases with pregnant partners should use condoms for the duration of the pregnancy. Pregnant women with ZIKV should be referred to a maternal fetal medicine specialist and/or an infectious diseases specialist.
- ZIKV cases should avoid sharing needles and defer donating blood for 56 days after the onset of symptoms.
- **Contact your Zone Medical Officer of Health (MOH)** for notification and testing.

Laboratory testing:

All requests for ZIKV testing at ProvLab must be coordinated through the local MOH.

A complete history is required, including: travel history (areas visited within the past 3 months); date of return to Canada; date of onset of symptoms; nature of symptoms; pregnancy status.

For asymptomatic pregnant females, serological testing should be carefully considered: ZIKV IgM antibody cross reacts with other flaviviruses such as dengue or yellow fever, making lab result interpretation challenging; the confirmatory assay (PRNT) may take weeks to complete. PRNT assays may be positive for more than one virus, making it impossible to determine the virus responsible.

Asymptomatic non-pregnant patient	No testing performed
Symptomatic patient (pregnant or non-pregnant)	<p>Molecular Testing:</p> <ul style="list-style-type: none"> • Blood (Lavender Top) - Order ZIKV RT-PCR up to 10 days after symptom onset • Urine – Order ZIKV RT-PCR up to 14 days after symptom onset <p>AND</p> <p>Serology:</p> <ul style="list-style-type: none"> • Order SST (Gold Top) blood for ZIKV IgM • Send convalescent blood at least 14 days later
Asymptomatic pregnant female	<p>Testing may be considered between 2 and 12 weeks after returning from area of current ZIKV circulation:</p> <p>Serology only - Order SST (Gold Top) blood for ZIKV IgM for TWO samples collected at least 14 days apart within this 2 to 12 week period AND ONLY one SST (Gold Top) if the first sample was collected at about 12 weeks after return</p>

Refer to ProvLab Guide to Services for more information:

<http://www.albertahealthservices.ca/assets/wf/plab/wf-provlab-guide-to-services.pdf>

Prevention:

The risk for travel-related ZIKV infection is determined by the World Health Organization's country classification scheme which is updated periodically. Please visit the World Health Organization's website at <http://www.who.int/emergencies/zika-virus/classification-tables/en/>.

Please refer to the Committee to Advise on Tropical Medicine and Travel (CATMAT) website for recommendations on travel to prevent ZIKV:

https://www.canada.ca/en/public-health/services/publications/diseases-conditions/zika-virus-prevention-treatment-recommendations.html?_ga=2.259998659.834846277.1523634425-48034139.1518478151