998-92-94   **Fabio Augusto Milner*** (`milner@purdue.edu`), Department of Mathematics, 150 North University Street, West Lafayette, IN 47907-2067, and **Zhilan Feng** and **Mimmo Iannelli**. *A control model for tuberculosis and other infectious diseases.* Preliminary report.

We consider a deterministic model for the spread of an infectious disease such as tuberculosis in a population that is structured according to disease clases: susceptible or unexposed, exposed or latent (but non-infective), infective individuals with active tuberculosis, and recovered. The exposed and infective individuals are structured by the length of time since their exposure to the bacillus. The population is not assumed to be closed to migration. Two different control problems are studied, one through random screening of non-infective individuals, and the other through that of inmigrants. An analysis of the long-term dynamics of the disease in the population is carried out through linearization about the steady states. Results from simulations will be presented to show the impact of control. (Received February 13, 2004)