

**Table S1.** Estimated values of the probability of Disease X, given available information at different timepoints using Hamming distance and including wet market exposure.

Hamming distance, with wet market													
Date	Disease X	SARS	MERS	HPAI (H5N1)	HPAI (H7N9)	Other Influenza viruses	Adenoviruses	Hantaviruses	RSV	Chlamydia pneumoniae	Mycoplasma pneumoniae	Legionellosis	Equal probability
30-Dec	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%
31-Dec	54.3%	1.0%	0.1%	7.4%	20.0%	2.7%	2.7%	2.7%	7.4%	0.4%	1.0%	0.4%	8.3%
1-Jan	54.3%	1.0%	0.1%	7.4%	20.0%	2.7%	2.7%	2.7%	7.4%	0.4%	1.0%	0.4%	8.3%
2-Jan	54.3%	1.0%	0.1%	7.4%	20.0%	2.7%	2.7%	2.7%	7.4%	0.4%	1.0%	0.4%	8.3%
3-Jan	80.8%	1.5%	0.2%					4.0%	10.9%	0.5%	1.5%	0.5%	12.5%
4-Jan	80.8%	1.5%	0.2%					4.0%	10.9%	0.5%	1.5%	0.5%	12.5%
5-Jan	82.2%							4.1%	11.1%	0.6%	1.5%	0.6%	16.7%
6-Jan	82.2%							4.1%	11.1%	0.6%	1.5%	0.6%	16.7%
7-Jan	82.2%							4.1%	11.1%	0.6%	1.5%	0.6%	16.7%
8-Jan	82.2%							4.1%	11.1%	0.6%	1.5%	0.6%	16.7%
9-Jan	82.2%							4.1%	11.1%	0.6%	1.5%	0.6%	16.7%
10-Jan	82.2%							4.1%	11.1%	0.6%	1.5%	0.6%	16.7%
11-Jan	82.2%							4.1%	11.1%	0.6%	1.5%	0.6%	16.7%
12-Jan	82.2%							4.1%	11.1%	0.6%	1.5%	0.6%	16.7%

SARS, Severe acute respiratory syndrome; MERS, Middle East respiratory syndrome; HPAI, Highly pathogenic avian influenza; RSV, Respiratory syncytial virus.

**Table S2.** Estimated values of the probability of Disease X, given available information at different timepoints using Euclidean distance and including wet market exposure.

Euclidean distance, with wet market													
Date	Disease X	SARS	MERS	HPAI (H5N1)	HPAI (H7N9)	Other Influenza viruses	Adenoviruses	Hantaviruses	RSV	Chlamydia pneumoniae	Mycoplasma pneumoniae	Legionellosis	Equal probability
30-Dec	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%
31-Dec	33.8%	4.6%	2.9%	8.2%	12.4%	6.0%	6.0%	6.0%	8.2%	3.6%	4.6%	3.6%	8.3%
1-Jan	33.8%	4.6%	2.9%	8.2%	12.4%	6.0%	6.0%	6.0%	8.2%	3.6%	4.6%	3.6%	8.3%
2-Jan	33.8%	4.6%	2.9%	8.2%	12.4%	6.0%	6.0%	6.0%	8.2%	3.6%	4.6%	3.6%	8.3%
3-Jan	50.2%	6.8%	4.3%					8.9%	12.2%	5.4%	6.8%	5.4%	12.5%
4-Jan	50.2%	6.8%	4.3%					8.9%	12.2%	5.4%	6.8%	5.4%	12.5%
5-Jan	56.5%							10.0%	13.7%	6.0%	7.6%	6.0%	16.7%
6-Jan	56.5%							10.0%	13.7%	6.0%	7.6%	6.0%	16.7%
7-Jan	56.5%							10.0%	13.7%	6.0%	7.6%	6.0%	16.7%
8-Jan	56.5%							10.0%	13.7%	6.0%	7.6%	6.0%	16.7%
9-Jan	56.5%							10.0%	13.7%	6.0%	7.6%	6.0%	16.7%
10-Jan	56.5%							10.0%	13.7%	6.0%	7.6%	6.0%	16.7%
11-Jan	56.5%							10.0%	13.7%	6.0%	7.6%	6.0%	16.7%
12-Jan	56.5%							10.0%	13.7%	6.0%	7.6%	6.0%	16.7%

SARS, Severe acute respiratory syndrome; MERS, Middle East respiratory syndrome; HPAI, Highly pathogenic avian influenza; RSV, Respiratory syncytial virus.

