776. Tuberculosis Screening Among People Living With HIV in Arkansas: A Ryan White Program Evaluation

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Background. The current TB screening practice among people living with HIV in the United States is understudied. In our preliminary study, we found that only 6 (12%) US states recommended TB screening in their HIV guidelines and only half of the Ryan White Programs capture client TB status. In this ongoing project, we aim to determine the prevalence of TB screening among people living with HIV in Arkansas, inform policy revisions, and ultimately reduce the burden of TB-HIV comorbidity.

Methods. We generated a sample of patients who received Ryan White service during the last grant year (April 1, 2016 to March 31, 2017) from CAREWare (Ryan White client database). We reviewed these patient files in multiple site visits and collected data on TB screening practice. We then performed descriptive analysis and multivariate logistic regression to analyze TB screening patterns in Arkansas.

Results. To date, we reviewed 728 patient records from 22 clinics across Arkansas during a 6-month study period. Three hundred sixty-seven (50%) patients have baseline HIV diagnosis. TB status. Of the multivariate logistic regression model (adjusting for age, gender, race, and patient residence), TB screening among Ryan White patients vary significantly by clinical regions in Arkansas (P < 0.0001). As compared with the central region, HIV patients in the North Central clinical regional are more likely to be screened for TB (OR, 23.28; 95% CI, 5.29, 102.49); and HIV patients in the Northeast clinical region are less likely to be screened (OR, 0.05; 95% CI, 0.01, 0.30).

Conclusion. We observed in Arkansas (1) low adherence to recommendations for TB screening among people living with HIV and (2) insufficient HIV surveillance infrastructure to capture TB status, and (3) geographic variations in TB screening practice among people with HIV, indicating the need for (1) clearer guidelines, (2) stronger TB education among providers, and (3) program collaboration and service integration between TB and HIV. In our next steps, we want to explore further into the regional variations in TB screening among people with HIV, in order to tailor interventions to different geographic regions. We also want to examine changes in TB screening practice after implementation of the new contract, and to determine the optimal frequency of TB screening among people living with HIV.

Disclosures. All authors: No reported disclosures.

777. Ten-Year Experience of Tertiary Hospital Regarding Epidemiology, Diagnostic Method, and Drug Resistance of Tuberculosis—Jeddah, Saudi Arabia

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Background. As the most severe form of tuberculosis (TB), TB meningitis (TBM) is still associated with high mortality even in developed countries. In certain US states more than 50% of the TBM patients eventually die or have neurological complications despite having advanced healthcare settings. This population-based analysis aimed to determine the risk factors and trends associated with TBM morbidity and mortality using state-wide surveillance data.

Methods. A de-identified surveillance data of all confirmed TB patients from the state of Texas reported between January 2010 and December 2017 to the National TB Surveillance System was analyzed. Spatial distribution of TBM cases was presented by Statistical Geographic Information Systems mapping. Univariate and multivariate logistic regression were used to identify risk factors associated with meningitis morbidity and mortality. Non-parametric trend testing was used for the morbidity and mortality trends.

Results. Among 10,103 TB patients reported from Texas between 2010 and 2017, 192 (1.9%) had TBM. Over the 8-year period, TBM proportion fluctuated between 1.5% and 2.7% with peaks in 2011 (2.7%) and 2016 (2.1%) and an overall trend x = –1.32, P = 0.19. TBM had higher mortality at diagnosis (8.9%), during treatment (20.3%) and overall (22.9%) than non-TBM (1.9%, 6.8%, and 7.2%, respectively, P < 0.001). While the mortality during treatment was unchanged overtime in non-TBM patients (z=0.5, P = 0.62), it has consistently increased in TBM patients since 2013 (z=-3.09, P = 0.002). TBM patients had more than 7 times the odds for overall death in multivariate analysis [OR 7.25 (95% CI 4.64, 11.33), P < 0.001]. TBM patients were younger, more likely to present with miliary TB (+) and HIV (+). Age ≥45 years, resident of a long-term care facility, IDU, diabetes, chronic kidney disease, abnormal chest radiograph, positive AFB smear or culture, culture not converted from positive to negative, and HIV (+) were independently associated with a higher mortality.

Conclusion. TBM remains a challenge in Texas with significantly higher mortality. Risk factors determined by multivariate modeling will inform health professionals and lay a foundation for the development of more effective strategies for TB prevention and management.