Determination of the treatment-free aids incubation distribution using a system dynamics optimisation tool.

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It is necessary to establish the form and parameters of the AIDS incubation distribution, not only because this is an essential facet of any model of AIDS spread, but also because it can then be used as a benchmark against which to assess the effcet of new treatments in lengthening the mean incubation time. Data from AIDS patients infected via transfusion of contaminated blood are used to fit a multicohort model which evaluates several candidate distributions. A best fit distribution is offered. Emphasis is also given to the resolution of various modeling complications involved, one of which is the data discontinuity caused by the introduction of routine screening of blood donations for HIV in 1985.