Vaccination Report - 14 December 2021

1. Vaccine Implementation

• WHO's Emergency Use Listing(EUL) Vaccines (Last Updated 11 Nov 2021)

	Manufacturer	Name of Vaccine	NRA of Record	Vaccine type
1	Pfizer-BioNTech (US)	BNT162b2/COMIRNAT Y Tozinameran (INN)	EMA/USFDA	mRNA
2	AstraZeneca (UK)	ChAdOx1 (AZS1222 Vaxzevria)	EMA/ MFDS KOREA/ Japan MHLW/PMDA/ Australia TGA	Non ReplicatingViral vector
3	Serum Institute of India (India)	Covishield (ChAdOx1_nCoV-19)	DCGI	Non Replicating Viral Vector
4	Johnson &Johnson (US)	Ad26.CoV2.S	EMA	Non ReplicatingViral vector
5	Moderna (US)	mRNA-1273	EMA/USFDA	mRNA
6	Sinopharm Beijing (China)	BBIBP-CorV	NMPA	Inactivated virus (Vero Cells)
7	Sinovac (China)	SARS-CoV-2 Vaccine	NMPA	Inactivated virus (Vero Cell)
8	Bharat Biotech (India)	SARS-CoV-2 Vaccine, Inactivated (Vero Cell)/ COVAXIN	DCGI	Whole-Virion Inactivated (Vero Cell)

• 28 Vaccines Approved by at Least One Country

Vaccine Type	mRNA	Non Replicating Viral vector	Inactivated virus	Protein Subunit	DNA	Total
In Use	3	6	9	9	1	28

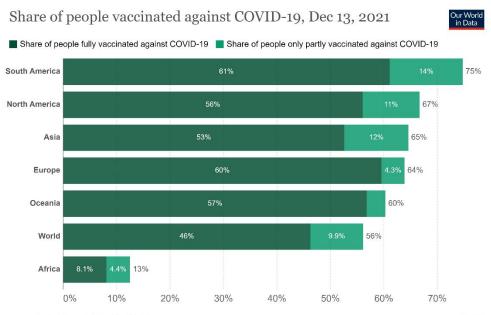
Source: https://covid19.trackvaccines.org/vaccines/ (Last Updated 13 Dec 2021)

 Vaccination against COVID-19 has now started in 218 locations (Source: Our World in Data.Last Updated 13 Dec, 2021)

Location	Doses given	Fully vaccinated (% of population)	At least 1 dose (% of population)
Worldwide	8.52 billion	3.64 billion (46.28%)	4.42 billion (56.13%)

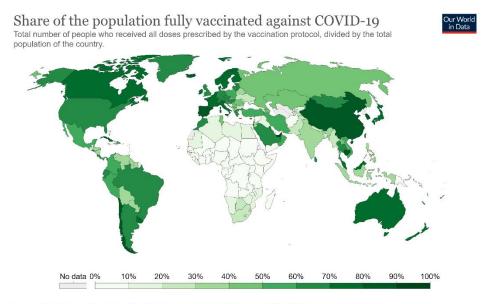
About this data:

- a: This data changes rapidly and might not reflect doses still being reported. It may differ from other sites & sources.
- b: Where data for full vaccinations is available, it shows how many people have received at least 1 dose and how many people have been fully vaccinated (which may require more than 1 dose). Where data for full vaccinations isn't available, the data shows the total number of vaccine doses given to people. Since some vaccines require more than 1 dose, the number of fully vaccinated people is likely lower.
 - c: It only has full vaccination totals in some locations.



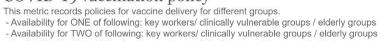
Source: Official data collated by Our World in Data Note: Alternative definitions of a full vaccination, e.g. having been infected with SARS-CoV-2 and having 1 dose of a 2-dose protocol, are ignored to maximize comparability between countries.

