ZOE COVID Study

Weekly COVID Vaccines Report

17 August 2022

Analysis by ZOE and King's College London

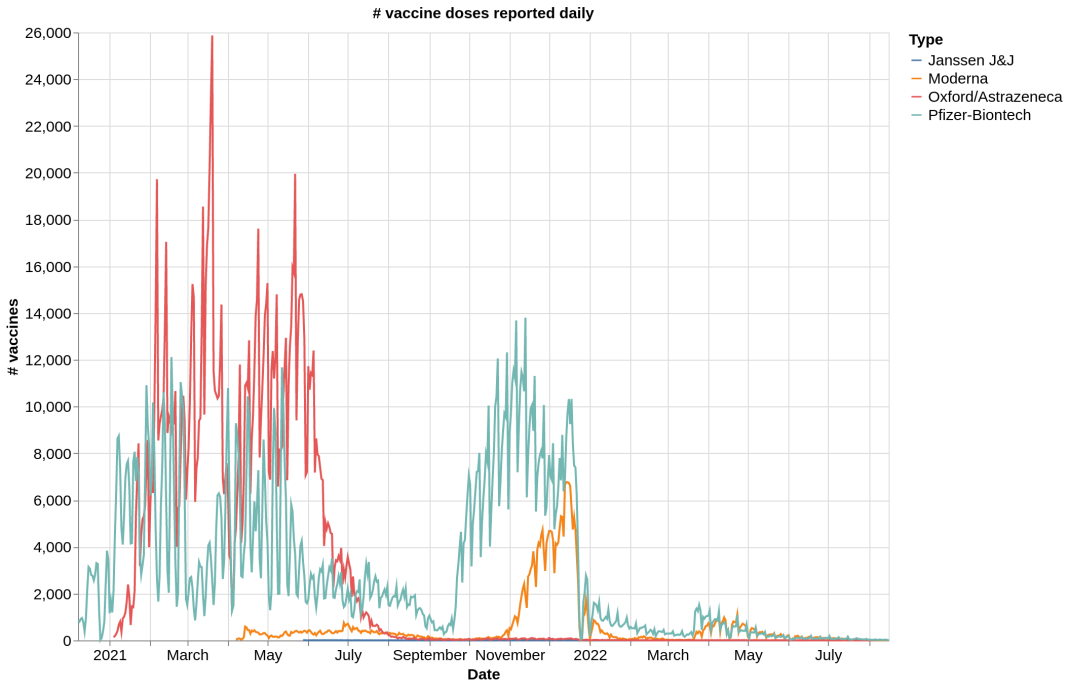
covid.joinzoe.com

Total number of users who logged a vaccine dose in the UK

Users have been logging their vaccines since the 8th of December 2020 when the national rollout was initiated. The first type of vaccine which was administered to the population was the Pfizer-BioNTech one. From the 4th of January 2021, Oxford/Astrazeneca vaccines were also supplied nationally. The national rollout of Moderna vaccines was also initiated on the 7th of April 2021. All the data provided in this report is up to date with respect to the types of vaccines we collect. The *Unspecified Brand* label refers to vaccines whose type was not explicitly declared by the user.

Breakdown of vaccines' types among vaccinated users

Type	# of Vaccines
Janssen J&J	347
Moderna	262,647
Oxford/Astrazeneca	827,200
Pfizer-BioNTech	987,892
Unspecified Brand	38,000
Total	**2,116,086**



Infections after vaccination

In this section of the report, the raw numbers for post-vaccine infections are presented. These are related to the number of symptomatic, tested and COVID positive users in both unvaccinated and vaccinated users. The vaccinated cohort refers to the set of vaccinated users who received their last dose more than 14 days ago or. The vaccinated cohort may have received any of the vaccine types listed previously. Positive PCR/LFT tests between these two groups are monitored monthly.

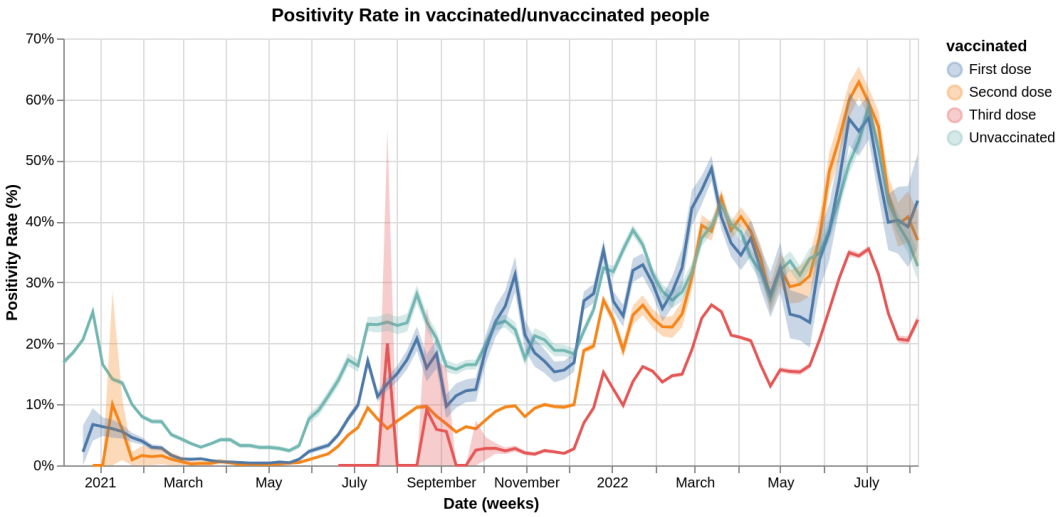
These figures do not take into account:

- *False positive rate of tests*
- *Population differences between the vaccinated and the unvaccinated group*

