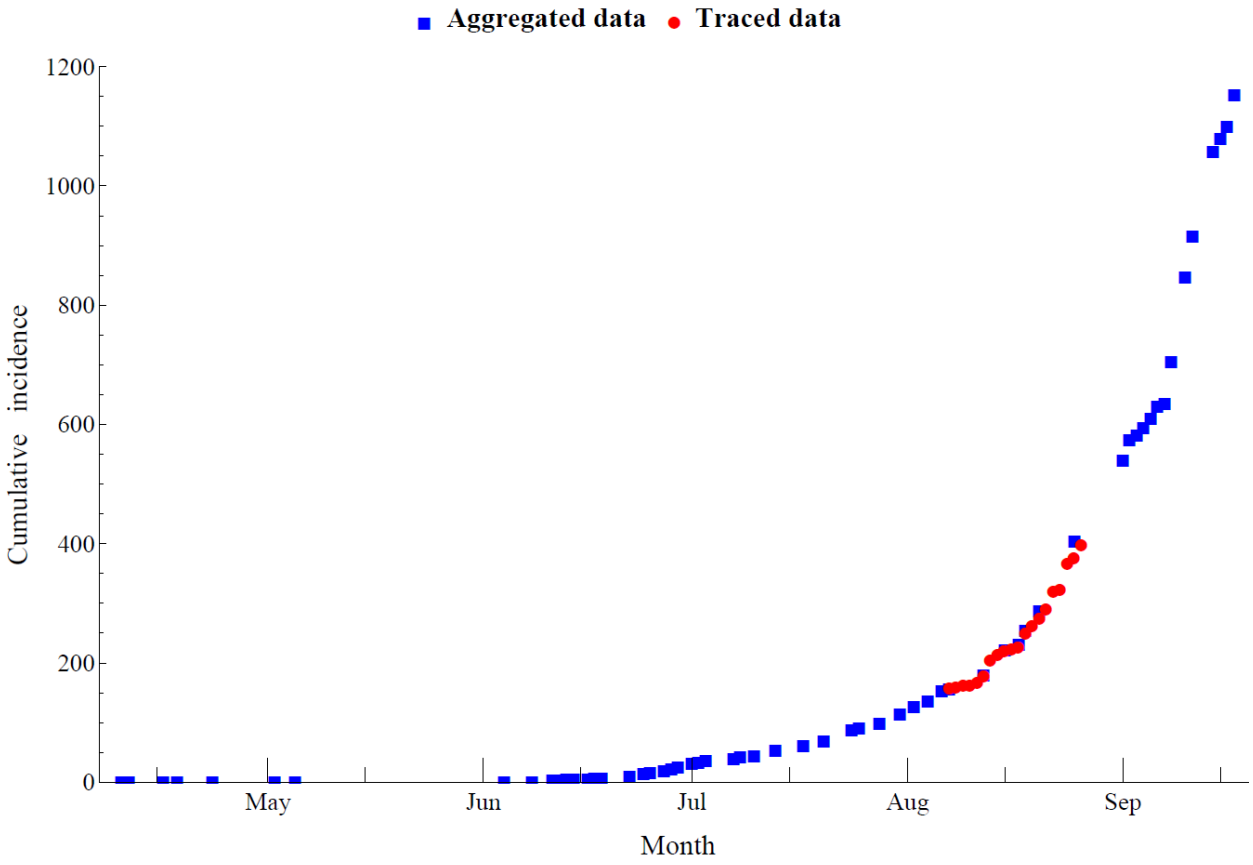
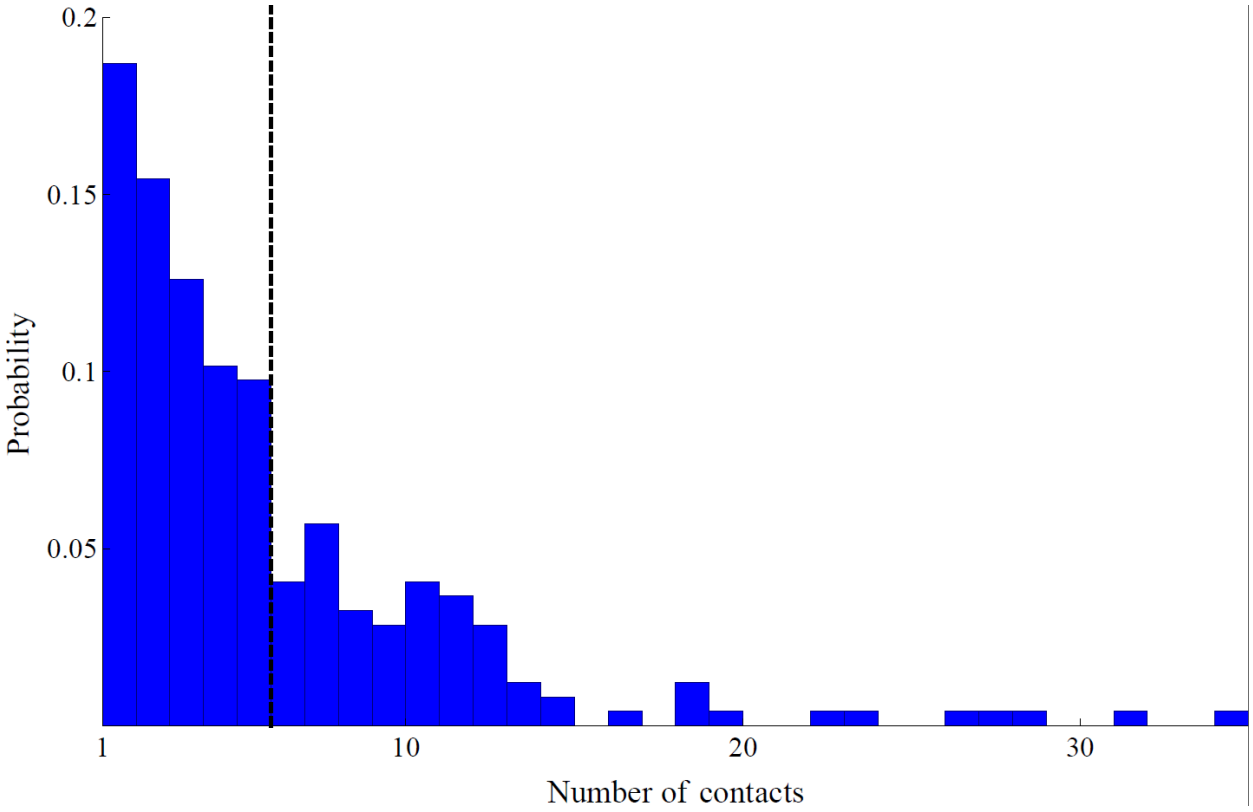
