infection in demographically similar populations based on BCG immunization policy and thus further supports efficacy of BCG for prevention of tuberculosis infection.

Disclosures. All authors: No reported disclosures.

762. Sex Differences in the Epidemiology of Tuberculosis in Tunisia
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Background. According to WHO, many more men than women are diagnosed with tuberculosis (TB) and die from it globally. In light of this fact, examining the gender differences among patients with TB is important to institute effective prevention, coverage and treatment. We aim to study sex differences in the epidemiology and clinical specificities of TB.

Methods. We conducted a retrospective study of patients with TB, of all ages between January 1995 and December 2016. Data were collected from the regional register of tuberculosis implanted at the anti tuberculosis center ATC of Sfax, Southern Sfax.

Results. We recorded 2,771 new cases of TB. Sex ratio was 1.2. Pulmonary Tuberculosis (PT) represented 40.5% of all cases of TB ($n = 1,121$) and was 2.5 times more frequent in men than women (50.3% vs. 28.7%; $P < 0.001$). The sex ratio for extra-pulmonary tuberculosis (EPT) was 0.83. Lymph node and abdominal TB were significantly more frequent in women with respectively 52.5% (vs. 37.4%; $P < 0.001$) and 12.6% (vs. 9.1%; $P = 0.025$). Pleural and urogenital TB were significantly more common in men (20.3% vs. 8.9%; $P < 0.001$ and 13.4% vs. 9.8%; $P = 0.023$ respectively). We did not found any gender differences in other EPT forms. Between 1995 and 2016, overall TB ($P = 0.001$; rho = 0.64), EPT ($P = 0.02$; rho = 0.63) and PT ($P = 0.03$; rho = 0.46) cases were increasingly notified in women while they were stable in men. Death rates were significantly more important in men (3.5 vs. 2.1; $P = 0.02$). Women experienced recovery more frequently (89.2% vs. 86.7%; $P = 0.04$) and duration of treatment was significantly higher in women (9 months vs. 8 months; $P < 0.001$).

Conclusion. Our study highlighted sex differences of TB in the region of Sfax with a higher burden and morbidity in men. National TB programs should actively focus in these results with more routine diagnostic and screening.

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763. Risk Factors for Homeless Status and Mortality Among Homeless TB Cases in Texas, 2010–2017
Saroochi Agarwal, PhD, MSPH; Duc T. Nguyen, MD, PhD and Edward A. Graviss, PhD, MPH, FIDSA; Houston Methodist Research Institute, Houston, Texas

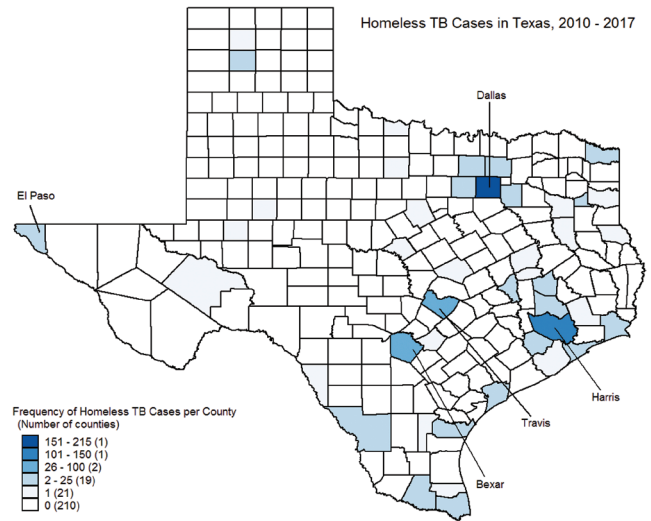**Session:** 70. Tuberculosis and Other Mycobacterial Infections
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Background. A disproportionate amount of tuberculosis (TB) cases and mortality occur among people experiencing homelessness in the United States. Our objective was to identify risk factors for mortality among reported homeless TB cases in Texas, a state with an increased TB prevalence in the United States.

Methods. Using data from the Centers for Disease Control and Prevention TB Genotyping Information Management System (TB GIMS), we evaluated the demographic, laboratory and clinical characteristics of people identified as being homeless in the year preceding TB diagnosis in Texas from January 1, 2010 to December 31, 2017. TB cases with missing or unknown homeless status were removed from the analysis. Multivariate logistic regression was used to analyze and evaluate risk factors associated with homeless status and mortality among homeless TB cases.

