Vaccination Report – 22 March 2022

1. Vaccine Implementation

- WHO's Emergency Use Listing(EUL) Vaccines (Last Updated 2 March 2022）
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	Manufacturer	Name of Vaccine	NRA of Record	Vaccine type
1	Pfizer-BioNTech (US)	BNT162b2/COMIRNATY Tozinameran (INN)	EMA,USFDA	mRNA
2	AstraZeneca (UK)	ChAdOx1 (AZS1222 Vaxzevria)	EMA, MFDS KOREA, Japan MHLW/PMDA, Australia TGA, COFEPRIS(Mexico), ANMAT(Argentina)	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, DCGI	Non ReplicatingViral vector
5	Moderna (US)	mRNA-1273	EMA, USFDA, MFDS	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)
9	Serum Institute of India (India)	NVX-CoV2373/Covovax	DCGI	Protein Subunit
10	NOVAVAX (US)	NVX-CoV2373/Covovax	EMA	Protein Subunit

- **35** Vaccines Approved by at Least One Country

Vaccine Type	mRNA	Non Replicating Viral vector	Inactivated virus	Protein Subunit	DNA	Virus-like Particles (VLP)	Total
In Use	3	6	11	13	1	1	**35**

Source: https://covid19.trackvaccines.org/vaccines/ （Last Updated 21 March 2022）

- Vaccination against COVID-19 has now started in **218** locations
  (Source: Our World in Data. Last Updated 21 March, 2022)

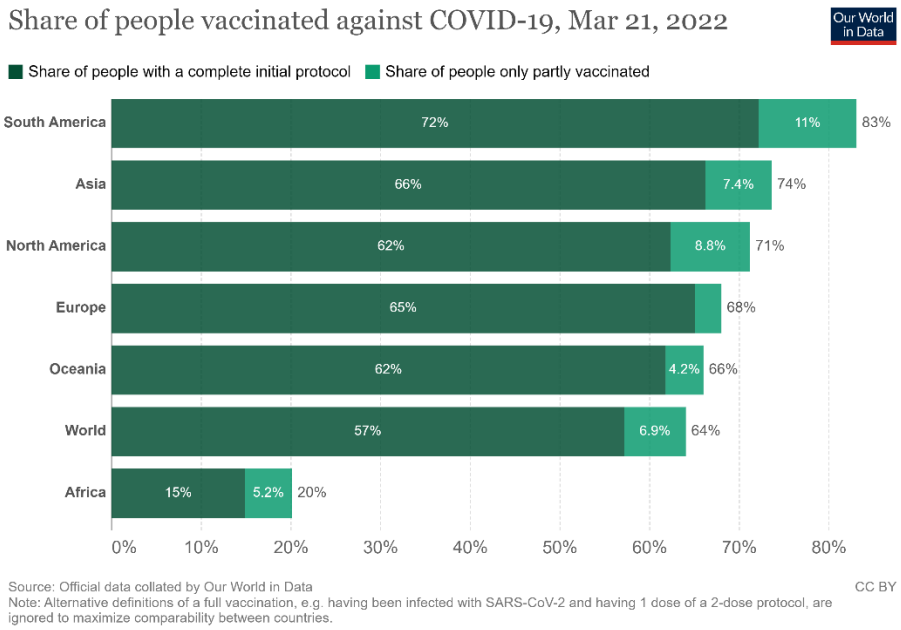
Location	Doses given	Fully vaccinated (% of population)	At least 1 dose (% of population)
Worldwide	11.01 billion	4.5 billion (57.16%)	5.04 billion (64.03%)

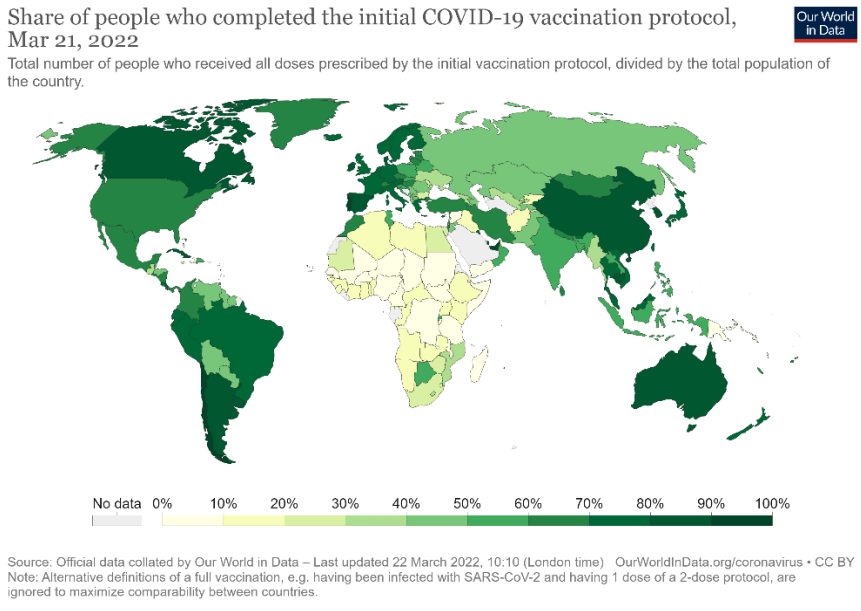
About this data:

