

The Impact of Treatment of Latent Tuberculosis on the Incidence: The Case of Algeria

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Abstract : We present a deterministic model which describes the dynamics of tuberculosis in Algerian population where the vaccination program with BCG is in place since 1969 and where the WHO recommendations regarding the DOTS (directly observed treatment, short course) strategy are in application. The impact of an intervention program, targeting recently infected people among all close contacts of active cases and their treatment to prevent endogenous reactivation, on the incidence of tuberculosis, is investigated. We showed that a widespread treatment of latently infected individuals for some years is recommended to shift from higher to lower equilibrium state and thereafter relaxation is recommended.

Keywords : deterministic model, reproduction number, stability, tuberculosis

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