Results. Of the 10,103 newly diagnosed TB cases over the 8-year period, 543 (5.4%) were reported as being homeless in the year preceding TB diagnosis. In 412 homeless TB patients with a reported outcome as "died" or "completed," 57 (13.8%) died during treatment and 355 (86.2%) completed therapy. Age >45, male, black ethnicity, foreign-born, urban living, excessive alcohol consumption, IDU, long-term care facility resident, diabetes, previous TB, and pulmonary TB were associated with homeless TB cases. Being homeless and having TB increased the risk of mortality compared with having TB alone (OR 2.26, $P < 0.01$). Age >45 years, positive HIV status, cavitary and miliary radiographic findings, no or unknown culture conversion and TB case confirmation by a positive culture/NAA/smear compared with clinical case definition/provider diagnosis were independent risk factors for mortality among homeless TB cases in Texas.

Conclusion. Being homeless increased the risk of TB mortality by nearly 130% compared with being housed prior to TB diagnosis. Our findings indicate that homelessness may be being diagnosed and treated in more advanced TB diseased homeless individuals who probably have poorer health due to the stresses of poverty, comorbidities, and lack of access to healthcare, leading to higher mortality. Additionally, testing and treatment for HIV among those reporting homelessness may reduce mortality among this high-risk group.

Homeless TB Cases in Texas, 2010 - 2017

Frequency of Homeless TB Cases per County
(Number of counties)
- 151 - 215 (1)
- 101 - 150 (1)
- 26 - 100 (2)
- 2 - 25 (19)
- 1 (21)
- 0 (210)

Disclosures. All authors: No reported disclosures.

764. Impact of Diabetes Mellitus on the Presentation and Response to Treatment of Adults With Pulmonary Tuberculosis in Qatar
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Background. Persons with diabetes mellitus (DM) have a 3-fold increased risk of TB. Vitamin D deficiency also is associated with a 4-fold increase in risk of progression of TB from latent TB infection to active TB. Qatar is an oil rich country with high prevalence of diabetes, obesity, and vitamin D deficiency. We aimed to evaluate the effect of diabetes mellitus on manifestations and response to treatment in adults with DM and TB.

Methods. Retrospective national hospital-based study of adult from January 2007 to December 2011, comparing TB-infected patients with and without DM.

Results. Of 134 adults with DM and TB, 62 (47%) became culture negative after 8 weeks of anti-TB treatment compared with 84 (72%) patients without DM. Patients with DM had more frequent lower lobe disease (28% vs. 17%, $P = 0.03$). Week 8 sputum culture conversion did not differ between patients by the degree of dysglyemia at time of diagnosis and onset of anti-TB treatment (70% vs. 46%, $P = 0.09$).

Conclusion. Diabetes mellitus was associated with delayed sputum culture conversion at two month and atypical radiological findings in adults with pulmonary TB in Qatar. Glycemic control had no effect on week-8 sputum culture conversion.

Disclosures. All authors: No reported disclosures.

765. Tuberculosis and Diabetes Mellitus Among Prison Inmates in Peru: Results of a National Survey, 2016
Daniel Rojas-Bolivar, MD[1]; Zheng Zhu, PhD[2]; Yamilee Hurtado, PhD[3]; Milagros Zavaleta, MSc[1]; Jorge Sanchez, MD, MPH[1,4]; Roman Jandarov, PhD[2]; Jorge Alarcon, PhD[1] and Moises Huaman, MD, MSc[1,5]; [1]Centro de Investigaciones Tecnológicas, Biomédicas y Medioambientales, Callao, Peru, [2]Division of Biostatistics and Bioinformatics, Department of Environmental Health, University of Cincinnati, Cincinnati, Ohio, [3]Boca Raton. Clinical Research Global Peru, Lima, Peru, [4]Asociación Civil Impacta Salud y Educación, Lima, Peru, [5]Division of Infectious Diseases, Department of Internal Medicine, University of Cincinnati, Cincinnati, Ohio

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Background. Diabetes mellitus (DM) increases the risk of tuberculosis disease (TB) and is associated with poor TB treatment outcomes in the general population. We examined the relationship between TB and DM in prison inmates in Peru.

Methods. We analyzed data from a cross-sectional, national survey of adult prison inmates in Peru conducted in 2016. The survey collected sociodemographic

and medical information via standardized interview. Medical conditions were defined by self-report. We used multivariate logistic models for adjusted analyses of the relationship between TB and DM.