Cohort	Unvaccinated			Vaccinated - 1st Dose			Vaccinated - 2nd Dose			Vaccinated - 3rd Dose		
Stats	#positives	#tests	positivity(%)	#positives	#tests	positivity(%)	#positives	#tests	positivity(%)	#positives	#tests	positivity(%)
Week												
2020-12-06	3,057	18,123	16.87	-	-	-	-	-	-	-	-	-
2020-12-13	6,160	33,287	18.51	-	-	-	-	-	-	-	-	-
2020-12-20	7,227	35,041	20.62	1	45	2.22	-	-	-	-	-	-
2020-12-27	8,780	34,892	25.16	23	343	6.71	-	2	-	-	-	-
2021-01-03	6,357	38,383	16.56	62	977	6.35	-	1	-	-	-	-
2021-01-10	4,391	31,049	14.14	58	965	6.01	1	10	10.00	-	-	-
2021-01-17	3,251	24,057	13.51	87	1,573	5.53	5	85	5.88	-	-	-
2021-01-24	2,192	21,965	9.98	127	2,780	4.57	2	222	0.90	-	-	-
2021-01-31	1,596	19,933	8.01	160	4,010	3.99	4	248	1.61	-	-	-
2021-02-07	1,214	16,823	7.22	146	4,901	2.98	4	277	1.44	-	-	-
2021-02-14	1,044	14,547	7.18	160	5,630	2.84	5	317	1.58	-	-	-
2021-02-21	664	13,222	5.02	99	6,019	1.64	3	299	1.00	-	-	-
2021-02-28	505	11,675	4.33	66	6,195	1.07	2	327	0.61	-	-	-
2021-03-07	507	14,183	3.57	71	7,085	1.00	1	441	0.23	-	-	-
2021-03-14	486	16,297	2.98	97	8,887	1.09	2	640	0.31	-	-	-
2021-03-21	510	14,443	3.53	80	10,046	0.80	3	943	0.32	-	-	-
2021-03-28	449	10,687	4.20	58	9,660	0.60	8	1,269	0.63	-	-	-
2021-04-04	382	9,075	4.21	62	11,171	0.56	7	1,777	0.39	-	-	-
2021-04-11	295	9,076	3.25	55	11,686	0.47	4	2,536	0.16	-	-	-
2021-04-18	263	8,104	3.25	39	10,629	0.37	6	2,831	0.21	-	-	-
2021-04-25	237	8,082	2.93	38	9,876	0.38	5	3,518	0.14	-	-	-
2021-05-02	224	7,620	2.94	39	10,148	0.38	7	4,512	0.16	-	-	-
2021-05-09	199	7,189	2.77	56	10,261	0.55	14	5,956	0.24	-	-	-
2021-05-16	166	6,868	2.42	43	10,150	0.42	25	7,256	0.34	-	-	-
2021-05-23	183	5,690	3.22	81	8,125	1.00	40	8,473	0.47	-	-	-

Cohort	Unvaccinated			Vaccinated - 1st Dose			Vaccinated - 2nd Dose			Vaccinated - 3rd Dose		
Stats	#positives	#tests	positivity(%)	#positives	#tests	positivity(%)	#positives	#tests	positivity(%)	#positives	#tests	positivity(%)
Week												
2021-05-30	303	3,984	7.61	134	5,919	2.26	84	9,017	0.93	-	-	-
2021-06-06	379	4,195	9.03	163	5,841	2.79	162	11,526	1.41	-	-	-
2021-06-13	563	4,932	11.42	217	6,608	3.28	280	14,723	1.90	-	-	-
2021-06-20	693	4,963	13.96	369	7,328	5.04	595	18,832	3.16	-	3	-
2021-06-27	928	5,358	17.32	602	7,873	7.65	1,182	23,729	4.98	-	2	-
2021-07-04	838	5,134	16.32	707	7,167	9.86	1,606	25,931	6.19	-	7	-
2021-07-11	1,138	4,914	23.16	1,115	6,509	17.13	2,566	27,191	9.44	-	10	-
2021-07-18	940	4,073	23.08	552	4,895	11.28	1,965	25,882	7.59	-	9	-
2021-07-25	791	3,368	23.49	499	3,727	13.39	1,534	25,467	6.02	1	5	20.00
2021-08-01	766	3,341	22.93	423	2,810	15.05	1,864	25,634	7.27	-	5	-
2021-08-08	772	3,302	23.38	377	2,175	17.33	2,216	26,453	8.38	-	10	-
2021-08-15	1,032	3,674	28.09	329	1,583	20.78	2,734	28,746	9.51	-	12	-
2021-08-22	927	3,943	23.51	169	1,059	15.96	3,139	32,489	9.66	1	11	9.09
2021-08-29	935	4,493	20.81	184	1,004	18.33	2,979	36,969	8.06	1	17	5.88
2021-09-05	839	5,153	16.28	86	888	9.68	2,548	37,450	6.80	1	18	5.56
2021-09-12	1,092	6,936	15.74	112	980	11.43	2,189	40,042	5.47	-	22	-
2021-09-19	1,413	8,569	16.49	145	1,186	12.23	2,930	46,250	6.34	-	29	-
2021-09-26	1,283	7,758	16.54	138	1,111	12.42	2,898	48,219	6.01	1	40	2.50
2021-10-03	1,404	7,085	19.82	197	1,040	18.94	3,482	46,819	7.44	8	290	2.76
2021-10-10	1,526	6,589	23.16	254	1,080	23.52	4,085	46,386	8.81	40	1,433	2.79
2021-10-17	1,419	5,998	23.66	289	1,107	26.11	4,555	47,640	9.56	73	3,066	2.38
2021-10-24	978	4,395	22.25	304	971	31.31	4,129	42,267	9.77	122	4,419	2.76
2021-10-31	665	3,791	17.54	217	1,015	21.38	3,126	39,102	7.99	119	5,825	2.04
2021-11-07	899	4,229	21.26	208	1,129	18.42	3,304	35,237	9.38	132	7,178	1.84
2021-11-14	1,006	4,887	20.59	247	1,447	17.07	3,232	32,403	9.97	223	9,200	2.42
2021-11-21	1,068	5,664	18.86	268	1,749	15.32	2,991	31,029	9.64	295	13,300	2.22
2021-11-28	1,249	6,631	18.84	345	2,209	15.62	3,126	32,797	9.53	417	21,188	1.97
2021-12-05	1,313	7,187	18.27	393	2,332	16.85	3,326	33,434	9.95	872	32,046	2.72
2021-12-12	1,989	9,031	22.02	880	3,264	26.96	6,182	32,828	18.83	3,489	50,116	6.96
2021-12-19	2,731	10,687	25.55	889	3,155	28.18	3,273	16,734	19.56	6,281	66,532	9.44
2021-12-26	3,377	10,432	32.37	1,072	3,035	35.32	2,979	11,004	27.07	12,401	81,341	15.25
2022-01-02	3,069	9,665	31.75	754	2,802	26.91	1,685	7,038	23.94	10,287	82,254	12.51
2022-01-09	3,519	9,957	35.34	532	2,171	24.50	710	3,757	18.90	6,472	65,934	9.82
2022-01-16	4,433	11,490	38.58	737	2,305	31.97	711	2,885	24.64	8,385	60,974	13.75
2022-01-23	4,038	11,162	36.18	790	2,402	32.89	748	2,848	26.26	10,244	63,260	16.19
2022-01-30	2,865	9,091	31.51	661	2,213	29.87	752	3,117	24.13	10,200	66,083	15.44
2022-02-06	1,782	6,246	28.53	436	1,697	25.69	615	2,703	22.75	8,576	62,759	13.66

