



Clinical Practice Change: Clinical Microbiology

Date: October 30, 2013
To: All physicians and healthcare staff submitting respiratory specimens for AFB culture
From: Dr. Michelle Alfa, Medical Director and Shirley Hoban, Technical Director, Clinical Microbiology, Diagnostic Services of Manitoba
 
Re: Changes to Respiratory specimen collection for diagnosis of patients suspected to have TB and for follow-up of admitted patients on TB therapy

TAKE HOME MESSAGE:

Effective October 30, 2013, DSM Microbiology laboratories will now accept three respiratory samples collected on the same day for INITIAL diagnostic testing (as per the 2013 Canadian TB Standards). The existing FOLLOW-UP protocol of admitted patients receiving TB therapy will remain in place (i.e., collect three samples 8–24 hours apart). After 2 weeks of therapy, there must be three consecutive respiratory samples that are AFB smear negative prior to discontinuation of Airborne Precautions.

Respiratory specimen collection for initial TB diagnosis: three samples all collected on the same day

The new Canadian TB Standards (7th edition) have accepted the Cuevas et al study¹ that demonstrated equivalency between collecting three specimens on two separate days and the collection of three samples on the same day when making the initial diagnosis of TB. Furthermore, they documented that same day collection improved compliance in obtaining three samples. As such, the DSM Microbiology laboratories in conjunction with the TB Disease Identification Working Group of WRHA Integrated TB Services recommend the same approach to the initial diagnostic sample collection.

A clinical review (including discussion with Infection Prevention and Control) is still required for admitted patients in whom TB is suspected who have been placed on Airborne Precautions, prior to discontinuation of precautions when the patient will remain in hospital for other reasons. This is currently in the Airborne Precaution Discontinuation protocol in the WRHA IP&C Manual². This approach is important because in Manitoba 70% of patients who have pulmonary TB will be AFB smear negative on all three specimens.

Follow-up of admitted TB patients: Three consecutive samples collected 8-24 hours apart

We will not be adopting the new Canadian TB Standards (i.e. collection of all three respiratory specimens on the same day, one hour apart) with respect to respiratory specimen collection for follow-up of admitted patients receiving TB therapy. Specifically, the existing MB follow-up protocol will remain in place (i.e. three respiratory specimens collected 8 to 24 hours apart). Our rationale is that the Canadian TB Standards did not base their recommendation on clinical studies that specifically addressed follow-up specimen collection. Furthermore, we foresee no issues with specimen collection compliance for patients who are admitted (and under airborne precautions). After 2 weeks of TB therapy with clinical response, and when all three respiratory samples are AFB smear-negative, the patient can be taken off of Airborne Precautions. However, if the patient is to remain in hospital, a clinical assessment including discussion with Infection Prevention and Control is required to determine if the patient should remain on Airborne Precautions until they are discharged home.

These practices are consistent with Manitoba Health (MH) updated protocol recommendations regarding conditions required to take TB patients off airborne precautions. The updated protocol will be released shortly.

If you have questions regarding the policy change contact Manitoba Health – Communicable Disease Control (204) 788-6330, or if you have questions regarding diagnostic testing contact Dr. Michelle Alfa or Shirley Hoban at 204-237-2484.

References:

1. Cuevas LE, Yassin MA, Al-Sonboli N, et al. A multi-country non-inferiority cluster randomized trial of frontloaded smear microscopy for the diagnosis of pulmonary tuberculosis. PLoS Med 2011;8(7):e1000443.
2. WRHA Hospital Infection Prevention & Control Manual Specific Disease Protocol: Tuberculosis (2010).