

**TITLE:** PULMONARY TUBERCULOSIS IN PRISONS OF THE WESTERN SÃO PAULO STATE BETWEEN 2014 AND 2015.

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Tuberculosis (TB) is a major problem that affects global health and ranks second among the leading causes of death from infectious disease, behind only the Human Immunodeficiency Virus. The occurrence of TB in prisoners is an important public health problem and difficult to control in Brazil and worldwide. This study aimed to assess the prevalence of pulmonary tuberculosis and Rifampin Resistance in four prisons (A, B, C and D) in Western São Paulo State. The retrospective study was conducted by analyzing 2,761 samples from patients treated from September 2014 to September 2015 in the area covered by the Regional Laboratory Center IAL Presidente Prudente-V. The samples were analyzed by Molecular Rapid Test (TRM) - GeneXpert® System and automated liquid culture MGIT Becton Dickinson (BD) with decontamination using the Petroff method. From 2761 samples, 1,614 samples were processed for both methods. For the TRM, TB prevalence was 61 (3.85%) and the culture method positivity was 71 (4.48%). Among the 20 positive samples in culture and not detected in TRM GeneXpert® MTB / RIF, the strains were identified as: 14 Complex *M. tuberculosis*; 2 *M. abscessus* subsp. *abscessus*; 1 *M. goodnae*; 1 *M. branderi*; 1 *M. triplex* and 1 did not grow in identification test. Based on the positive results were identified two (0.07%) patients with resistance to rifampin antibiotic, one of which belongs to the Penitentiary A and the second Penitentiary B. In both samples, the sensitivity test to confirm the result was not carried out. Among the samples submitted, 1,147 (41.54%) were insufficient and inadequate to process in both tests in parallel. It lead us to reflect not only on the necessity to carry out some actions towards the training of health professionals staff working in prisons, but also on the quantity and quality of samples collected and sent for diagnosis of TB, as well as to evaluate the possibility of preparing samples to the TRM with the sample substrate prepared for culture, since the use of the culture means an increase of 0.25% in the diagnosis of TB.

**Keywords:** *Mycobacterium tuberculosis*, Penitentiary system, prevalence, real-time PCR, Tuberculosis.

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