

## Additional file 2

**Table Disease Model Parameters and Values: non-scenario specific values  
The AsiaFluCap Simulator**

SEIR parameter	Description	Chosen value*	Justification/notes
$\kappa$	Rate of daily contacts possibly resulting in transmission	7	Assumption for the model.
$\sigma$	Rate at which individuals leave exposed group	1	1-2 days [1], 2.62 days [2], and 1-5 days [3] between infection and symptom onset.
$\delta$	Rate at which individuals leave asymptomatic group	1/0.4	1 day [2, 3], and 0-2 days [3] infectious before symptom onset.
$\tau$	Rate cases get detected	1/0.5	Assumption for the model.
$\gamma_a$	Rate at which asymptomatic cases leave infectious group	2	1.9 days [4], 3.38 days [2], 4-10 days [3] mean duration of infectivity.
$\gamma_m$	Rate at which mild cases leave infectious group	1/1.5	See above [2, 3, 5].
$\gamma_c$	Rate at which severe cases leave infected group	1/3.5	See above [2, 3, 5].
$\gamma_{ma}$ $\gamma_{ca}$	Rate at which mild and critical cases under AV treatment leave infectious groups	1/2.5	Infectious period under AV treatment reduced by 1 day [6].
$\gamma_h$	Rate at which cases leave hospital group	1/12	Length of ICU stay 13.5 days [5].
$\gamma_v$	Rate at which cases leave ventilated group	1/13	12 days [7], 15 days [8].
$q$	Proportion of contacts resulting in transmission	$q = R_0\gamma/\kappa$	Value estimated based on chosen $R_0$ (which can be varied in interface between 1.2-2.5 [9]), taking into account contacts per day ( $\kappa$ ) and different infectious periods of case groups ( $\gamma$ 's) which are weighted according to the case proportions.
$p_\kappa$	Proportion of contacts reduced during contact reduction period (when prevalence of symptomatic cases $>0.5\%$ ).	0.10	Value set to 0.10 for all baseline scenarios, which gives more realistic attack rates for given $R_0$ values (since we have homogenous mixing). Users can change proportion in interface between 0 and 0.10.
$p_{qh}$	Proportion of hospital	0	Value set to 0 for baseline scenario. Users

	transmissions reduced (e.g. due to case isolation or use of PPE by hospital staff)		can change proportion in interface between 0 and 1.
$P_{ma}$	Proportion of mild cases treated with antivirals	0	Value set to 0 for baseline scenario. Users can change proportion in interface between 0 and 1.
$P_{ca}$	Proportion of critical outpatients treated with antivirals	1	For the baseline scenario it is assumed that only critical cases are treated with antivirals. Users can change proportion of critical outpatient receiving antivirals in interface between 0 and 1.
$\rho$	Rate at which susceptible individuals leave susceptible compartment through vaccination (number of individuals that are vaccinated per day).	0	Vaccination was not included in baseline scenario. Number of individuals that can be vaccinated per day can be changed by users in the interface.

\*All parameter values can be changed, either in interface or in the SEIR Model sheet of the AsiaFluCap Simulator.

## References

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