Cohort	Unvaccinated			Vaccinated - 1st Dose			Vaccinated - 2nd Dose			Vaccinated - 3rd Dose		
Stats	**#positives**	**#tests**	**positivity(%)**	**#positives**	**#tests**	**positivity(%)**	**#positives**	**#tests**	**positivity(%)**	**#positives**	**#tests**	**positivity(%)**
Week												
2022-02-13	1,187	4,383	27.08	340	1,196	28.43	479	2,112	22.68	8,039	54,689	14.70
2022-02-20	951	3,344	28.44	272	840	32.38	397	1,602	24.78	7,185	48,103	14.94
2022-02-27	1,150	3,624	31.73	461	1,093	42.18	607	1,969	30.83	10,304	54,377	18.95
2022-03-06	1,888	5,073	37.22	780	1,728	45.14	1,191	3,026	39.36	17,061	70,786	24.10
2022-03-13	2,626	6,688	39.26	1,109	2,278	48.68	1,514	3,946	38.37	22,586	85,876	26.30
2022-03-20	3,569	8,359	42.70	960	2,357	40.73	2,194	4,999	43.89	23,410	92,904	25.20
2022-03-27	2,934	7,412	39.58	649	1,782	36.42	1,687	4,377	38.54	18,088	84,700	21.36
2022-04-03	2,521	6,582	38.30	500	1,450	34.48	1,489	3,653	40.76	15,688	74,879	20.95
2022-04-10	1,732	5,079	34.10	380	1,020	37.25	979	2,550	38.39	12,025	58,853	20.43
2022-04-17	1,271	4,008	31.71	235	728	32.28	623	1,831	34.03	7,559	45,868	16.48
2022-04-24	870	3,194	27.24	157	561	27.99	345	1,257	27.45	4,543	34,951	13.00
2022-05-01	1,041	3,254	31.99	163	502	32.47	366	1,137	32.19	4,565	29,124	15.67
2022-05-08	1,112	3,318	33.51	114	460	24.78	313	1,069	29.28	3,954	25,696	15.39
2022-05-15	1,024	3,282	31.20	116	476	24.37	270	909	29.70	3,619	23,648	15.30
2022-05-22	1,009	2,976	33.90	94	401	23.44	233	750	31.07	3,500	21,433	16.33
2022-05-29	964	2,771	34.79	125	371	33.69	278	742	37.47	4,379	21,275	20.58
2022-06-05	1,112	2,878	38.64	162	423	38.30	470	975	48.21	6,208	24,292	25.56
2022-06-12	1,260	2,885	43.67	204	437	46.68	490	915	53.55	7,665	24,993	30.67
2022-06-19	1,517	3,068	49.45	283	498	56.83	695	1,161	59.86	10,148	29,093	34.88
2022-06-26	1,854	3,484	53.21	315	575	54.78	880	1,400	62.86	11,739	34,170	34.35
2022-07-03	2,752	4,688	58.70	414	726	57.02	1,006	1,691	59.49	13,769	38,806	35.48
2022-07-10	2,334	4,484	52.05	297	618	48.06	829	1,492	55.56	10,218	32,578	31.36
2022-07-17	1,568	3,631	43.18	175	439	39.86	464	1,045	44.40	6,108	24,493	24.94
2022-07-24	1,085	2,747	39.50	123	306	40.20	279	707	39.46	4,090	19,738	20.72
2022-07-31	832	2,261	36.80	81	207	39.13	216	530	40.75	2,936	14,319	20.50
2022-08-07	518	1,586	32.66	69	159	43.40	147	398	36.93	2,668	11,174	23.88
Total	**145,982**	**767,677**	**19.02**	**26,080**	**278,579**	**9.36**	**105,071**	**1,062,761**	**9.89**	**105,071**	**1,062,761**	**9.89**


Positivity Rate in vaccinated/unvaccinated people
70%
60%
50%
40%
30%
20%
10%
0%
Positivity Rate (%)
2021
March
May
July
September
November
2022
March
May
July
Date (weeks)
vaccinated
First dose
Second dose
Third dose
Unvaccinated

Infections after natural infection

In this section of the report, the raw numbers for re-infections are presented. A re-infection is defined to be an infection (PCR/LF positive test) which occurs 90 days after the primary PCR/LFT positive test. We only considered positive symptomatic tests, i.e. positive tests that were preceded/followed by an unhealthy assessment within 7 days from the test date. Two groups are presented in the table. The first includes users who were not previously infected while the second is related to users who got infected once from the start of the pandemic. Positive PCR/LFT tests between these two groups are monitored monthly.

