

Table S1 Base-case and plausible ranges of model inputs on transition probabilities

Model input	Base case	Range	Reference
Proportion of older patients	30.2%	0~100%	[1]
Proportion of two-dose inactivated vaccination	Young people: 90.0%; Older people: 96.6%	0~100%	[2]
Proportion of symptomatic COVID-19	Young people: 66.7%; Older people: 66.2%		[3]
Proportion of severe COVID-19	Young people: 8.0%; Older people: 18.7%		[4]
Proportion of critical COVID-19	Young people: 2.0%; Older people: 10.6%		[4]
Proportion of critical COVID-19 to death	Young people: 0.63%; Older people: 5.96%		[5]
Ischaemic stroke incidence rate after SARS-Cov-2 infection	Mild/moderate COVID-19: 0.2%; Severe COVID-19: 0.4%; Critical COVID-19: 0.5%		[6]
Proportion of different outcomes of ischaemic stroke at first year	mRS 0-2: 79.6%; mRS 3-5: 13.7%; mRS 6 (death): 6.7%; Recurrent ischaemic stroke: 6.7%	mRS 0-2: 78.0~81.2%; mRS 3-5: 12.4~15.2%; mRS 6 (death): 5.7~7.7%; Recurrent ischaemic stroke: 5.7~7.7%	[7]
Relative risk of stroke recurrence per life-year	1.03	1.02~1.04	[7]
Relative risk of natural death for mRS 3–5 state	1.68	1.49-1.92	[8]
Proportion of patients in recurrent stroke	mRS 0-2: 53.4%; mRS 3-5: 32.4%; mRS 6 (death): 14.2%	mRS 0-2: 47.0~59.6%; mRS 3-5: 26.7~38.6%; mRS 6 (death): 10.2~19.2%;	[8]
Age- specific death rates	See 2020 Census data	-	[9]

mRS, modified Rankin Scale.

Table S2 Base-case and plausible ranges of model inputs on vaccine effectiveness, costs and health utilities

Model input	Base case	Range	Reference
Vaccine effectiveness			
Two-dose inactivated vaccination efficacy	Symptomatic COVID-19: 75.0%; Severe COVID-19: 87.5%; Critical COVID-19: 90.3%; Death: 86.3%; Ischaemic stroke: 60.0%	Symptomatic COVID-19: 65.0~83.0%; Severe COVID-19: 86.7~88.2%; Critical COVID-19: 89.1~91.4%; Death: 84.5~87.9%; Critical COVID-19 to ischaemic stroke: 37.0~74.0%	[10-12]
Cost inputs (2022 US\$)			
Cost of two dose inactivated vaccines	11.8	11.8-14.9	[13]
Cost of COVID-19	Asymptomatic COVID-19: 813.2 Mild/moderate: COVID-19: 915.5; Severe: 8656.4; Critical: 24937.6; Natural death/alive/R0/R1: 0		[14]
Cost of ischaemic stroke	mRS 0–2: 16907.7; mRS 3–5: 18084.5; mRS 6: 15656.5		[7, 8]
Utility inputs			
Utility of COVID-19	I0: 0.946; I1: 0.847 I2: 0.766; I3: 0.629; R0: 0.896; R1/alive: 1; natural death/D0/D1: 0	I0: 0.946~1; I1: 0.762~0.932; I2: 0.689~0.843; I3: 0.566~0.692; R0 0.806~0.986	[15, 16]
Utility of ischaemic stroke	mRS 0–2: 0.76; mRS 3–5: 0.21; Death (mRS 6), 0	mRS 0–2: 0.69~0.82; mRS 3–5: 0.17~0.26;	[7]
Discount rate inputs			
Costs	0.03	0 ~0.06	[17, 18]
Outcomes	0.03	0~0.06	[17, 18]

mRS, modified Rankin Scale.

Reference

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