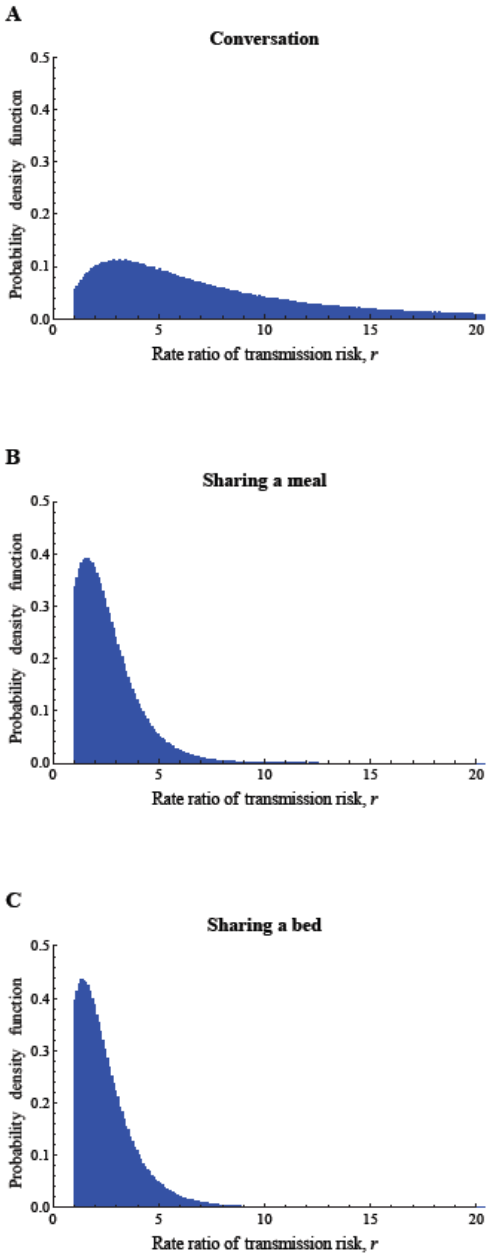
Appendix 1