These figures do not take into account:

- *False positive rate of tests*
- *Population differences between the two cohorts*

Cohort	Not previously infected			Previously infected		
Stats	**#positives**	**#tests**	**positivity(%)**	**#positives**	**#tests**	**positivity(%)**
Month						
2020-10-01	14527	102671	14.15	103	530	19.43
2020-11-01	14926	94804	15.74	147	687	21.4
2020-12-01	27268	122479	22.26	132	884	14.93
2021-01-01	20661	123214	16.77	132	1387	9.52
2021-02-01	5762	85477	6.74	94	1537	6.12
2021-03-01	3343	92449	3.62	142	2712	5.24
2021-04-01	2347	79572	2.95	141	3895	3.62
2021-05-01	2218	83916	2.64	387	5208	7.43
2021-06-01	7509	90085	8.34	1267	5852	21.65
2021-07-01	18414	112465	16.37	707	5581	12.67
2021-08-01	18494	103903	17.8	387	5317	7.28
2021-09-01	19729	133265	14.8	406	7657	5.3
2021-10-01	27847	154802	17.99	578	9811	5.89
2021-11-01	22764	147631	15.42	671	11548	5.81
2021-12-01	65192	246858	26.41	3323	23747	13.99
2022-01-01	65011	187529	34.67	4668	22265	20.97
2022-02-01	43899	127963	34.31	3192	17738	18.0
2022-03-01	107214	198245	54.08	8265	28402	29.1
2022-04-01	57460	124752	46.06	4731	23511	20.12
2022-05-01	23521	61293	38.37	2418	16930	14.28
2022-06-01	41873	71071	58.92	6198	21136	29.32
2022-07-01	46837	71722	65.3	8628	27975	30.84
2022-08-01	7310	15073	48.5	1384	7826	17.68

Cohort	Not previously infected			Previously infected		
Stats	#positives	#tests	positivity(%)	#positives	#tests	positivity(%)
Month						
Total	664126	2.63124e+06	25.24	48101	252136	19.08

Symptoms logged after vaccination

In this section of the report, symptoms logged after vaccination are collected and ranked according to their frequency of occurrence in active users. These symptoms can be divided into two groups: systemic and local ones. The first are also called whole-body symptoms since they are not strictly related to the local response of the body to the injection. The latter are related to local reactions on the site of the injection.

Top 10 most frequent systemic symptoms for vaccines types

The 10 most frequent systemic symptoms for each vaccine type are ranked according to their frequency of occurrence in descending order. These symptoms were collected from the reports completed by vaccinated active users in the first week after any injection (either first or second dose).

	Pfizer-BioNTech	Oxford/Astrazeneca	Moderna	Janssen J&J	Unspecified Brand
#1 systemic symptom	Fatigue	Fatigue	Fatigue	Fatigue	Fatigue
#2 systemic symptom	Headache	Headache	Headache	Headache	Headache
#3 systemic symptom	Arthralgia	Chills Or Shivers	Chills Or Shivers	Runny Nose	Runny Nose
#4 systemic symptom	Chills Or Shivers	Arthralgia	Arthralgia	Chills Or Shivers	Sore Throat
#5 systemic symptom	Runny Nose	Fever	Myalgia	Arthralgia	Sneezing
#6 systemic symptom	Sore Throat	Dizzy Light Headed	Fever	Sore Throat	Arthralgia
#7 systemic symptom	Dizzy Light Headed	Myalgia	Runny Nose	Fever	Chills Or Shivers
#8 systemic symptom	Myalgia	Nausea	Sore Throat	Sneezing	Dizzy Light Headed
#9 systemic symptom	Fever	Brain Fog	Dizzy Light Headed	Dizzy Light Headed	Persistent Cough
#10 systemic symptom	Sneezing	Runny Nose	Nausea	Myalgia	Myalgia

Ranked local effects for vaccines types

Users are asked daily for a week whether they are experiencing some local reactions on the site of injection. These users can choose among the following local reactions: tenderness, redness, local pain, swelling, swollen armpit glands, bruising, warmth, itch or other reasons (text field).