Results. Of 75,971 inmates, 3,104 (4.3%) reported a history of TB diagnosis. Table 1 shows the characteristics of the TB and non-TB groups. The prevalence of DM was higher in the TB group compared with the non-TB group (4.2% vs. 2.4%; $P < 0.001$). In multivariate analysis, DM was associated with twice the odds of having had a diagnosis of TB (adjusted OR = 2.2; 95% CI: 1.8–2.7). Male sex, Spanish language, no college/university education, reimprisonment, hypertension, and HIV infection were also associated with increased odds of prevalent TB (Figure 1).

Conclusion. There was a high prevalence of TB among prison inmates in Peru. DM was associated with an increased likelihood of prevalent TB. Our results are consistent with findings in noninstitutionalized populations and underscore the need to implement aggressive screening and treatment interventions for both TB and DM in prison settings.

Table 1: Characteristics of TB and Non-TB Groups in Peruvian Prisons

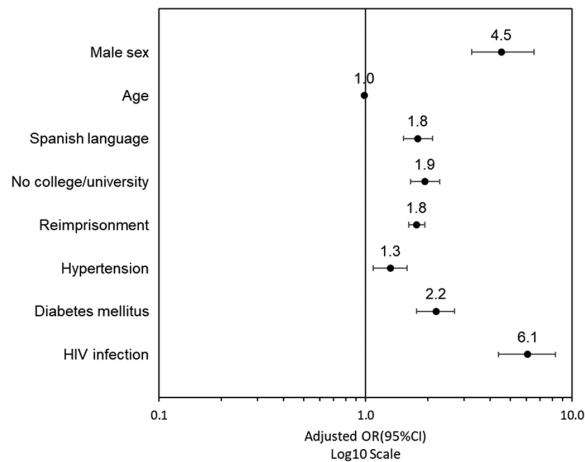| Variables	TB group $N = 3,104$	Non-TB group $N = 72,331$	P-value
Age in years, mean ± SD	35.1 ± 10.4	36.1 ± 11.5	<0.001
Male sex, n (%)	3,053 (98.3)	68,516 (93.8)	<0.001
College/University education, n (%)	8,996 (6.6)	201 (12.7)	<0.001
Spanish language, n (%)	2,893 (93.2)	64,295 (88.2)	<0.001
Reimprisonment, n (%)	723 (27.0)	9,110 (16.2)	<0.001
Hypertension, n (%)	175 (4.7)	3,399 (5.6)	0.011
Diabetes mellitus, n (%)	131 (4.2)	1,766 (2.4)	<0.001
HIV infection, n (%)	65 (2.1)	251 (0.3)	<0.001

Figure 1. Factors associated with TB in Peruvian prisons

Disclosures. All authors: No reported disclosures.

766. Migration Flows and Increase of Extrapulmonary Tuberculosis in a Low Prevalence Setting: A Retrospective Analysis in Two Italian Centers

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Background. Extrapulmonary tuberculosis (EPTB) represents 25% of Worldwide tuberculosis and it is more commonly associated with immunodepression. The purpose of this study was to determinate the burden of EPTB in a low TB prevalence setting.

Methods. A retrospective evaluation of patients treated for TB at Tor Vergata Hospital and Terni Hospital (Italy) from January 2013 to November 2017 was done. Clinical charts, laboratory tests and radiological findings were reviewed and analysed. Data were elaborated using Yates' method analysis, Fisher test and Pearson's chi-square test.

Results. A total of 171 patients were enrolled from 2013 to 2017 in two Italian centers (Rome and Terni); 71% were males, with a mean age of 41.5 years. The number of TB diagnosis increased among the study period (6.6% in 2013 vs. 56% in 2017) and an increase of EPTB (23% in 2013 vs. 44% in 2017) was seen. Most commonly EPTB presented as generalized lymphadenitis (34%), osteomyelitis and spondylodiscitis (28%) and other sites localizations (31%). Statistical analysis revealed a significant correlation between geographical provenience and TB localization ($P = 0.004$). Extra

European immigrants (76% Africans) resulted at higher risk of EPTB (OR 2.31; CI 95% 0.63–8.46), while being Caucasian showed a protective role toward EPTB development ($P = 0.001$). The risk of EPTB doubled in 2015–2017 respect 2013–2014.

