

Table 1: Epidemiological parameters of the seasonal influenza model and their distributions

Variable	Distribution	References
Infectious period (ages 0-14)	Gamma(Mean 3.6, Std 1.9)	19
Infectious period (ages 15+)	Gamma(Mean 3.9, Std 1.9)	19
Latent period	Triangular(Min 1, Mode 2, Max 3)	20–23
Susceptibility (ages 0-3)	Normal(Mean 0.83, Std 0.369)	24
Susceptibility (ages 4-17)	Normal(Mean 0.49, Std 0.5)	24
Susceptibility (ages 18+)	Normal(Mean 0.53, Std 0.49)	24
Reproductive number (<i>R</i>)	Normal(Mean 1.3, Std 0.15, Min 1)	25
Case mortality (ages 0-4)	Normal(Mean 4×10^{-5} , Std 10^{-5} , Min 0)	2
Case mortality (ages 5-17)	10^{-5}	2
Case mortality (ages 18-49)	Normal(Mean 9×10^{-5} , Std 3×10^{-5} , Min 0)	2
Case mortality (ages 50- 64)	Normal(Mean 134×10^{-5} , Std 45×10^{-5} , Min 0)	2
Case mortality (ages 65+)	Normal(Mean 117×10^{-4} , Std 39×10^{-4} , Min 0)	2
Case hospitalization (ages 0-4)	Normal(Mean 0.0141, Std 0.0047, Min 0)	2
Case hospitalization (ages 5-17)	Normal(Mean 0.0006, Std 0.0002, Min 0)	2
Case hospitalization (ages 18-49)	Normal(Mean 0.0042, Std 0.0014, Min 0)	2
Case hospitalization (ages 50-64)	Normal(Mean 0.0193, Std 0.0064, Min 0)	2
Case hospitalization (ages 65+)	Normal(Mean 0.0421, Std 0.0140, Min 0)	2
Proportion high risk (ages 0.5-1)	Normal(Mean 0.0415, Std 0.0044, Min 0)	26
Proportion high risk (ages 2-5)	Normal(Mean 0.0883, Std 0.0051, Min 0)	26
Proportion high risk (ages 5-18)	Normal(Mean 0.1168, Std 0.0030, Min 0)	26
Proportion high risk (ages 19-24)	Normal(Mean 0.1235, Std 0.0055, Min 0)	26
Proportion high risk (ages 25-49)	Normal(Mean 0.1570, Std 0.0027, Min 0)	26
Proportion high risk (ages 50-64)	Normal(Mean 0.3056, Std 0.0044, Min 0)	26
Proportion high risk (ages 65+)	Normal(Mean 0.4701, Std 0.0050, Min 0)	26

High-risk relative mortality (ages 0-19)	Triangular(Min 0.4, Mode 0.6, Max 21.9) / Triangular(Min 0.041, Mode 0.07, Max 0.30)	17
High-risk relative mortality (ages 20-64)	Uniform(Min 0.8, Max 24.9) / Triangular(Min 0.21, Mode 0.31, Max 0.41)	17
High-risk relative mortality (ages 65+)	Uniform(Min 23, Max 29.6) / Triangular(Min 2.3, Mode 3.51, Max 4.52)	17
High-risk relative hospitalization (ages 0-19)	Uniform(Min 6.0, Max 21.4) / Uniform(Min 0.57 , Max 6.9)	17
High-risk relative hospitalization (ages 20-64)	Uniform(Min 6.9, Max 22.3) / Uniform(Min 1.5, Max 12.0)	17
High-risk relative hospitalization (ages 65+)	Uniform(Min 33.3, Max 68.4) / Uniform(Min 12.5, Max 15.8)	17
Vaccine efficacy against infection (ages 0.5 -15)	Uniform(Min 0.54, Max 0.8)	27,28
Vaccine efficacy against infection (ages 16 -64)	Uniform(Min 0.54, Max 0.7)	27,28
Vaccine efficacy against infection (ages 65+)	Uniform(Min 0.33, Max 0.66)	27,28
Vaccine efficacy against mortality	Uniform(Min 0.39, Max 0.54)	16
Vaccine efficacy against hospitalization	Uniform(Min 0.21, Max 0.73)	16,27

Std = standard deviation; Min = minimum; Max= maximum; Normal (Mean m, Std s, Min a) is the standard Normal (Mean m, Std s) random variable censored so that it has minimum a.