

PIMSA Progress Report

Detection and Follow-up of Latent Tuberculosis Infection (LTBI) among Migrant Workers,
United States and Mexico

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Submitted by

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Background:

This research project is a collaboration of the University of Arizona (UA), Mel and Enid Zuckerman College of Public Health, the University of Monterrey (UDEM), and the Migrant Clinicians Network (MCN). The purpose of this project is to 1) demonstrate utility and feasibility of detection of latent tuberculosis infection (LTBI) among migrant farmworkers and to compare outcomes in the US and Mexico and 2) to assess follow-up of workers detected with LTBI and ability to link individuals to care. Despite the work being conducted on TB, there has been little LTBI on the US-Mexico border. Our previous work in the border region around Monterrey, Mexico (in the border state of Nuevo Leon), has shown high LTBI prevalence (~40%) among close contacts to active TB cases and even higher prevalence in Arizona (62%). We believe that a shift in focus to prevention is necessary, including diagnosis and treatment of LTBI.

Update from University of Arizona

An observational, longitudinal comparative study was performed in the state of Arizona, in the United States with individuals recruited near the Yuma-San Luis border in Arizona. Adult (>18 years) farm or rural workers were invited to participate. Farmworker were restricted to migrant workers using the definition of the Migratory Health Network of principal employment in agriculture on a seasonal basis, and employed as such within the last twenty-four months. In November, 2015 we completed two site visits on the United States and Mexico border to enroll participants into the study. We had four screen failures in which an informed consent was obtained and participation in the study was completed, but the forms were lost (the total recruitment number does not reflect these 4 participants). We enrolled 36 individuals into the study during this time, of which 18 were connected to MCN, for a total of over 100 enrollees since study inception. A manuscript utilizing data from one of the questionnaires is currently in preparation which we hope will be published later this year. We expect to enroll additional participants and offer connection with MCN for follow-up care as requested.

MCN Update

Eighteen participants were directed to the Health Network (HN) project of MCN and a case file was initiated for each one. Every participant was assigned to a Health Network Associate as a part of the Associate's follow up case load. The Associates contacted or attempted to contact each of the participants to provide him/her with testing outcome information. Of the 18 test participants: 5 did not return to receive skin test results, 4 participants have been lost to follow-up (i.e. no phone number, lack of reports), communication has been maintained with 9 of the participants, 4 expressed interest in additional participation with regards to survey follow-up, and 1 requested assistance with a non-TB related health concern.

Update from Universidad de Monterrey

Interaction with Arizona Activities

During the first months of the project, Dr. Francisco Gonzalez traveled to Arizona. The main objective of this travel was to observe the sampling procedures in order to replicate these on the Mexican side. Dr. Gonzalez visited the facilities of the University of Arizona and was in contact with the sampling coordinator and interviewers, as well as personnel performing the screening tests. Finally, Dr. Gonzalez observed the interview process. Samples were incubated in Yuma, Arizona. After incubation, they were refrigerated and then were shipped to Dr. Gonzalez' UDEM laboratory to determine interferon gamma production by ELISA. Specimens were run at the UDEM testing facility, and coded results for US participants provided by email and fax to the Yuma Health Services District.

Mexico Sampling, Follow-up and Linkage to Care

In Mexico, work is being performed in the states of Tamaulipas and Nuevo Leon, with adults >18 years of age who are farmworkers invited to participate. UDEM researchers and the Ministry of Health of Tamaulipas. Work is now underway to begin sampling and recruitment, with the first step for sampling consisting of recording the research protocol and the purchase of reagents for sample processing. Data collection sheets have been reviewed and compiled and clinic administrators contacted to progress with the screening in March, 2016. Currently, personnel training in interviewing and screening is taking place. We are working on the administrative process to travel to Tamaulipas for sampling.

Joint Conference Activities: Attending Binational Health Week

In October 2015 we jointly attended the Binational Health Week of the Border Health Commission of the Mexican Ministry of Health and Research Programme in Migration and Health (PIMSA) This is one of the largest mobilization efforts of community organizations, federal and state agencies and volunteers in the Americas to improve the health and well-being of Latin American migrants in the United States. During the group sessions on infectious disease, one of the main recommendations issued was inclusion of QuantiFERON TB gold in-tube (blood test for LTBI) within the basic framework of the US and Mexican health sector. We were also invited to collaborate with the University of Berkley and Health Initiative of the Americas in binational health project in the area of tuberculosis and diabetes.

Future Plans and Challenges

Our work will continue on both sides of the border as noted above, with Dr. Oren to travel to Monterrey in April to observe some of the activities and fieldwork in Mexico. We have also obtained a new grant to increase our screening activities beyond LTBI and to continue interface with MCN such that the PIMSA work will interface with these new activities. We plan on presenting our findings at the 2016 Border Health Week.

One of the main challenges we have faced is follow-up and retention of individuals in our study. Even with the MCN partnership, adequate individual access to working phones and the ability to locate individuals on the move is an ongoing struggle. However, this work is important, as we believe that by demonstrating the potential for better follow-up of patients with an LTBI diagnosis, and subsequent linkages to care, we will help to prevent future active TB disease.

