TB Nurse Network Meeting
7/20/2016
10:00 – 11:30 a.m. EST
Minutes

Kathy Janer (*Bay County HD*); Ericka Mueller (*Berrien County HD*); Angie Schooley (*BOL*); Mari Pat Terpening (*Central Michigan District HD*); Jeanette Parent (*Dickinson County Healthcare System*); Janet Potvin (*District HD #10, Wexford County*); Bonnie Childs, Stephanie Connolly, Denise (*Genesee County HD*); Melissa Mundy (*Health Department of Northwest Michigan*); Angela Titus (*Hills & Dales General Hospital*); Deneen Gallagher, Colleen Harns, Kathy Kacynski (*Ingham County HD*); Tracy Payne (*Jackson County HD*); Ashley Huver (*Kalamazoo County Health and Human Services*); Linda Van Eck (*Kent County HD*); Marilyn Fitzpatrick (*Lapeer County HD*); Denny Wisner, Beth Butzu (*Macomb County HD*); Peter Davidson, Shona Smith, Helen McGuirk (*MDHHS*); Nancy Brablett (*Midland County HD*); Katlyn Anthony (*Munson Healthcare*); Linda Scott (*Muskegon County HD*); Tamara Drake, Patty Feenstra, Julie Kwiper (*Ottawa County HD*); Donna Baynai (*Pine Rest*); Stephanie Patton, Janice Van Heest (*St. Joe's Health*); Aimmee Mullendore (*St. Joseph County*); Dawn Ramsey (*Sturgis Hospital*); Laure Jean Howatt (*University of Michigan Medical School*); Julie Beeching (*Van Buren-Cass County District HD*); Mary McCloud (*Washtenaw County Public HD*); Elizabeth Daniels, Charlene Giuchici, Kathy Mell (*Wester Upper Peninsula District HD*); Dawn Geise.

Total Attendance: 42

I. Announcements
   a. **Next meeting:**
      - Wednesday October 19th, 2016; 10-11:30 AM
      - Online webinar and conference call
      - Send topic/open forum ideas that you'd like to hear more about

   b. **Call for resources from LHDs:**
      - Do you have recommendations for great interpreter & translation services?
      - Policies to share with other LHDs:
         i. Video DOT
         ii. Incentive and enabler use
      - Please email/fax to Helen McGuirk
         i. mcguirkh@michigan.gov
         ii. Fax: 517-335-8263

   c. **Recently Archived Webinars from our RTMCCs (see attached presentation for links):**
      - Southeastern National Tuberculosis Center (SNTC)
         i. "Learning From the Front Lines: Celebrating 10 Years of the Medical Consultation Database"
         ii. "Changing TB Isolation Practices: New Guidelines for Molecular Testing"
            1. Will be archived soon, presented on 7/20/16

- Mayo Clinic Center for Tuberculosis
    i. "CDC MDR TB ENM Webinar Series: MDR-CNS"
    ii. "TB in the Federal Corrections System: Status, Challenges, and Opportunities"
- Curry International Tuberculosis Center
    i. "INH and Rifapentine Treatment for LTBI: Expert Opinions about 3HP Utilization"

d. **Upcoming Webinars:**
- SNTC & Curry Center
    i. "GeneXpert: Examples From the Field"
    ii. 7/27/16, 1-2:30 PM Eastern
    iii. Registration link on the presentation
- Mayo Clinic Center for Tuberculosis
    iv. "Tuberculosis and Biologics"
    v. 9/14/16, 1-2 PM Eastern
    vi. Registration not yet open

e. **New Educational Materials on our Website:**
- MDHHS 2016 TB Nursing Certification
    i. www.michigan.gov/tb --> scroll to "education events" on the bottom
        1. Adobe PDF presentations

f. **Upcoming Events:**
- Tri-State TB Clinical Intensive
    i. Audience: Physicians, NP/PAs, RNs, infection control practitioners, and other healthcare professionals working in MI, IN, and OH
    ii. Dates: September 29-30, 2016
    iii. Location: Dearborn, MI, Arab American History Museum
    iv. Registration: Free, online, will open in August
    v. Questions: tbcenter@mayo.edu
    vi. Topics:
        - 9/29: Active TB
            - Diagnosis of Active TB
            - Radiology
            - Treatment of Pulmonary TB
            - Adverse Drug Reactions
            - Extra pulmonary TB
            - Tuberculosis and Viral Hepatitis
        - 9/30: Latent TB
            - Epidemiology
            - Treatment of Latent TB Infection

- Expanded Screening (Primary Care Physician focus)
- TB Class Arrivals as Public Health Approach
- Complex Case Review and Clinical Discussion

II. Presentation: Discordant TST & IGRA Results, Peter Davidson MDHHS

a. *NOTE: this is a new link to the article (the one in my PowerPoint may not work). http://www.atsjournals.org/doi/full/10.1164/rccm.201107-1244OC#.V5E36E32bcs