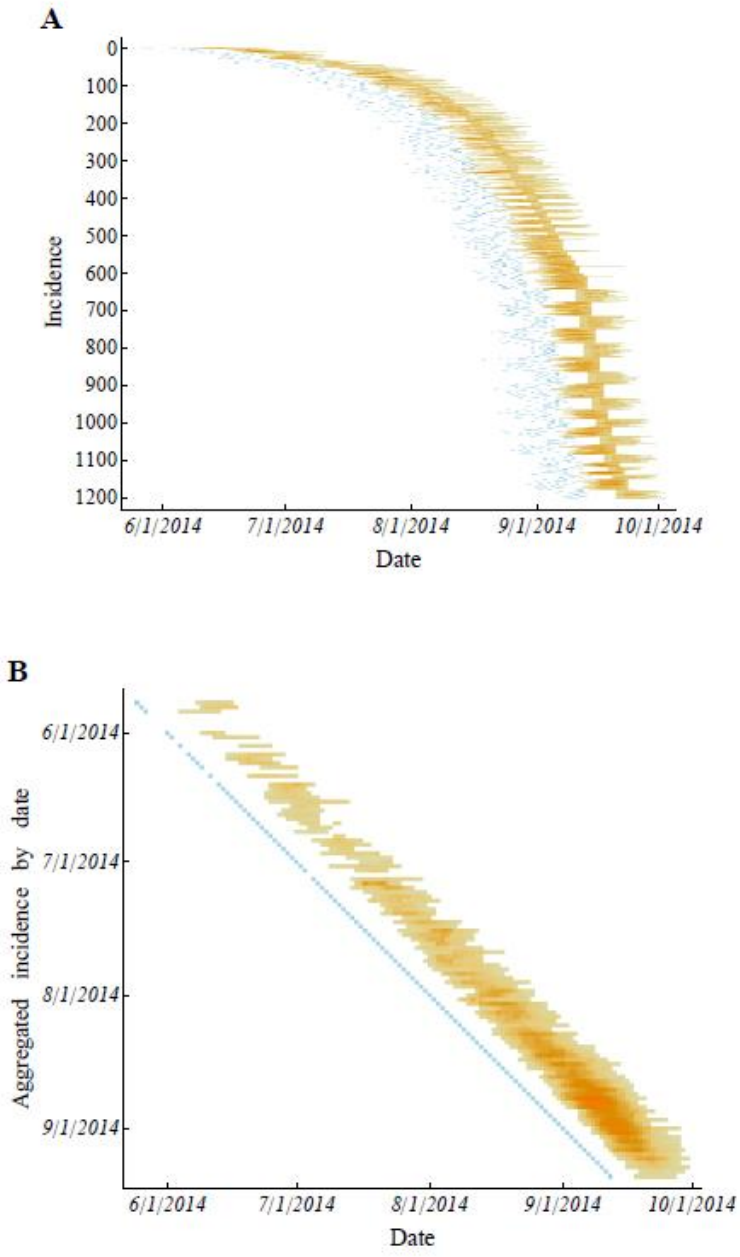
Appendix 1 Figure 1: **Cumulative incidence reported from the Liberian Ministry of Health and Social Welfare (MoHSW).** Individual contact tracing data was used between August 7th and August 26th, and aggregated cases data was used in the rest of the model analysis period.



