HIV-TB Co-infection in Arizona from 1993–2016

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Introduction

Key risk factors for tuberculosis (TB) in the United States include HIV-positive status, birth outside of the U.S., incarceration and homelessness. Despite advances in antiretroviral therapy (ART) and declining HIV-TB comorbidity, TB remains an important opportunistic infection for all people living with HIV. Few studies exist which characterise HIV-TB co-infection in geographic populations within the U.S. In this study, we cross-reference the HIV and TB registries in Arizona from 1993 through 2016 and compare features of HIV-TB co-infected individuals with HIV-negative TB cases and the broader population living with HIV.

Methods

Case records were identified by cross-referencing two separate databases maintained by the Arizona Department of Health Services, the Report of Verified Case of Tuberculosis (RVCT) and Enhanced HIV/AIDS Reporting System (eHARS). Data were organized and analyzed in SAS and comparisons evaluated with Pearson chi-square test.

Results

We describe HIV-TB co-infection in Arizona through comparison of variables from the eHARS and RVCT databases. These data describe the influence of risk-factors for HIV and TB disease on the population with co-morbidity, and identify vulnerable populations with respect to transmission of these infections and negative TB-related health outcomes. Notable findings include:

- Total TB cases diagnosed among people living with HIV in Arizona are decreasing despite increasing prevalence of HIV. This is likely explained by impactful public health interventions to fight TB transmission and the success of HAART.
- The nature of HIV-TB comorbidity in Arizona reflects many characteristics of nationwide HIV-TB comorbidity including high proportions of men and individuals age 25-44, and rates of extrapulmonary TB compared to HIV-negative TB cases, and the important roles of incarceration and homelessness as risk factors.
- Features which differ from national trends include a larger proportion of foreign-born individuals with HIV-TB comorbidity, and a higher proportion of hispanic individuals among those affected by HIV-TB co-morbidity.
- Immigrants from Mexico are a key population among those with HIV-TB comorbidity, driven by patterns among all Arizonans with a TB diagnosis. This may be a population for continued attention among public health efforts.

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