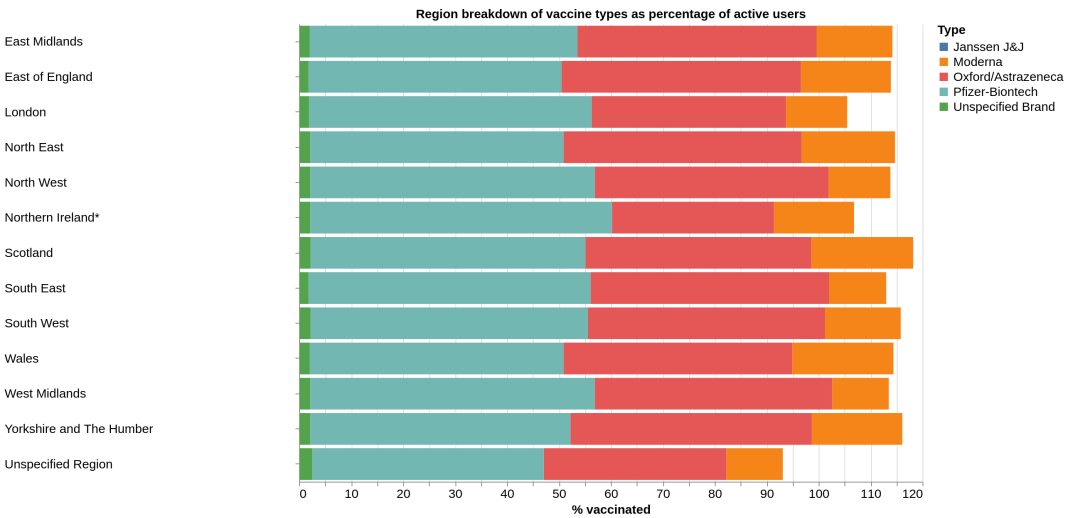
	Moderna	Pfizer-BioNTech	Oxford/Astrazeneca	Janssen J&J	Unspecified Brand
#1 local symptom	Tenderness	Tenderness	Tenderness	Tenderness	Tenderness
#2 local symptom	Pain	Pain	Pain	Pain	Pain
#3 local symptom	Swelling	Warmth	Warmth	Swelling	Warmth
#4 local symptom	Warmth	Swelling	Swelling	Redness	Swelling
#5 local symptom	Redness	Redness	Bruising	Warmth	Redness
#6 local symptom	Bruising	Bruising	Redness	Bruising	Bruising
#7 local symptom	Swollen Armpit Glands	Swollen Armpit Glands	Swollen Armpit Glands	Swollen Armpit Glands	Swollen Armpit Glands

Breakdown of vaccinated active users

In the following sections, different breakdowns are provided for vaccinated active users. A user is defined to be active if she/he has logged either one vaccine, a test or an assessment from the beginning of December. As of today, our dataset contains 1,893,996 active users. These breakdowns are split for vaccines types. Absolute values for each stratum are provided together with percentages. The latter are related to the percentage of active users in that stratum who were vaccinated with a specific vaccine type. Therefore, rates will add up horizontally but not vertically (through different strata).

Regional breakdown of vaccine types for active users

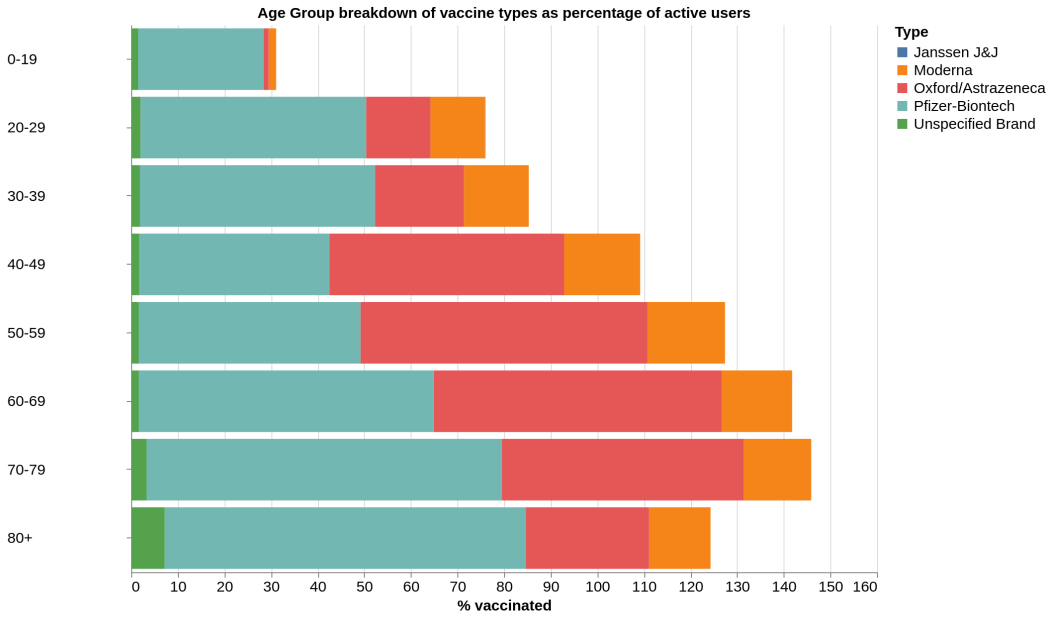
Region	Janssen J&J	Moderna	Oxford/ Astrazeneca	Pfizer-BioNTech	Unspecified Brand	Total
East Midlands	12 (0.0%)	16,039 (14.6%)	50,401 (46.0%)	56,582 (51.6%)	2,199 (2.0%)	**125,233 (78.2%)**
East of England	43 (0.0%)	36,019 (17.3%)	95,827 (46.1%)	101,215 (48.7%)	3,685 (1.8%)	**236,789 (76.8%)**
London	71 (0.0%)	29,457 (11.8%)	93,302 (37.4%)	135,630 (54.4%)	4,817 (1.9%)	**263,277 (75.5%)**
North East	9 (0.0%)	8,740 (18.0%)	22,256 (45.8%)	23,733 (48.8%)	1,041 (2.1%)	**55,779 (78.2%)**
North West	24 (0.0%)	16,676 (11.9%)	63,081 (45.0%)	76,837 (54.8%)	2,973 (2.1%)	**159,591 (78.8%)**
Northern Ireland*	1 (0.0%)	1,922 (15.4%)	3,902 (31.2%)	7,259 (58.1%)	257 (2.1%)	**13,341 (77.0%)**
Scotland	28 (0.0%)	19,512 (19.6%)	43,311 (43.5%)	52,660 (52.9%)	2,194 (2.2%)	**117,705 (79.1%)**
South East	54 (0.0%)	42,233 (11.0%)	175,997 (45.9%)	208,054 (54.3%)	6,788 (1.8%)	**433,126 (76.8%)**
South West	32 (0.0%)	29,933 (14.6%)	93,709 (45.6%)	109,790 (53.4%)	4,437 (2.2%)	**237,901 (78.4%)**
Wales	5 (0.0%)	16,433 (19.5%)	37,152 (44.0%)	41,254 (48.9%)	1,677 (2.0%)	**96,521 (78.2%)**
West Midlands	16 (0.0%)	12,149 (10.9%)	50,809 (45.7%)	60,906 (54.8%)	2,308 (2.1%)	**126,188 (78.3%)**
Yorkshire and The Humber	19 (0.0%)	19,192 (17.4%)	51,260 (46.5%)	55,251 (50.1%)	2,292 (2.1%)	**128,014 (78.7%)**
Unspecified Region	33 (0.0%)	14,342 (10.9%)	46,193 (35.1%)	58,721 (44.6%)	3,332 (2.5%)	**122,621 (67.7%)**
Total	**347 (0.0%)**	**262,647 (13.9%)**	**827,200 (43.7%)**	**987,892 (52.2%)**	**38,000 (2.0%)**	**2,116,086 (111.7%)**



