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Study on HIV transmission among intravenous drug users

The intravenous-drug-using community has been strongly affected by the HIV virus, and can further contribute to the transmission of AIDS in the non-drug-using community. It has also been indicated that IV-drug users provide a major link between the heterosexual and the homosexual population, thus affecting HIV prevalence in many different population classes. As a result, methods to reduce or remove HIV infections among IV-drug users need to be considered. In this talk, a model for HIV transmission among intravenous drug users is studied. Several control methods are introduced and analyzed. In each case, a stability analysis of the disease-free equilibrium point may provide an estimation of the effectiveness of the control method.