

Calculating Odds-Ratios

2022-02-01

Overview

The COVID Ops Teams maintains data (updated twice daily) on the number of positive test results based on an individual's vaccination status and age-group. These data are used to calculate the odds of a particular group – for example, unvaccinated 15-19-year olds – testing positive versus vaccinated 15-19-year olds testing positive. One can also compare these two odds and derive an odds-ratio that tells us how much more or less likely is one group to test positive than the other.

Grand Total

Vaccinated	Negative	Positive	Odds of Testing Positive	Odds Ratio
Unvaccinated	2459	564	0.2294	0.98
Vaccinated	17007	3980	0.2340	0.98

By Vaccine Group

(a) J&J

Vaccinated	Negative	Positive	Odds of Testing Positive	Odds Ratio
Unvaccinated	2459	564	0.2294	1.04
Vaccinated	1978	436	0.2204	1.04

(b) Pfizer

Vaccinated	Negative	Positive	Odds of Testing Positive	Odds Ratio
Unvaccinated	2459	564	0.2294	0.87
Vaccinated	9381	2480	0.2644	0.87

(c) Moderna

Vaccinated	Negative	Positive	Odds of Testing Positive	Odds Ratio
Unvaccinated	2459	564	0.2294	1.21
Vaccinated	5554	1051	0.1892	1.21

(d) Other Vaccines

Vaccinated	Negative	Positive	Odds of Testing Positive	Odds Ratio
Unvaccinated	2459	564	0.2294	2.11
Vaccinated	5715	621	0.1087	2.11

By Age-group

age_group	Vaccinated	Negative	Positive	Odds of Testing Positive
10-14	Unvaccinated	15	0	0.0000
10-14	Vaccinated	11	0	0.0000
15-19	Unvaccinated	936	193	0.2062
15-19	Vaccinated	4874	1495	0.3067
20-24	Unvaccinated	977	268	0.2743
20-24	Vaccinated	9645	2350	0.2436
25-29	Unvaccinated	137	30	0.2190
25-29	Vaccinated	1997	278	0.1392
30-34	Unvaccinated	83	12	0.1446
30-34	Vaccinated	1058	117	0.1106
35-39	Unvaccinated	74	11	0.1486
35-39	Vaccinated	841	63	0.0749
40-44	Unvaccinated	59	19	0.3220
40-44	Vaccinated	790	78	0.0987
45-49	Unvaccinated	59	9	0.1525
45-49	Vaccinated	782	50	0.0639
50-54	Unvaccinated	44	7	0.1591
50-54	Vaccinated	881	57	0.0647
55-59	Unvaccinated	26	8	0.3077
55-59	Vaccinated	755	47	0.0623
60-64	Unvaccinated	24	5	0.2083
60-64	Vaccinated	584	40	0.0685
65-69	Unvaccinated	14	2	0.1429
65-69	Vaccinated	274	9	0.0328
70-74	Unvaccinated	4	0	0.0000
70-74	Vaccinated	111	4	0.0360
75-79	Unvaccinated	5	0	0.0000
75-79	Vaccinated	24	0	0.0000
80-84	Unvaccinated	1	0	0.0000
85-89	Unvaccinated	1	0	0.0000
85-89	Vaccinated	1	0	0.0000

Breakthrough Positive Tests Reported after Boosters

Result	Number	Percent
Negative	5621	90.24
Positive	608	9.76
Total	6229	100.00

By Age-group

Age-Group	Negative	Positive	Total	% Positive
15-19	1031	175	1206	14.51
20-24	2162	270	2432	11.10
25-29	418	47	465	10.11
30-34	264	24	288	8.33
35-39	231	13	244	5.33
40-44	248	18	266	6.77
45-49	266	11	277	3.97
50-54	333	18	351	5.13
55-59	283	14	297	4.71
60-64	229	14	243	5.76
65-69	108	4	112	3.57
70-74	40	0	40	0.00
75-79	8	0	8	0.00