

**S5 Table.** Summary of model parameters describing the contact behavior for Germany (GER) and USA.

Name	Description	Value/Eq.	
		GER	USA
$\lambda_{\text{Ext}}$	Infections from outside of the population	45/day	50/day
$\bar{R}_0$	Annual average basic reproduction number	3.4	3.2
$a$	Amplitude of the seasonal fluctuation of $R_0$	0.43	0.35
$t_{R_0\text{max}}$	Day when $R_0$ reaches its maximum	300	335
$t_{\text{Iso1}}$	Day of beginning of case isolation measures	30	20
$t_{\text{Iso2}}$	Day of end of case isolation measures	750	800
$Q_{\text{max}}$	Maximum capacity of isolation units per 10 000	200	30
$n^{(\text{Ge})}$	Average number of daily contacts of an individual in Ge	50	60
$n^{(\text{St})}$	Average number of daily contacts of an individual in St	50	60
$n^{(\text{Ri})}$	Average number of daily contacts of an individual in Ri	30	60
$x$	prob. for individual in Ge to meet with individual in Ge	99.50%	99.92%
$y$	prob. for individual in Ge to meet with individual in St	0.30%	0.07%
$u$	prob. for individual in St to meet with individual in Ge	49.08%	54.47%
$v$	prob. for individual in the St to meet individual of the St	20.0%	20.0%
$p$	prob. for individual in Ri to meet individual of the Ge	38.95%	2.35%
$q$	prob. for individual in Ri to meet individual in St	36.81%	7.71%
$c_P$	Relative infectiousness in prodromal period		0.5
$c_I$	Relative infectiousness in fully infectious stage		1
$c_L$	Relative infectiousness in late infectious stage		0.5
$\beta_P(t)$	Seasonally varying effective contact rate of prodromal ind.		(23a)
$\beta_I(t)$	Seasonally varying effective contact rate of fully infectious ind.s		(23b)
$\beta_L(t)$	Seasonally varying effective contact rate of late infectious ind.		(23c)
$p_{\text{Home}}$	Contact reduction in home isolation		75%

Description of parameters and their initial values chosen for the simulations. Equation numbers refer to S1 Appendix