**Table S3.** Estimated values of the probability of Disease X, given available information at different timepoints using Hamming distance and excluding wet market exposure.

Hamming distance, without wet market													
Date	Disease X	SARS	MERS	HPAI (H5N1)	HPAI (H7N9)	Other Influenza viruses	Adenoviruses	Hantaviruses	RSV	Chlamydia pneumoniae	Mycoplasma pneumoniae	Legionellosis	Equal probability
30-Dec	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%
31-Dec	41.3%	2.1%	0.3%	5.6%	15.2%	5.6%	5.6%	5.6%	15.2%	0.8%	2.1%	0.8%	8.3%
1-Jan	41.3%	2.1%	0.3%	5.6%	15.2%	5.6%	5.6%	5.6%	15.2%	0.8%	2.1%	0.8%	8.3%
2-Jan	41.3%	2.1%	0.3%	5.6%	15.2%	5.6%	5.6%	5.6%	15.2%	0.8%	2.1%	0.8%	8.3%
3-Jan	60.7%	3.0%	0.4%					8.2%	22.3%	1.1%	3.0%	1.1%	12.5%
4-Jan	60.7%	3.0%	0.4%					8.2%	22.3%	1.1%	3.0%	1.1%	12.5%
5-Jan	62.9%							8.5%	23.1%	1.2%	3.1%	1.2%	16.7%
6-Jan	62.9%							8.5%	23.1%	1.2%	3.1%	1.2%	16.7%
7-Jan	62.9%							8.5%	23.1%	1.2%	3.1%	1.2%	16.7%
8-Jan	62.9%							8.5%	23.1%	1.2%	3.1%	1.2%	16.7%
9-Jan	62.9%							8.5%	23.1%	1.2%	3.1%	1.2%	16.7%
10-Jan	62.9%							8.5%	23.1%	1.2%	3.1%	1.2%	16.7%
11-Jan	62.9%							8.5%	23.1%	1.2%	3.1%	1.2%	16.7%
12-Jan	62.9%							8.5%	23.1%	1.2%	3.1%	1.2%	16.7%

SARS, Severe acute respiratory syndrome; MERS, Middle East respiratory syndrome; HPAI, Highly pathogenic avian influenza; RSV, Respiratory syncytial virus.

**Table S4.** Estimated values of the probability of Disease X, given available information at different timepoints using Euclidean distance and excluding wet market exposure.

Euclidean distance, without wet market													
Date	Disease X	SARS	MERS	HPAI (H5N1)	HPAI (H7N9)	Other Influenza viruses	Adenoviruses	Hantaviruses	RSV	Chlamydia pneumoniae	Mycoplasma pneumoniae	Legionellosis	Equal probability
30-Dec	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%	8.3%
31-Dec	29.1%	5.1%	3.1%	7.1%	10.7%	7.1%	7.1%	7.1%	10.7%	3.9%	5.1%	3.9%	8.3%
1-Jan	29.1%	5.1%	3.1%	7.1%	10.7%	7.1%	7.1%	7.1%	10.7%	3.9%	5.1%	3.9%	8.3%
2-Jan	29.1%	5.1%	3.1%	7.1%	10.7%	7.1%	7.1%	7.1%	10.7%	3.9%	5.1%	3.9%	8.3%
3-Jan	42.7%	7.6%	4.6%					10.4%	15.7%	5.8%	7.6%	5.8%	12.5%
4-Jan	42.7%	7.6%	4.6%					10.4%	15.7%	5.8%	7.6%	5.8%	12.5%
5-Jan	48.6%							11.8%	17.9%	6.6%	8.6%	6.6%	16.7%
6-Jan	48.6%							11.8%	17.9%	6.6%	8.6%	6.6%	16.7%
7-Jan	48.6%							11.8%	17.9%	6.6%	8.6%	6.6%	16.7%
8-Jan	48.6%							11.8%	17.9%	6.6%	8.6%	6.6%	16.7%
9-Jan	48.6%							11.8%	17.9%	6.6%	8.6%	6.6%	16.7%
10-Jan	48.6%							11.8%	17.9%	6.6%	8.6%	6.6%	16.7%
11-Jan	48.6%							11.8%	17.9%	6.6%	8.6%	6.6%	16.7%
12-Jan	48.6%							11.8%	17.9%	6.6%	8.6%	6.6%	16.7%

SARS, Severe acute respiratory syndrome; MERS, Middle East respiratory syndrome; HPAI, Highly pathogenic avian influenza; RSV, Respiratory syncytial virus.