(*) The number of active users in Northern Ireland is low compared to other region. Numbers could be less reliable in this nation.

Age group breakdown of vaccine types for active users

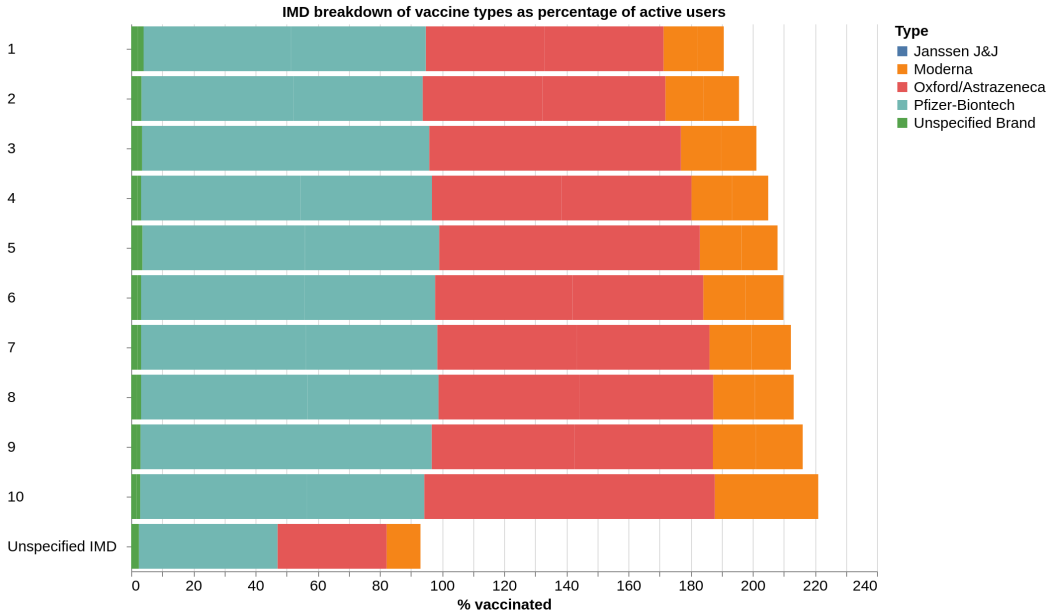
Age Group	Janssen J&J	Moderna	Oxford/Astrazeneca	Pfizer-BioNTech	Unspecified Brand	Total
0-19	11 (0.0%)	2,758 (1.6%)	1,948 (1.1%)	46,955 (26.9%)	2,625 (1.5%)	**54,297 (29.1%)**
20-29	72 (0.1%)	15,359 (11.7%)	18,189 (13.8%)	63,778 (48.4%)	2,684 (2.0%)	**100,082 (63.2%)**
30-39	39 (0.0%)	32,040 (13.9%)	43,930 (19.1%)	116,146 (50.4%)	4,290 (1.9%)	**196,445 (67.9%)**
40-49	51 (0.0%)	51,563 (16.3%)	159,153 (50.4%)	128,877 (40.8%)	5,278 (1.7%)	**344,922 (75.9%)**
50-59	60 (0.0%)	66,046 (16.6%)	244,744 (61.6%)	189,227 (47.6%)	6,470 (1.6%)	**506,547 (83.9%)**
60-69	46 (0.0%)	56,849 (15.1%)	233,095 (61.8%)	238,642 (63.3%)	5,901 (1.6%)	**534,533 (90.9%)**
70-79	56 (0.0%)	31,570 (14.5%)	113,179 (51.9%)	166,239 (76.2%)	7,224 (3.3%)	**318,268 (93.0%)**
80+	12 (0.0%)	6,462 (13.2%)	12,962 (26.4%)	38,028 (77.5%)	3,528 (7.2%)	**60,992 (92.0%)**
Total	**347 (0.0%)**	**262,647 (13.9%)**	**827,200 (43.7%)**	**987,892 (52.2%)**	**38,000 (2.0%)**	**2,116,086 (111.7%)**



