Burden

Legend: Switch V2–>V1 · No switching (V2 only) · No early vaccine (V1 only)

Infections — Constant risk / Slow growth / Fast growth
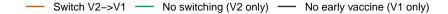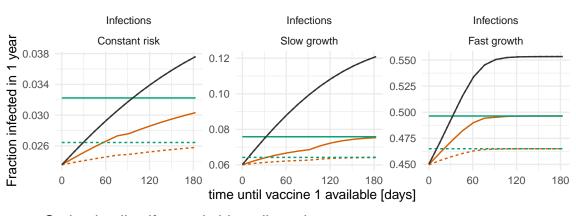
Fraction infected in 1 year

time until vaccine 1 available [days]

Optimal policy if no switching allowed

Constant risk — Slow growth — Fast growth

e2 (efficacy for the less effective vaccine)

Infections

Constant risk:

e2	0	1	2	3	4	5	6
0.9	1.04	0.92	0.84	0.77	0.72	0.68	0.65
0.8	1.12	1	0.9	0.83	0.78	0.74	0.7
0.7	1.21	1.07	0.97	0.89	0.83	0.79	0.75
0.6	1.29	1.14	1.03	0.95	0.89	0.84	0.81
0.5	1.37	1.21	1.1	1.01	0.95	0.9	0.86

Slow growth:

e2	0	1	2	3	4	5	6
0.9	1.02	0.82	0.7	0.62	0.57	0.53	0.51
0.8	1.07	0.86	0.73	0.65	0.59	0.55	0.53
0.7	1.12	0.9	0.76	0.68	0.62	0.58	0.56
0.6	1.18	0.95	0.81	0.72	0.66	0.62	0.59
0.5	1.26	1.01	0.86	0.76	0.7	0.66	0.63

Fast growth:

e2	0	1	2	3	4	5	6
0.9	1.01	0.92	0.85	0.83	0.82	0.82	0.82
0.8	1.03	0.94	0.87	0.84	0.84	0.84	0.84
0.7	1.06	0.96	0.89	0.86	0.86	0.86	0.86
0.6	1.08	0.98	0.91	0.88	0.88	0.88	0.88
0.5	1.1	1.01	0.93	0.9	0.9	0.9	0.9

Deaths

Constant risk:

e2	0	1	2	3	4	5	6
0.9	1.11	0.9	0.76	0.66	0.59	0.53	0.48
0.8	1.33	1.08	0.92	0.79	0.7	0.63	0.57
0.7	1.56	1.27	1.07	0.93	0.82	0.74	0.67
0.6	1.78	1.45	1.22	1.06	0.94	0.84	0.76
0.5	2	1.63	1.37	1.19	1.05	0.95	0.86

Slow growth:

e2	0	1	2	3	4	5	6
0.9	1.05	0.76	0.59	0.48	0.42	0.37	0.35
0.8	1.16	0.84	0.65	0.54	0.46	0.41	0.38
0.7	1.29	0.93	0.72	0.59	0.51	0.46	0.42
0.6	1.44	1.04	0.81	0.66	0.57	0.51	0.47
0.5	1.62	1.17	0.91	0.74	0.64	0.57	0.53

Fast growth:

e2	0	1	2	3	4	5	6
0.9	1.08	0.63	0.44	0.39	0.38	0.38	0.38
0.8	1.25	0.73	0.51	0.45	0.44	0.44	0.44
0.7	1.43	0.83	0.58	0.51	0.51	0.5	0.5
0.6	1.61	0.94	0.66	0.58	0.57	0.57	0.57
0.5	1.8	1.05	0.73	0.65	0.64	0.63	0.63

Months until 95% effective vaccine available

Legend: Less effective better by 5% or more · Comparable (+−5%) · 95% effective better by at least 5%