

## Misinformation making a disease outbreak worse: Outcomes compared for influenza, monkeypox and norovirus, S2: Additional results for Monkeypox

### ADDITIONAL RESULTS FOR MONKEYPOX

Results of exercise to find proportion of risk attributable to viral shedding.

Viral shed risk	maxGens (75th centile)	r0	Duration (wks)	AR	CFR	maxill	# of iterations	gens.5th	gens.95th
0.10%	1.00	0.01	3.1	1.0%	1.274%	0.97%	10	1.0	2.0
0.20%	1.75	0.03	3.8	1.2%	0.541%	1.11%	10	1.0	2.6
0.30%	1.75	0.02	3.8	1.1%	0.565%	1.08%	10	1.0	2.6
0.40%	2.00	0.06	4.8	1.2%	1.604%	1.08%	10	1.0	3.0
0.50%	3.00	0.10	5.4	1.1%	0.749%	0.99%	112	1.0	5.0
0.60%	3.00	0.12	5.8	1.2%	1.117%	0.98%	150	1.0	5.0
0.70%	3.00	0.13	6.4	1.2%	0.779%	0.99%	150	1.0	5.0
0.80%	4.00	0.17	7.3	1.3%	1.040%	0.98%	160	1.0	8.0
0.90%	4.00	0.22	8.1	1.4%	1.122%	1.01%	160	1.0	8.0
1.00%	6.00	0.26	9.5	1.6%	1.456%	1.01%	160	1.0	10.0
1.10%	6.00	0.27	9.9	1.7%	1.375%	1.02%	60	1.0	9.1
1.20%	7.00	0.37	12.0	2.1%	1.412%	1.07%	60	1.0	11.1
1.30%	10.00	0.39	13.3	2.3%	1.674%	1.06%	60	2.0	12.0
1.40%	8.00	0.46	14.1	2.1%	1.484%	0.95%	10	1.9	10.6
1.50%	11.00	0.46	15.1	3.4%	1.487%	1.25%	10	1.5	13.1
1.60%	7.50	0.42	13.6	2.3%	1.340%	1.09%	10	2.5	11.6
1.70%	13.75	0.70	22.2	5.7%	2.093%	1.56%	10	4.4	14.0

Pink and Purple fill: Parameters that best met target objectives

Viral shed risk: test % of total risk attributable to shedding virus (exclusive of other risk factors)

maxGens (75<sup>th</sup> centile): maximum number of generations, 75<sup>th</sup> percentile of all observed model runs

Purpose of this indicator is to find likely parameters when most observed outbreaks will have this maximum number of generations of transmission

TP (mean % of time that exposed individuals take effective precautions to avoid disease): 50% in all Stage 1 runs

r0: basic reproduction number

AR: Attack rate

CFR: Case fatality rate

maxIll: Maximum number of persons ill at any one time

gens.5<sup>th</sup>: 5<sup>th</sup> percentile, number of generations of transmission for all relevant iterations

gens 95<sup>th</sup>: 95<sup>th</sup> percentile of number of generations of transmission for all relevant iterations

Other model assumptions as described in main text.

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Results of exercise to find change in taking precautions ( $\Delta$ TP) that exacerbated outbreak using pre-specified indicators

Delta TP	maxGens (75th centile)	Median # of Gens	r0	Duration (wks)	AR	CFR	Peak AR	# of iterations
0.1%	3.0	2	0.15	6.7	1.2%	1.21%	1.0%	50
0.2%	4.0	3	0.22	8.5	1.4%	1.26%	0.0%	90
0.3%	4.0	3	0.19	8.3	1.4%	1.40%	1.0%	90
0.4%	4.0	2	0.20	8.5	1.5%	1.39%	1.0%	200
0.5%	5.0	3	0.23	8.8	1.5%	1.58%	1.0%	201
0.6%	5.0	3	0.23	9.8	1.8%	1.42%	1.1%	211
0.7%	5.0	3	0.23	8.9	1.7%	1.48%	1.1%	211
0.8%	5.0	3	0.26	9.5	1.8%	1.35%	1.1%	361
0.9%	5.0	3	0.26	9.5	2.0%	1.61%	1.2%	470
1.0%	6.0	3	0.28	9.8	2.1%	1.37%	1.1%	471
1.1%	7.0	3	0.28	9.9	2.2%	1.36%	1.2%	680
1.2%	9.3	3	0.32	10.5	2.5%	1.55%	1.3%	420
1.3%	10.0	3	0.32	10.6	2.8%	1.51%	1.4%	241
1.4%	10.0	3	0.32	10.5	2.8%	1.42%	1.4%	201
1.5%	11.0	4	0.43	12.8	3.9%	1.60%	1.6%	50
1.6%	11.0	2.5	0.38	11.8	3.3%	1.70%	1.5%	50
1.7%	11.0	4	0.37	12.4	3.0%	1.51%	1.4%	50
1.8%	11.0	5	0.46	14.1	3.6%	1.20%	1.5%	20

Pink or Purple fill: Parameters that best met target objectives

maxGens (75<sup>th</sup> centile): maximum number of generations, 75<sup>th</sup> percentile of all observed model runs  
 Purpose of this indicator is to find likely parameters when most observed outbreaks will have this maximum number of generations of transmission

TP: presumed mean % of time that exposed individuals take effective precautions to avoid disease.