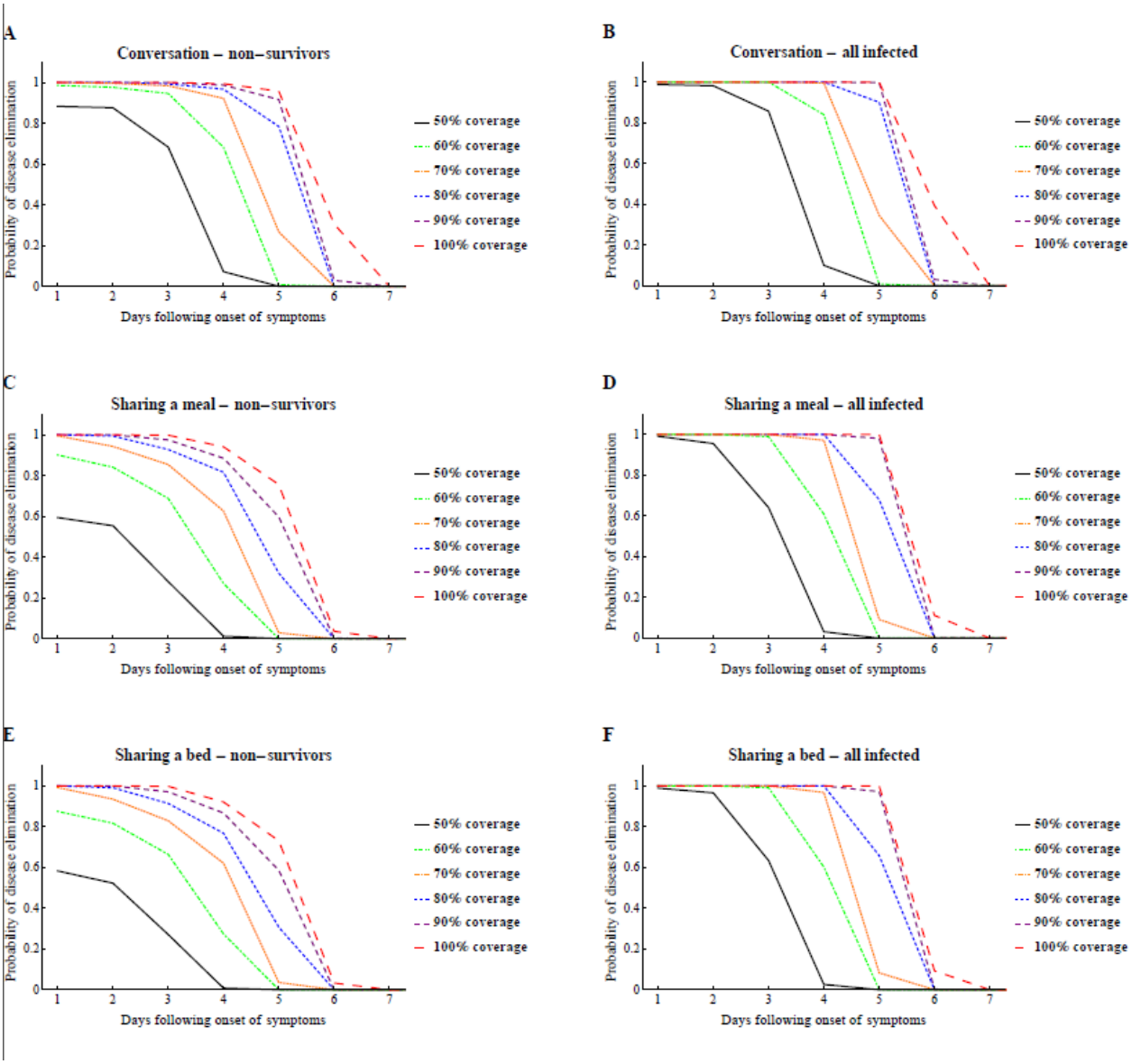
Appendix 1 Figure 2: **Contact distribution of an infected individual during the infectious period.** The dash line represents the upper bound of the number of contacts for non-survivors in the late phase.



