The impact of Tuberculosis interventions in Korea

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ABSTRACT

Objectives: Tuberculosis (TB) is an infectious disease, one of the top 10 causes of death worldwide. Despite the effort of government, Korea is still suffering from high mortality rate due to TB, ranking first among OECD countries. This study aimed to evaluate the effects of intervention strategies to control number of incidences of new and retreating TB patients.

Method: A deterministic model was developed for the TB transmission in Korea. A SEIT (susceptible-exposed-infectious-treating) model with some additional compartments were constructed. The effects of different intervention strategies such as active case finding, treatments success rate, preventive treatment, and hospital delay control were evaluated.

Result: The model suggested that active case finding had biggest impact on reducing incidences and decreasing trend of new cases is expected to slow down.

Conclusion: Intervention and efforts reduce number of new cases of TB, but due to large number of low risk latent, dramatic effect of control is not expected.

Keywords: Pulmonary Tuberculosis, transmission dynamics, infection control