Software & modeling frameworks:

Stella: software for simulating dynamical systems; easy to use icon-based graphical interface.
http://www.iseesystems.com/softwares/Education/StellaSoftware.aspx

Berkeley Madonna: software for modeling and analyzing dynamic systems; good for modeling deterministic computational models.
http://www.berkeleymadonna.com/

statnet: a modeling framework for network estimation and simulation.
http://csde.washington.edu/statnet/

STDSIM: a dynamic stochastic simulation model for decision support in attempts to control sexually transmitted diseases.
http://portal.acm.org/citation.cfm?id=768041

HIV-1 Transmission Risk Model
The HIV-1 Transmission Risk Model **[**http://sprc.washington.edu/services/docs/HIV-1%20Transmission%20Risk%20Model.xls**]** is an Excel spreadsheet used to calculate the expected number of new infections that a HIV-positive study participant would transmit within a specific period of time on the basis of a description of the current patterns of sexual behavior and clinical characteristics and distribution of HIV and STD infections within the population. This model helps the user explore various behavior and treatment influences on the pattern of infection in the population of interest, and identifies factors that may reduce new infections and that can be expected to help plan prevention interventions.

The HIV-1 Transmission Risk Model Manual [http://sprc.washington.edu/services/docs/TransmissionRiskModelManual.doc] provides step-by-step instructions on data requirements and data entry. Included in the manual are the survey items that relate specifically to the model parameters (Appendix A), and the data collection forms for the chart review data (Appendix B). Finally, the complete data collection instrument **[**http://sprc.washington.edu/services/docs/TransmissionRiskDataCollectionInstrument.doc**]** is provided as a reference for additional sexual behavior items.

HIV tools research group: a toolkit "HIVTools" which comprises a range of dynamic, user-friendly mathematical models that can be used to estimate how different interventions impact on patterns of STI and HIV transmission.
http://www.hivtools.lshtm.ac.uk/models.htm