

Publication

A bundle of services increased ascertainment of tuberculosis among HIV-infected individuals enrolled in a HIV cohort in rural sub-Saharan Africa

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To report on trends of tuberculosis ascertainment among HIV patients in a rural HIV cohort in Tanzania, and assessing the impact of a bundle of services implemented in December 2012, consisting of three components: (i) integration of HIV and tuberculosis services; (ii) GeneXpert for tuberculosis diagnosis; and (iii) electronic data collection.; Retrospective cohort study of patients enrolled in the Kilombero Ulanga Antiretroviral Cohort (KIULARCO), Tanzania.; HIV patients without prior history of tuberculosis enrolled in the KIULARCO cohort between 2005 and 2013 were included. Cox proportional hazard models were used to estimate rates and predictors of tuberculosis ascertainment.; Of 7114 HIV positive patients enrolled, 5123 (72%) had no history of tuberculosis. Of these, 66% were female, median age was 38 years, median baseline CD4+ cell count was 243 cells/μl, and 43% had WHO clinical stage 3 or 4. During follow-up, 421 incident tuberculosis cases were notified with an estimated incidence of 3.6 per 100 person-years (p-y) [95% confidence interval (CI) 3.26-3.97]. The incidence rate varied over time and increased significantly from 2.96 to 43.98 cases per 100 p-y after the introduction of the bundle of services in December 2012. Four independent predictors of tuberculosis ascertainment were identified: poor clinical condition at baseline (Hazard Ratio (HR) 3.89, 95% CI 2.87-5.28), WHO clinical stage 3 or 4 (HR 2.48, 95% CI 1.88-3.26), being antiretroviral naïve (HR 2.97, 95% CI 2.25-3.94), and registration in 2013 (HR 6.07, 95% CI 4.39-8.38).; The integration of tuberculosis and HIV services together with comprehensive electronic data collection and use of GeneXpert increased dramatically the ascertainment of tuberculosis in this rural African HIV cohort.

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