

S5 Text. Transition probabilities for the ABM.

Table S1. Transition Probabilities used in the ABM

Model	Transition Probability	Notes
Pure Zoonotic Spillover (Simple Poisson model)	$\Lambda_R \tau / N_H$	the rate of change in the limiting Poisson process is therefore the constant $\lambda(t_j) = \Lambda_R \tau$
Zoonotic Spillover with depletion of susceptibles (Self-Correcting Poisson)	$\Lambda_R \tau / S_H$	the rate of change in the limiting Poisson process is therefore the constant $\tilde{\lambda}(t_j) = \Lambda_R \tau$
Human-to-human transmission (Self-Exciting Poisson)	$\Lambda_H \tau / S_H$	the rate of change in the limiting Poisson process is therefore the time-dependent $\hat{\lambda}(t_j) = \Lambda_H \tau$
Zoonotic Spillover with human-to-human transmission (Poisson with Feedback)	$\Lambda_R \tau / S_H$ and $\Lambda_H \tau / S_H$	the rate of change in the limiting Poisson process is therefore the time-dependent $\hat{\lambda}(t_j) = (\Lambda_R + \Lambda_H) \tau$