

PROVINCIAL LABORATORY SERVICES
COMMUNIQUÉ

<http://www.healthpei.ca/laboratoryservices>

TO: Island Physicians and Nurse Practitioners
FROM: Dr. Greg German, Medical Microbiologist and Infectious Diseases Consultant
DATE: January 31, 2017
RE: **Very low risk of *Mycobacterium chimaera* infection during open-heart surgery**

Health Canada and the CDC have reported that heater cooler units used in open heart surgeries have been linked to infection caused by an environmental mycobacterium. *Mycobacterium chimaera* is a NON-tuberculosis mycobacterium that has infected approximately 50 patients in Europe and so far 2 patients in Canada during the time of their open heart/chest surgery. Time from exposure to symptoms is prolonged (3 months to 5 years; median 18 months) and only devices used after 2011 are implicated. Heater-cooler devices are required for bypass / perfusion during these procedures and the internal water circuit has been found to be contaminated in some machines, leading to exhaust airflow that could potentially infect the patient. The attack rate is uncommon to rare (between 1 in 100 to 1 in 10,000 surgeries). Steps have been taken to limit future risk, and infected patients cannot spread the organism to others.

Dr. Dorran and I are in contact with our regional partners. Patient notification occurred for those Islanders that went to Nova Scotia for their procedure (18 paediatric patients and 296 adult patients). New Brunswick (Saint John Regional Hospital) has decided to focus on alerting all clinicians in New Brunswick rather having a special letter sent to exposed patients that include 210 Islanders. Copies of these letters and additional accessory information will be provided on the Health PEI Microbiology website including off-island contact information. (www.healthpei.ca/micro). I serve as the provincial contact for suspected cases.

Only symptomatic patients should be tested for *M. chimaera* for which recent interim Canadian guidelines are summarized below. Please note that 3 or more weeks of constitutional symptoms are typically required to be considered significant to warrant special testing:

- Constitutional: Fevers, fatigue, dyspnea, weight loss, night sweats, & failure to thrive (infants)**
- Cardiac: (endocarditis / vascular graft infection),**
- Extracardiac: osteomyelitis (sternal, etc), mediastinitis, hepatitis, bacteremia, ocular...**
- Ocular: 50% of cases: panuveitits, multifocal chorioiditis, and chorioretinitis**
- Immunologic/embolic: Splenomegaly (80% of cases), cytopenia, and sarcoid-like conditions**

Mycobacterium chimaera infections like other mycobacteria infections will not respond to many first line antibiotics. There is an importance on sending tissue for mycobacterial culture and blood using special mycobacteria/fungal blood culture bottles (two cultures separated by at least 12 hours). Please indicate query *M. chimaera* on the request form and list symptoms. Please contact me if you have further questions or concerns; I am also available for laboratory and/ or infectious diseases telephone, inpatient, or outpatient consultations (fax: 620-0483)