

Parameter	Description	Value	Reference
$\langle k \rangle$	Average node degree for networks	39	[1-3]
$\mathcal{R}_0^P$	Null Deterministic Basic Reproductive Value (Poisson)	2.2	calibrated **;[4-7]
$\mathcal{R}_0^E$	Null Deterministic Basic Reproductive Value (exponential)	2.875	calibrated **;[4-7]
$p_s$	Change in Seasonality Amplitude (Poisson)	0.03	[5,8]
$p_s$	Change in Seasonality Amplitude (exponential)	0.0525	[5,8]
$\bar{t}$	Shift in Seasonality function (Poisson)	76	calibrated**
$\bar{t}$	Shift in Seasonality function (exponential)	122	calibrated **
$I$	Number of Exogenous Infections (Poisson)	7	calibrated **
$I$	Number of Exogenous Infections (exponential)	7	calibrated **
$b$	Parameter for vaccine uptake equation (Poisson)	1360	calibrated
$b$	Parameter for vaccine uptake equation (exponential)	4000	calibrated
$\langle \phi \rangle_{SEPT}$	Average vaccine uptake for September	0.0593	[9]
$\langle\langle \phi \rangle\rangle_{SEPT}$	Variance in vaccine uptake for September	0.00015	[9]
$\langle \phi \rangle_{OCT}$	Average vaccine uptake for October	0.1842	[9]
$\langle\langle \phi \rangle\rangle_{OCT}$	Variance in vaccine uptake for October	0.00072	[9]
$\langle \phi \rangle_{NOV}$	Average vaccine uptake for November	0.1012	[9]
$\langle\langle \phi \rangle\rangle_{NOV}$	Variance in vaccine uptake for November	0.00038	[9]
$\langle \phi \rangle_{DEC}$	Average vaccine uptake for December	0.0238	[9]
$\langle\langle \phi \rangle\rangle_{DEC}$	Variance in vaccine uptake for December	0.00004	[9]