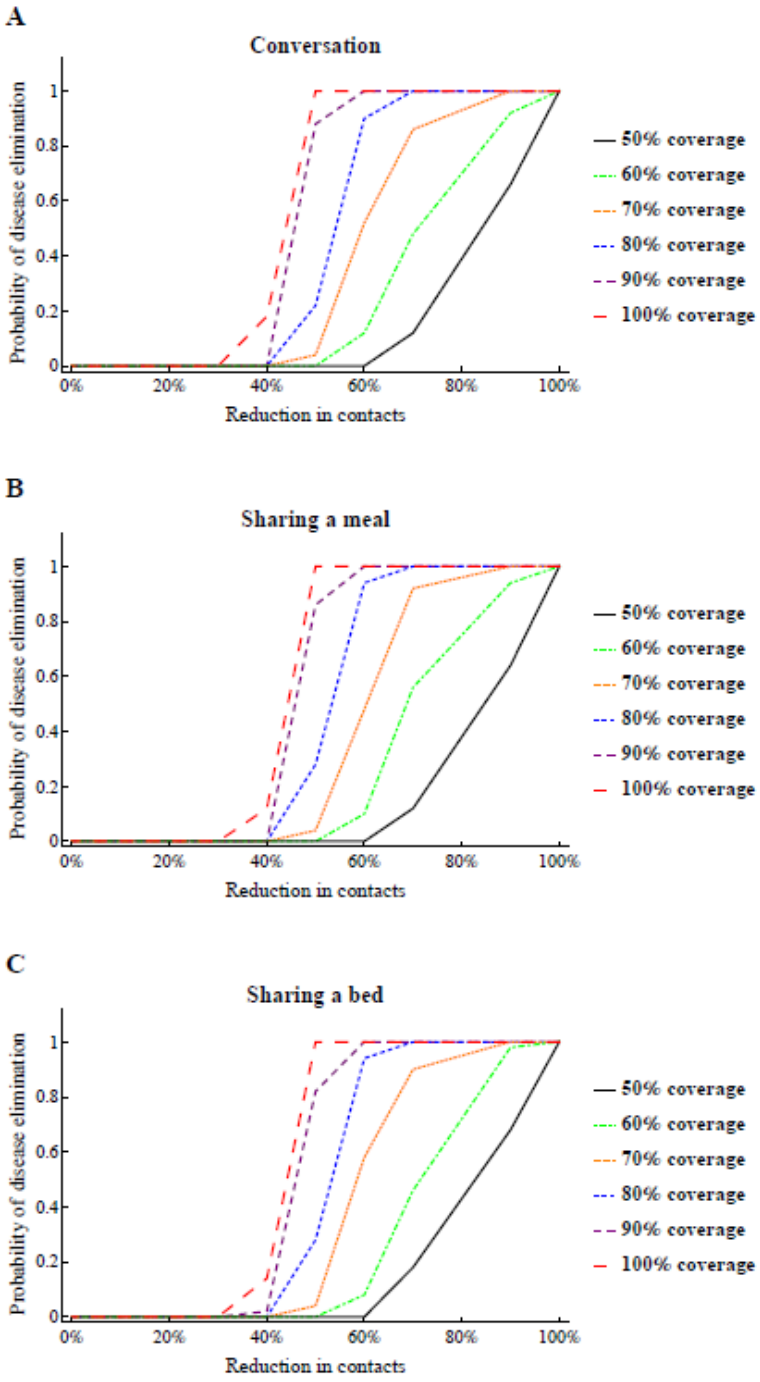
Appendix 1 Figure 3: **Distribution of the rate ratio of transmission risk for three types of contact.** A. Conversation B. Sharing a meal C. Sharing a bed. Each ten-fold increase in VL is assumed to lead to an r -fold rise in infectiousness.



