THE LANCET
Microbe

Supplementary appendix

This appendix formed part of the original submission. We post it as supplied by the authors.

Appendix

Table 1. Relative risk, relative risk reduction, absolute risk reduction and numbers needed to treat with 95% confidence intervals from publicly-available information.

Table 2. Calculations

Supplementary table 1.

Company	vaccine arms	n	N	Risk	RR	SE(RR)	95%LL	95%UL	(RRR)	SE (RRR)	95%LL	95%UL	ARR	SE(ARR)	95%LL	95%UL	NNV	SE(NNV)	95%LL	95%UL
						Relative risk				Vaccine efficacy: relative risk reduction				Absolute risk reduction				Numbers needed to vaccinate		
Pfizer/BioNTech	BNT162b2 mRNA	8	18198	0.4396	0.0497	0.7096	0.0245	0.1011	95.03%	0.14%	89.89%	97.55%	0.0084	0.0014	0.0070	0.0098	119	0.0007	102	143
	Placebo	162	18325	8.8404																
Moderna/NIH	mRNA-1273	11	14134	0.7783	0.0592	0.6078	0.0322	0.1087	94.08%	0.19%	89.13%	96.78%	0.0124	0.0019	0.0104	0.0143	81	0.0010	70	96
	Placebo	185	14073	13.1457																
Gamaleya	GamCovidVac	13	14094	0.9224	0.0903	0.6133	0.0489	0.1667	90.97%	0.29%	83.33%	95.11%	0.0093	0.0029	0.0063	0.0122	108	0.0015	82	158
	Placebo	47	4601	10.2152																
Johnson & Johnson	Ad26.COV2.S	116	19514	5.9445	0.3338	0.2092	0.2708	0.4115	66.62%	0.21%	58.85%	72.92%	0.0119	0.0021	0.0097	0.0140	84	0.0011	71	103
	Placebo	348	19544	17.8060																
AstraZeneca/Oxford	ChAdOx1 nCov-19	37	5807	6.3716	0.3316	0.3699	0.2291	0.4800	66.84%	0.41%	52.00%	77.09%	0.0128	0.0041	0.0088	0.0169	78	0.0021	59	114
	Placebo	112	5829	19.2143																

Data source:

Company	vaccine	source	ref.
Pfizer/BioNTech	BNT162b2 mRNA	table 2	2
Moderna/NIH	mRNA-1273	figure 4	3
Gamaleya	GamCovidVac	table 2	5
Johnson & Johnson	Ad26.COV2.S	table 10	8
AstraZeneca/Oxford	ChAdOx1 nCov-19	table 2	4

Supplemenatry Table 2.

	diseased	healthy	All
Exposed	a	b	n1
Not exposed	c	d	n2
All			

Relative risk : $RR = \dfrac{a/n_1}{c/n_2}$

Confidence intervals of RR : $95\%CI = e^{Ln(RR)\pm 1.96*SE}$ $where\ SE = \sqrt{\dfrac{b/a}{n_1} + \dfrac{d/c}{n_2}}$

Relative Risk Reduction: $RRR = 1 - RR$

Confidence intervals of RRR : $95\%CI = 1 - 95\%CI\ RR$

Absolute Risk Reduction: $aRR = \dfrac{c}{n_2} - \dfrac{a}{n_1}$

Confidence Intervals of aRR: $95\%CI = aRR \pm 1.96 * SE\ where\ SE =$
$\sqrt{\dfrac{a/n_1 \times (1 - a/n_1)}{n_1} + \dfrac{c/n_2 \times (1 - c/n_2)}{n_2}}$

Number Needed to Vaccine: $NNV = \dfrac{1}{aRR}$

Confidence Intervals of NNV: $95\%CI = \dfrac{1}{95\%CI\ aRR}$