b. Were the nurses in the study who conducted the TST properly trained and experienced? Quoting from **Methods**: "**Regulatory Information** PPD-B was used as a skin test antigen under an Investigational New Drug Protocol sponsored by the Uniformed Services University in Bethesda, Maryland. The Infectious Diseases Institutional Review Board at Uniformed Services University provided approval and oversight of the study." "**Skin testing** TST and BST were placed by study personnel after the blood draw. All personnel involved in placement and reading of the skin test were trained and monitored to strictly adhere to standard operating procedures based on published methods for skin test administration and interpretation (20, 29). The Mantoux technique was used to intradermally administer 0.1 ml (5 TU) of Tubersol tuberculin PPD (Sanofi Pasteur Ltd., Toronto, ON, Canada) and 0.1 ml (0.01 μg) of PPD-B at the same sitting. One skin test was placed on each forearm. A random number table for each recruitment day determined which PPD was placed on each arm. The transverse diameter of induration at each skin test site was measured 2 days after PPD injection. Participants and those administering and reading the skin tests were masked to which skin test antigen was administered on each arm." Ref 20: CDC. National Health and Nutrition Examination Survey: tuberculosis skin test procedures manual. c2000 [accessed 2008 November 4]. Available from: http://www.cdc.gov/nchs/data/nhanes/tb.pdf. Ref 29: CDC. Mantoux tuberculin skin test: facilitator guide [accessed 2008 November 4]. Available from: http://www.cdc.gov/TB/pubs/Mantoux/images/Mantoux.pdf.

c. What about the study population? Typically military recruits are healthy and at low risk for TB infection, so is the study biased?
Quoting from **Methods**: "**Study Enrollment** After providing written informed consent, recruits originating from all areas of the United States, age 18 years or older, undergoing routine entry-level medical processing at Fort Jackson, South Carolina, were screened for participation in the study. Recruits were excluded from participating if they (*1*) had a history of severe reaction to the TST, (*2*) were pregnant by urine human chorionic gonadotropin testing, (*3*) had received a live virus vaccine within the past 30 days, or (*4*) had a major viral infection at the time of screening." "**Risk factor questionnaire** The TB risk factor questionnaire contained questions about demographics, TB exposure, work history, location of residence, and other factors shown in Table 1. This questionnaire was developed from the risk factors previously identified in the military and nonmilitary literature (20–25), and other factors considered candidates for causal relationships with LTBI." Link to Table 1:

http://www.atsjournals.org/action/showPopup?citid=citart1&id=tbl1&doi=10.1164%2Frccm.201107-1244OC

d. What are the specific quantitative values that make a QFT test result positive and negative?
    i. Because each lab may present QFT results in a different format it is important to know where the quantitative cut off is when reading a test result.
    ii. A QFT is considered negative when the TB Antigen minus the Nil is less than 0.35.
    iii. Here is a chart from the QuantiFERON package insert to help with quantitative interpretations:

Table 2. When Nil, TB Antigen, and Mitogen tubes are used

Nil (IU/ml)	TB Antigen minus Nil (IU/ml)	Mitogen minus Nil (IU/ml)*	QFT result	Report/Interpretation
≤8.0	< 0.35	≥ 0.5	Negative	*M. tuberculosis* infection NOT likely
	≥ 0.35 and < 25% of Nil value	≥ 0.5	Negative	*M. tuberculosis* infection NOT likely
	≥ 0.35 and ≥ 25% of Nil value	Any	Positive†	*M. tuberculosis* infection likely
	< 0.35	< 0.5	Indeterminate‡	Results are indeterminate for TB-Antigen responsiveness
	≥ 0.35 and < 25% of Nil value	< 0.5	Indeterminate‡	Results are indeterminate for TB-Antigen responsiveness
> 8.0§	Any	Any	Indeterminate‡	Results are indeterminate for TB-Antigen responsiveness

* Responses to the Mitogen positive control (and occasionally TB Antigen) can be commonly outside the range of the microplate reader. This has no impact on test results.

† Where *M. tuberculosis* infection is not suspected, initially positive results can be confirmed by retesting the original plasma samples in duplicate in the QFT ELISA. If repeat testing of one or both replicates is positive, the individual should be considered test positive.

‡ Refer to the "Troubleshooting" section for possible causes.

§ In clinical studies, less than 0.25% of subjects had IFN-γ levels of > 8.0 IU/ml for the Nil value.

    iv. As discussed in Dr. Davidson's presentation you should take into account all information about epidemiology, medical history, and risk when interpreting IGRA test results.
    v. Attached is a presentation by Dr. Dana Kissner about interpreting IGRA test results
    vi. Also attached a good resource for interpreting IGRA test results from Heartland National TB Clinic, starts in the middle of page 11-18 (PDF page numbers).

e. What makes T-SPOT borderline?
    i. A borderline test result occurs with T-SPOT tests when there are 5, 6, or 7 spots counted on the panel. Meaning there are too many spots to be considered negative and too few spots to be considered positive.
    ii. A borderline test result could be due to many factors and if you get one the test should be repeated.
    iii. Attached is an algorithm and tables for interpreting T-SPOT test results, from the T-SPOT package insert.

iv. The Heartland TB Resource (from the previous question) also has really good information about T-SPOT interpretation (page 15-16).

III. Open Forum: Billing Patient Insurance for LTBI Services

a. Does your LHD bill insurance for LTBI services?
    i. If so, what services and actives? (TST or IGRA, CXR, liver functions, meds, time, etc.)
    ii. Are you interested in joining a workgroup to investigate if any other states are successfully doing this?

b. Discussion:
    i. What is the ICD code for LTBI services?
        1. Is this something that hospitals and TB clinics can look-up? Like Beaumont or Oakland HD?
    ii. Can you bill for the initial consultation service with a medical director or other services:
        1. Nurse visit in TB clinic
        2. DOT therapy in home
    iii. Peter will look into his notes for more information
    iv. Send Helen an email if you're interested in joining the workgroup with Mari Pat Terpening.