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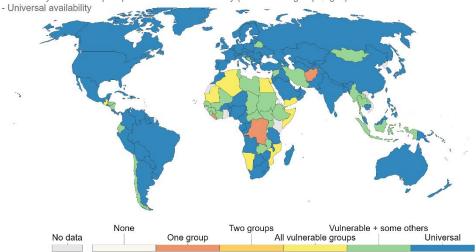


Source: Official data collated by Our World in Data – Last updated 14 December 2021, 17:57 (London time)
Note: Alternative definitions of a full vaccination, e.g. having been infected with SARS-CoV-2 and having 1 dose of a 2-dose protocol, are ignored to maximize comparability between countries.
OurWorldInData.org/coronavirus - CC BY

COVID-19 vaccination policy



- Availability for ALL of following: key workers/ clinically vulnerable groups / elderly groups
- Availability for all three plus partial additional availability (select broad groups/ages)



Source: Oxford COVID-19 Government Response Tracker, Blavatnik School of Government, University of Oxford – Last updated 14 December 2021, 21:08 (London time) OurWorldInData.org/coronavirus • CC BY

2. Vaccine effectiveness against symptomatic infection for Alpha and Delta variants

Vaccine Status	Vaccine Effectiveness		
	Alpha	Delta	
1 Dose (BNT162b2 or ChAdOx1 nCoV-19)	48.7% (95%CI: 45.5-51.7%) ¹ 66%(BNT162b2) ⁴ 64% (ChAdOx1) ⁴	30.7% (95%CI: 25.2-35.7%) ¹ 56%(BNT162b2) ⁴ 67%(ChAdOx1) ⁴ 82% (95% CI:73- 91%) ⁷	
1 Dose (mRNA-1273)	83% ⁴	72% ⁴	
1 Dose(Sinopharm or Sinovac)	Unknown	13.8%,(95%CI: -60.2-54.8%) ³	
2 Doses (BNT162b2)	93.7% (95%CI: 91.6-95.3) ¹ 76% (95%CI: 69-81%) ² 89% ⁴	88% (95%CI: 85.3-90.1%) ¹ 42% (95% CI: 13-62%) ² 87% ⁴ 93%(95% CI: 88-97%/12-18Y) ⁵ 93% (95% CI: 88-97%) ⁷	
2 Doses (ChAdOx1 nCoV-19)	74.5% (95%CI: 68.4-79.4%) ¹	67.0% (95%CI: 61.3-71.8%) ¹	
2 Doses (mRNA-1273)	86%, (95%CI: 81-90.6%) ²	76%, (95% CI: 58-87%) ²	
2 Doses(Sinopharm or Sinovac)	Unknown	59.0%, (95%CI: 16.0-81.6%) ³	
3 Doses (BNT162b2)	Unknown	95.33% (SD 6.44) ⁶	

References:

- 1) Effectiveness of Covid-19 Vaccines against the B.1.617.2 (Delta) Variant
- 2) Comparison of two highly-effective mRNA vaccines for COVID-19 during periods of Alpha and Delta variant prevalence



- 3) Efficacy of inactivated SARS-CoV-2 vaccines against the Delta variant infection in Guangzhou: A test-negative case-control real-world study
- 4) Effectiveness of COVID-19 vaccines against variants of concern in Ontario, Canada
- 5) Effectiveness of BNT162b2 Vaccine against Delta Variant in Adolescents
- 6) A RCT of a third dose CoronaVac or BNT162b2 vaccine in adults with two doses of CoronaVac
- 7) Effectiveness of BNT162b2 Vaccine against Delta Variant in Adolescents

3. Latest Relevant Articles

- Third BNT162b2 vaccination neutralization of SARS-CoV-2 Omicron infection
- Improved neutralization of the SARS-CoV-2 Omicron variant after Pfizer-BioNTech BNT162b2 COVID-19 vaccine boosting
- mRNA-based COVID-19 vaccine boosters induce neutralizing immunity against SARS-CoV-2 Omicron variant
- mRNA booster immunization elicits potent neutralizing serum activity against the SARS-CoV-2 Omicron variant

4. Other Information

- UK Health Security Agency: Omicron daily overview(13 December 2021)
- <u>CDC: SARS-CoV-2 B.1.1.529 (Omicron) Variant United States, December 1–8, 2021</u>