

## **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