IMD (Index of Multiple Deprivation) breakdown of vaccine types for active users

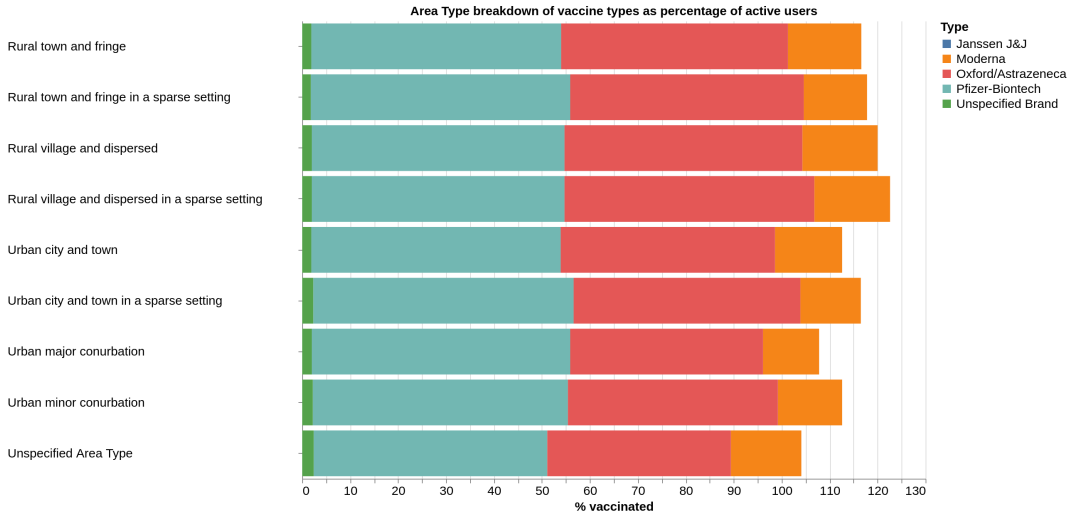
The Index of Multiple Deprivation (IMD) is a measure of the socio-economic class of a user based on his/her *Lower Layer Super Output Areas* of residence. The higher the IMD, the higher is the socio-economic status of a user. In this breakdown, we report vaccination levels across the 10 different deciles of the IMD distribution.

IMD	Janssen J&J	Moderna	Oxford/ Astrazeneca	Pfizer-BioNTech	Unspecified Brand	Total
1	0 (0.0%)	252 (8.6%)	1,119 (38.3%)	1,267 (43.4%)	53 (1.8%)	**2,691 (82.6%)**
2	1 (0.0%)	412 (11.4%)	1,430 (39.5%)	1,505 (41.6%)	42 (1.2%)	**3,390 (83.6%)**
3	0 (0.0%)	547 (11.3%)	1,976 (40.9%)	2,041 (42.3%)	66 (1.4%)	**4,630 (86.4%)**
4	0 (0.0%)	746 (11.6%)	2,679 (41.8%)	2,711 (42.3%)	80 (1.2%)	**6,216 (87.5%)**
5	3 (0.0%)	1,033 (11.6%)	3,609 (40.6%)	3,837 (43.2%)	130 (1.5%)	**8,612 (87.5%)**
6	2 (0.0%)	1,381 (12.2%)	4,781 (42.1%)	4,771 (42.0%)	142 (1.2%)	**11,077 (87.7%)**
7	0 (0.0%)	1,636 (12.7%)	5,492 (42.6%)	5,450 (42.3%)	160 (1.2%)	**12,738 (88.3%)**
8	2 (0.0%)	1,736 (12.5%)	5,969 (43.0%)	5,863 (42.2%)	186 (1.3%)	**13,756 (88.4%)**
9	3 (0.0%)	2,394 (15.1%)	7,069 (44.6%)	6,319 (39.9%)	179 (1.1%)	**15,964 (88.6%)**
10	6 (0.0%)	4,520 (18.7%)	11,193 (46.2%)	9,149 (37.8%)	301 (1.2%)	**25,169 (88.3%)**
Unspecified IMD	33 (0.0%)	14,342 (10.9%)	46,193 (35.1%)	58,721 (44.6%)	3,332 (2.5%)	**122,621 (67.7%)**
Total	**348 (0.0%)**	**264,716 (13.9%)**	**862,665 (43.7%)**	**1,014,926 (52.2%)**	38,399 (2.0%)	**2,181,054 (115.2%)**



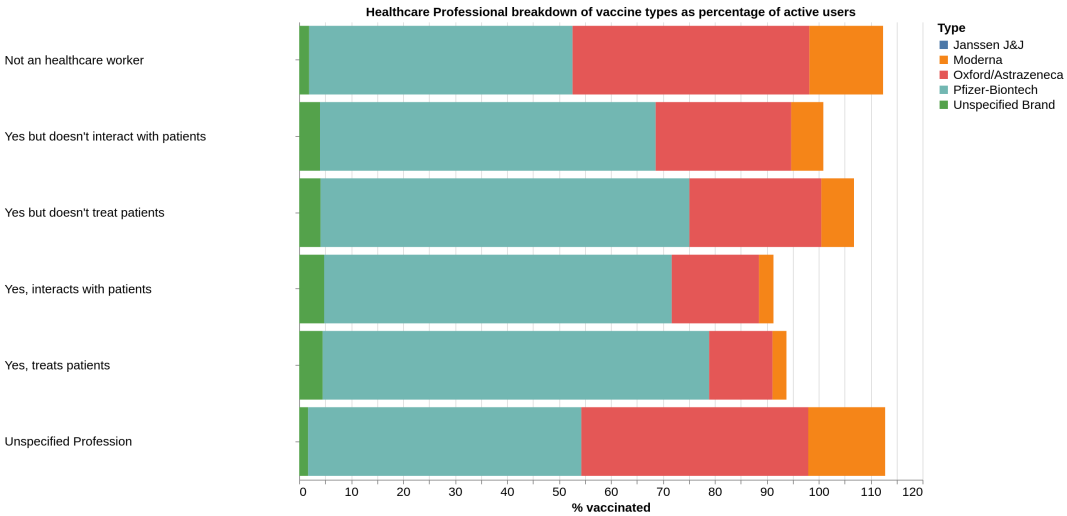
Area type (rural - urban) breakdown of vaccine types for active users