Conclusion. From 2013 to 2017 an increase in TB admissions was documented with a significant higher number of EPTB cases, particularly in extra-European immigrants. The doubled risk in 2015–2017 was likely the consequence of the recent ongoing escalating levels of migration from African countries and may result as an emerging Public Health problem.

Disclosures. All authors: No reported disclosures.

767. A 7-Year Retrospective Study of Pediatric Tuberculosis in a Third-Level Hospital in Mexico City

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Background. According to WHO data, in 2016 10.4 million people were infected with tuberculosis (TB), from which one million were patients ≤18 years, and 250,000 deaths. The diagnosis of TB in pediatric patients is a challenge given the clinical behavior.

Methods. This is a retrospective, descriptive, and observational study of patients under 18 years treated at the TB Clinic at Department of Pediatric Infectious Diseases in the National Institute of Pediatrics (INP) in Mexico City during the period 2011–2018.

Results. A total of 118 cases were included; 64 (54.5%) were male, and the average age at diagnosis was 79.45 ± 63.7 months. The most frequent presentations were; lymph node in 50 (42.4%) cases, followed by skeletal 20 (16.9%), pulmonary 16 (13.6%), meningeal 11 (9.3%), abdominal 6 (5.1%), cutaneous 6 (5.1%), and miliary 4 (3.1%). The most common symptoms were fever (52%) and lymphadenopathy (49%). TST was applied in 42 cases (55% positive). A positive COMBE was reported in 47.5% of patients. We performed: GeneXpert® in 33 (28%) cases with 36% positive results; biopsy in 74 (62%) cases with 92% positive cases; and Ziehl-Neelsen stain in 30 (25.4%) cases with 26% positive results. Positive cultures (41%) isolated: *M. bovis* 25 (52.4%), followed by MTB complex in 9 (19%), *M. tuberculosis* 7 (14.3%) and atypical *Mycobacteria* with 7 (14.3%) cases. The most frequent treatment was: INH (98.2%), RIF (95.5%), E (85.6%) and PZA (77.5%) with an average of 6.3 months during intensive phase and 10.1 months of maintenance. Primary immunodeficiency (PID) was detected in 33 (20.3%) cases, mainly: chronic granulomatous disease in 15 (45.5%), Mendelian susceptibility to Mycobacterial diseases was found in 8 (24.2%) and severe combined immunodeficiency in 7 (21.2%). Overall mortality was 2.5%.

Conclusion. Tuberculosis in Mexico is still a major health problem and thus is important to remain suspicious of it. This is the first report in Mexico where immunodeficiency is investigated in pediatric patients with tuberculosis, detected in one out of five cases, which stresses the need of its search, given this can modify the outcome.

Disclosures. All authors: No reported disclosures.

768. Epidemiological and Clinical Profile of Miliary Tuberculosis in Southern of Tunisia

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Background. Miliary tuberculosis (MT) is a severe rare form of tuberculosis (TB). It is often due to lymphohaematogenous dissemination of tubercle bacilli. Although the global incidence of TB has been slowly decreasing with globally conducted program, MT incidence is relatively increasing owing mainly to widespread use of immunosuppressive drugs and HIV/AIDS pandemicity. Few reports were found regarding epidemiological data of MT in developing countries. We aim to evaluate epidemiological characteristics of MT in the region of Sfax Southern Tunisia.

Methods. We conducted a retrospective study of all new cases of MT of all ages between January 1995 and December 2016. Data were collected from the regional register of tuberculosis implanted in the anti-tuberculosis center of Sfax.

Results. We analyzed 22 patients with MT accounting for 0.8 of all cases of tuberculosis. Incidence rates of MT were stable over the 22-year study period. Their median age was of 41 years (IQR= [17–63.5]) and a half of them were females. MT was significantly more common in patients less than 15 years (2.4% vs. 0.7%; OR=3.5; $P = 0.04$). Six patients (27.3%) had extra-pulmonary locations with lymph nodes ($n = 1$), meninges ($n = 2$), bones and joints ($n = 1$), abdominal cavity ($n = 1$), and pleura ($n = 1$). One patient (4.5%) died within 8 months after a confirmed diagnosis. Median duration of treatment was 10 months (IQR = [6–15 months]). The outcome was favorable in 19 cases (86.4%) and three patients received a combined-drug regimen (13.6%).