Appendix 1 Figure 4: **Visualization transmission patterns in one stochastic iteration.** Blue represents the day of exposure, yellow represents infectious period. Darker colors represent higher transmissibility resulting from a combination of contacts and viral load. A. Visualization of incidence over time B. Visualization of aggregated incidence by date.

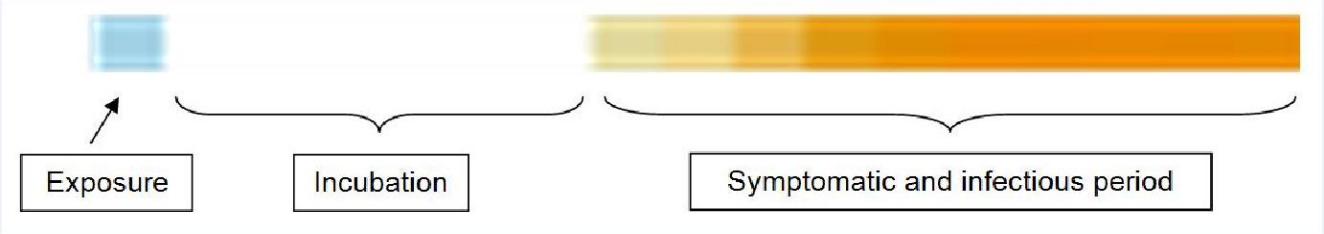


***Appendix 1 Figure* 5: Probability of disease elimination from case isolation of non-survivors and of all infected for different transmission routes.** A. Conversation, non-survivors B. Conversation, all infected C. Sharing a meal, non-survivors D. Sharing a meal, all infected. E. Sharing a bed, non-survivors F. Sharing a bed, all infected.

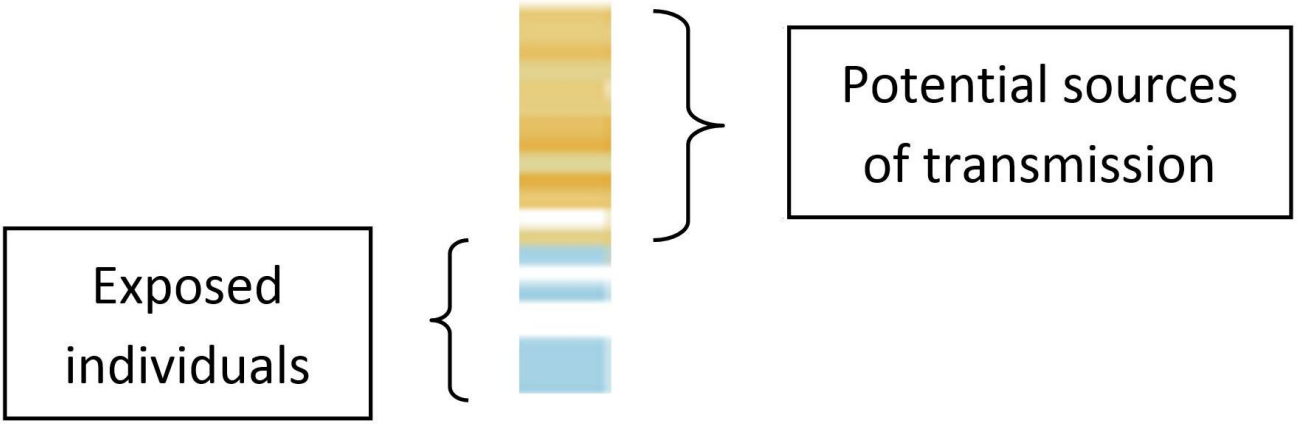


***Appendix 1 Figure* 6: Probability of disease elimination from self-quarantine for different transmission routes.** A. Conversation B. Sharing a meal C. Sharing a bed.

Appendix 2



Appendix 2 Figure 1: **Disease progression for an infected individual.**



Appendix 2 Figure 1: **Assigning transmission.**

Table 1. **Parameters used in the stochastic model.**

Parameter	Symbol	Distribution used for uncertainty analysis	Source
Number of contacts during early phase	C_{Early}	Sampled from data	2014 Liberia (Appendix 1)
Number of contacts during late phase for non-survivors	C_{Late}	Sampled from data, between 1and 5	Based on household size (22)
Incubation phase duration (days)	η	Triangular (5,8,15)[1]	(3, 9, 15, 30)
Late symptoms phase duration (days)	ψ	Uniform (1,5)	(18, 21 ,31, 32)
Overall symptom duration (days)	ν	Triangular (5,8,14)[2]	(18, 21, 26)
Rate ratio of transmission risk	r	Evaluated	1995 DCR, 2000 Uganda (8, 9, Appendix 1)
Daily viral load stratified by survivorship	$V^S(t)$	Log Normal[3]	2000 Uganda (8)

[1] Mode = 8, range (5, 15).

[2] Mode = 8, range (5, 14).

[3] Viral load was measured based on the mean and standard deviation counts of daily RNA copy levels over 14 days following symptom onset and are stratified by survivorship.