Area Type	Janssen J&J	Moderna	Oxford/ Astrazeneca	Pfizer-BioNTech	Unspecified Brand	Total
Rural town and fringe	20 (0.0%)	29,580 (15.3%)	91,543 (47.3%)	100,855 (52.1%)	3,694 (1.9%)	**225,692 (78.4%)**
Rural town and fringe in a sparse setting	0 (0.0%)	1,178 (13.2%)	4,356 (48.7%)	4,845 (54.1%)	165 (1.8%)	**10,544 (79.6%)**
Rural village and dispersed	32 (0.0%)	31,394 (15.7%)	99,129 (49.6%)	105,299 (52.7%)	3,968 (2.0%)	**239,822 (79.9%)**
Rural village and dispersed in a sparse setting	4 (0.0%)	3,052 (15.8%)	10,062 (52.1%)	10,175 (52.7%)	383 (2.0%)	**23,676 (81.5%)**
Urban city and town	112 (0.0%)	103,682 (14.0%)	330,427 (44.7%)	384,751 (52.0%)	14,317 (1.9%)	**833,289 (77.0%)**
Urban city and town in a sparse setting	0 (0.0%)	439 (12.6%)	1,649 (47.3%)	1,895 (54.3%)	79 (2.3%)	**4,062 (81.1%)**
Urban major conurbation	113 (0.0%)	52,599 (11.7%)	180,433 (40.2%)	241,779 (53.9%)	8,814 (2.0%)	**483,738 (76.3%)**
Urban minor conurbation	4 (0.0%)	4,947 (13.4%)	16,195 (43.8%)	19,653 (53.2%)	797 (2.2%)	**41,596 (77.8%)**
Unspecified Area Type	62 (0.0%)	35,776 (14.7%)	93,406 (38.3%)	118,640 (48.7%)	5,783 (2.4%)	**253,667 (72.9%)**
Total	**347 (0.0%)**	**262,647 (13.9%)**	**827,200 (43.7%)**	**987,892 (52.2%)**	**38,000 (2.0%)**	**2,116,086 (111.7%)**



Healthcare worker breakdown of vaccine types for active users

Healthcare Professional	Janssen J&J	Moderna	Oxford/ Astrazeneca	Pfizer-BioNTech	Unspecified Brand	Total
Not an healthcare worker	233 (0.0%)	171,391 (14.2%)	549,969 (45.6%)	611,874 (50.7%)	23,414 (1.9%)	**1,356,881 (76.3%)**
Yes but doesn't interact with patients	4 (0.0%)	1,985 (6.2%)	8,357 (26.1%)	20,685 (64.6%)	1,265 (4.0%)	**32,296 (82.3%)**
Yes but doesn't treat patients	1 (0.0%)	534 (6.3%)	2,163 (25.4%)	6,054 (71.0%)	353 (4.1%)	**9,105 (86.4%)**
Yes, interacts with patients	6 (0.0%)	1,405 (2.8%)	8,444 (16.8%)	33,730 (66.9%)	2,441 (4.8%)	**46,026 (81.3%)**
Yes, treats patients	1 (0.0%)	241 (2.7%)	1,075 (12.2%)	6,563 (74.4%)	399 (4.5%)	**8,279 (84.8%)**
Unspecified Profession	102 (0.0%)	87,091 (14.8%)	257,192 (43.7%)	308,986 (52.6%)	10,128 (1.7%)	**663,499 (77.0%)**
Total	**347 (0.0%)**	**262,647 (13.9%)**	**827,200 (43.7%)**	**987,892 (52.2%)**	**38,000 (2.0%)**	**2,116,086 (111.7%)**



Ethnicity breakdown of vaccine types for active users

Ethnicity	Janssen J&J	Moderna	Oxford/Astrazeneca	Pfizer-BioNTech	Unspecified Brand	Total
Asian	4 (0.0%)	2,690 (8.9%)	9,978 (33.0%)	14,014 (46.4%)	730 (2.4%)	**27,416 (68.9%)**
Black	3 (0.0%)	850 (9.7%)	3,197 (36.3%)	3,833 (43.5%)	175 (2.0%)	**8,058 (67.8%)**
Chinese	2 (0.0%)	938 (14.1%)	2,286 (34.4%)	3,351 (50.4%)	112 (1.7%)	**6,689 (72.4%)**
Middle Eastern	2 (0.0%)	515 (9.0%)	2,022 (35.5%)	2,709 (47.6%)	105 (1.8%)	**5,353 (71.0%)**
Mixed Other	6 (0.0%)	2,367 (10.4%)	6,221 (27.3%)	9,952 (43.7%)	396 (1.7%)	**18,942 (61.5%)**
Mixed White Black	1 (0.0%)	910 (8.8%)	2,690 (25.9%)	4,183 (40.3%)	219 (2.1%)	**8,003 (57.6%)**
White	321 (0.0%)	252,148 (14.1%)	793,907 (44.5%)	940,948 (52.7%)	35,453 (2.0%)	**2,022,777 (77.6%)**
Prefer Not to Say	5 (0.1%)	693 (10.0%)	2,570 (36.9%)	2,943 (42.3%)	130 (1.9%)	**6,341 (65.2%)**
Other	3 (0.0%)	1,001 (12.0%)	3,355 (40.3%)	4,185 (50.3%)	186 (2.2%)	**8,730 (74.9%)**
Unspecified Ethnicity	0 (0.0%)	535 (5.9%)	974 (10.7%)	1,774 (19.5%)	494 (5.4%)	**3,777 (28.9%)**
Total	**347 (0.0%)**	**262,647 (13.9%)**	**827,200 (43.7%)**	**987,892 (52.2%)**	**38,000 (2.0%)**	**2,116,086 (111.7%)**