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Using System Dynamics tools to gain insight into intervention options related to the interaction between tobacco and tuberculosis

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India. Results of the Bombay Cohort Study. Belapur, India: Healis, Sekhsaria Institute for Public Health; 2005. Schneider NK , Novotny...India. Results of the Bombay Cohort Study. Belapur, India: Healis, Sekhsaria Institute for Public Health; 2005. 33. Schneide. Tobacco exposure is an important risk factor for tuberculosis (TB) when considering its effects on population-level disease outcomes. If we hope to gain control over TB globally, we must begin to think 'outside of the box' to identify an extended and multi-faceted intervention strategy that is grounded in an understanding of the particular ways in which key risk factors worsen TB. In light of the role of tobacco exposure as an important, identifiable, modifiable, and preventable risk factor for TB, efforts aiming at reducing tobacco use merit inclusion in such a comprehensive TB control program. The goal of this paper is to share the conceptual framework we have developed using System Dynamics methodology, which diagrams the likely effects of tobacco exposure on TB dynamics in a typical low-income country setting. Using this framework as a guide, we leverage an understanding of the likely mechanisms by which tobacco exposure affects TB risk to systematically explore TB control intervention options. We hope that this paper will help inspire new approaches to extend and enhance traditional TB control efforts. We also hope that the conceptual framework will spark further discussion and research on this important and potentially explosive combination of global public health crises.