



DATE: 3/25/2022

TO: Saskatchewan Practitioners

FROM: SHA Laboratory Medicine, Division of Microbiology
SHA TB Prevention and Control

RE: Distributed PCR testing for *Mycobacterium tuberculosis*

We are pleased to announce that on-site PCR testing to detect *Mycobacterium tuberculosis* (MTB) complex is now available at 12 hospital laboratories in Saskatchewan. This testing is performed using the Cepheid GeneXpert™ instrument and will improve the diagnostic turnaround time for patients suspected of MTB infection.

Locations currently capable of performing MTB PCR include:

Lloydminster	Prince Albert	Tisdale
Meadow Lake	Regina (RGH)	Weyburn
Moose Jaw	Saskatoon (RUH)	Yorkton
North Battleford	Swift Current	Stony Rapids (AHA)

Key Messages:

- Indications for MTB PCR testing:
 - Inpatients or outpatients presenting with symptoms of active TB disease. Symptoms include: *cough 2 weeks or longer, unexplained fever, pneumonia that does not improve with antibiotics, fatigue/lethargy, unexplained weight loss/anorexia/failure to thrive, night sweats, hemoptysis, chest pain/dyspnea.*
 - Routinely, 1 specimen per patient will be tested by MTB PCR per investigation (defined as 1 every 3 months). If additional investigations are required, they must be requested through the Microbiologist on-call or TB Prevention and Control.
 - MTB PCR is **not** recommended for monitoring TB treatment response. PCR assays can remain positive, despite the absence of viable organisms.
 - For further information on the diagnosis of tuberculosis refer to TB Prevention and Control SK guidance document [“Think Your Patient has TB?: A Guide for Health Care Providers”](#)
- A sputum (either expectorated or induced) with 5-10 mL of specimen should be sent to the laboratory in a sterile, screw-topped container. Use a [Microbiology Requisition](#) and check “TB PCR” or write in “TB PCR” on local requisition.

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- Refer to the [RRPL Compendium of Tests](#) for TB specimen collection guidance. For outpatient specimen collection instructions, refer to [TBPC SK Sputum Collection Guidance Sheet](#)
- MTB PCR is validated only for lower respiratory tract specimens (sputum, ETT, bronchoalveolar lavage and washes). Testing of unvalidated specimen types requires approval from the Microbiologist on-call.
- Three specimens cultured for mycobacteria remains the gold standard for TB diagnosis. Specimens submitted for MTB PCR, whether positive or negative, will also be referred to RRPL for culture if specimen volume is sufficient. Specimens with insufficient volume will require timely recollection and submission.
- Compared to direct microscopy, PCR is more sensitive and is specific for *M. tuberculosis* complex. Compared to culture, PCR will detect approximately 70% of smear-negative specimens. Thus, some patients may be PCR-negative but culture-positive.
- Turnaround time for test results will be 24 hours after receipt of the specimen by the laboratory. If more urgent testing is required, please contact a Microbiologist on-call.

For questions or additional information, please contact a Microbiologist on-call:

Regina General Hospital switchboard at 306-766-4444
 Royal University Hospital switchboard at 306-655-1000
 Roy Romanow Provincial Laboratory at 306-798-1234