Delta TP: candidate changes in TP with each exposure to good or bad advice

r0: basic reproduction number

AR: Attack rate

CFR: Case fatality rate

maxIll: Maximum number of persons ill at any one time

Other model assumptions as described in main text.

## Misinformation making a disease outbreak worse: Outcomes compared for influenza, monkeypox and norovirus, S2: Additional results for Monkeypox

Impacts on outbreak parameters from varying % of circulating advice that is bad advice.

%BA	maxGens (75th centile)	Median Gens	r0	Duration (wks)	AR	CFR	Peak AR	# of iterations
10.0%	3.00	2	0.11	5.2	1.11%	0.96%	0.98%	100
20.0%	3.00	2	0.12	5.6	1.15%	0.95%	0.98%	40
30.0%	3.00	2	0.13	5.9	1.15%	0.95%	0.98%	40
31.0%	3.00	2	0.13	6.0	1.23%	0.80%	1.04%	70
32.0%	3.00	2	0.14	6.0	1.22%	1.17%	1.03%	70
33.0%	3.00	2.5	0.11	6.6	1.18%	1.75%	0.95%	70
34.0%	3.00	2	0.11	5.7	1.13%	1.51%	0.97%	70
35.0%	3.25	2	0.16	6.6	1.19%	1.74%	0.95%	100
36.0%	4.00	2	0.17	1.8	1.25%	1.80%	0.99%	225
37.0%	4.00	2	0.16	6.9	1.26%	1.17%	0.99%	225
38.0%	4.00	2	0.17	7.1	1.35%	1.10%	1.04%	195
39.0%	4.00	2	0.17	7.3	1.32%	1.33%	0.99%	328
40.0%	4.00	3	0.19	7.5	1.35%	1.21%	1.01%	203
41.0%	4.00	2	0.18	7.3	1.29%	1.43%	0.99%	203
42.0%	4.00	3	0.19	8.1	1.42%	1.43%	1.02%	203
43.0%	5.00	3	0.23	9.2	1.63%	1.53%	1.04%	203
44.0%	5.00	3	0.25	9.7	1.70%	1.50%	1.05%	201
45.0%	5.00	3	0.24	9.1	1.72%	1.47%	1.06%	203
46.0%	5.00	3	0.24	9.3	1.76%	1.15%	1.07%	300
47.0%	6.00	3	0.27	9.8	2.03%	1.43%	1.15%	401
48.0%	9.00	3	0.30	10.6	2.22%	1.35%	1.17%	500
49.0%	9.00	3	0.30	10.5	2.38%	1.38%	1.23%	501

Pink or Purple fill: Parameters that best met target objectives

%BA: tested %s of total circulating advice that is bad advice

r0: basic reproduction number

AR: Attack rate

CFR: Case fatality rate

Other model assumptions as described in main text.

## Misinformation making a disease outbreak worse: Outcomes compared for influenza, monkeypox and norovirus, S2: Additional results for Monkeypox

Impacts on outbreak parameters from immunising specified %s of population against believing or circulating bad advice

imm%	maxGens (75th centile)	Median # of Gens	r0	wks	AR	CFR	Peak AR	# of iterations
5.0%	7.0	3	0.29	10.1	2.2%	1.56%	1.17%	200
10.0%	6.0	3	0.28	10.0	1.9%	1.35%	1.09%	300
15.0%	5.0	3	0.24	9.2	1.7%	0.00%	1.06%	300
20.0%	4.0	3	0.21	8.4	1.5%	1.17%	1.04%	300
25.0%	4.0	2	0.18	7.6	1.3%	1.12%	0.98%	200
30.0%	4.0	2	0.16	7.0	1.3%	1.34%	1.01%	200
35.0%	4.0	3	0.16	6.9	1.3%	0.86%	1.02%	200
40.0%	4.0	2	0.17	7.1	1.3%	1.25%	1.00%	200
45.0%	3.0	2	0.13	5.9	1.2%	1.13%	0.98%	200
50.0%	3.0	2	0.14	6.2	1.2%	1.24%	1.03%	70
55.0%	3.0	2	0.16	6.1	1.2%	1.59%	0.98%	70
60.0%	3.0	2	0.15	6.4	1.2%	1.77%	0.99%	70
65.0%	3.0	2	0.14	6.2	1.2%	1.46%	1.02%	70
70.0%	3.0	2	0.14	5.9	1.2%	1.37%	1.05%	70
75.0%	3.0	2	0.11	5.4	1.2%	1.27%	1.04%	70
80.0%	3.0	2	0.13	5.9	1.2%	0.98%	1.02%	70
85.0%	3.0	2	0.13	5.6	1.1%	0.86%	0.97%	70
90.0%	3.0	2	0.12	5.6	1.2%	0.96%	1.02%	200

Pink or Purple fill: Parameters that best met target objectives

%imm: %s of population 'immunised' so that they neither believe nor share bad advice

r0: basic reproduction number

AR: Attack rate

CFR: Case fatality rate

Other model assumptions as described in main text.