

Behavior stability in two SIR-style models for HIV

ABSTRACT

In this article we want to compare the SIR model with the modified SIR model for HIV describing behavioral. In the modified SIR model for HIV we assume that high-infective and higher-infective individuals in infective class I to inter I1 and I2 classes. At last, we can say that the modified SIR model have bigger or equal stability region in comparison with the SIR model.

Keyword: Stable; Reproductive number; Disease-free equilibrium; Endemic equilibrium