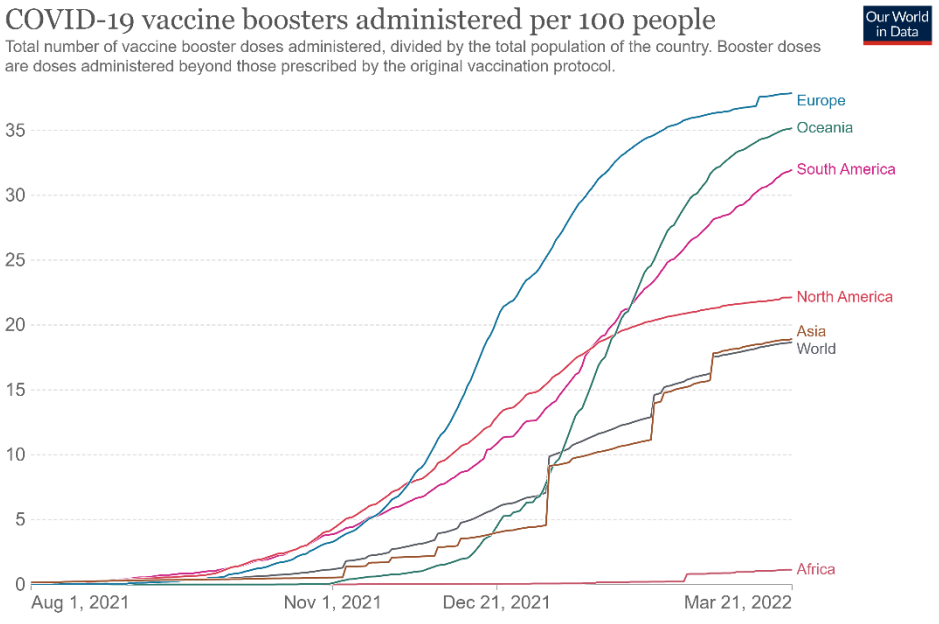
a: This data changes rapidly and might not reflect doses still being reported. It may differ from other sites & sources.

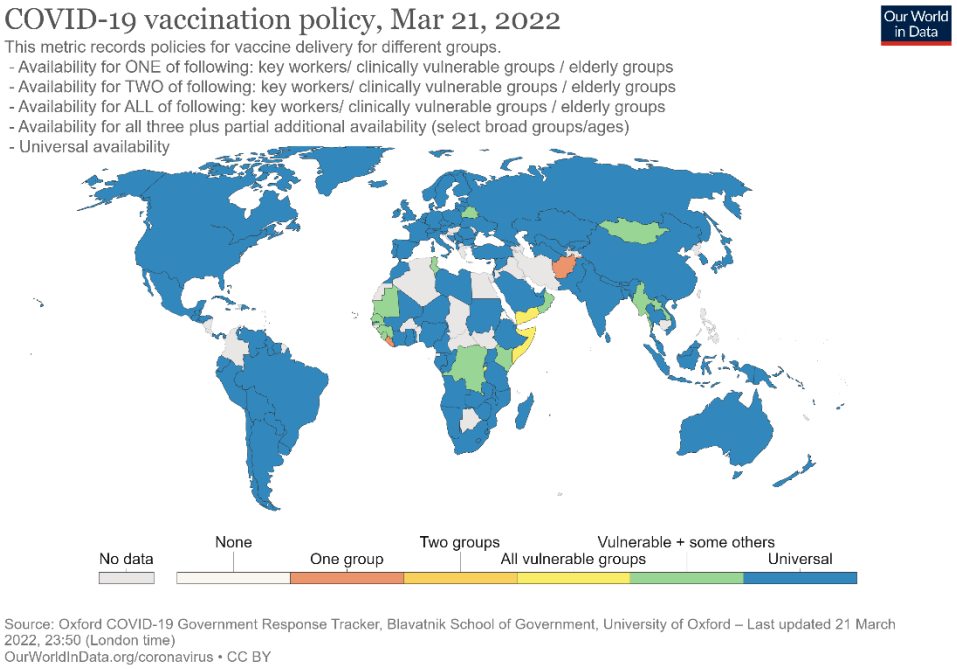
b: Where data for full vaccinations is available, it shows how many people have received at least 1 dose and how many people have been fully vaccinated (which may require more than 1 dose).Where data for full vaccinations isn't available, the data shows the total number of vaccine doses given to people. 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.









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

Vaccine Status	Vaccine Effectiveness		
	Alpha	**Delta**	**Omicron**
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)		**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]	**50%** (95% CI: 35%–62%)[8]

		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]	**30.4%** (95% CI: 5.0%-49.0%)[9]
2 Doses(Sinopharm or Sinovac)		**59.0%,** (95%CI: 16.0-81.6%)[3]	
3 Doses (BNT162b2)		**95.33%** (SD 6.44)[6] **86.1%** (95% CI, 67.3 to 94.1)[11]	**67.2%** (95% CI: 66.5- 67.8%) at 2 to 4 weeks[10] **49.4%** (95% CI, 47.1 to 51.6)[11]
3 Doses(mRNA-1273)			**62.5%** (95% CI: 56.2-67.9%)[9] **47.3%** (95% CI, 40.7 to 53.3)[11]
2 Doses (BNT162b2) + 1Dose(mRNA-1273)			**73.9%** (95% CI: 73.1- 74.6%) at 2 to 4 weeks[10]
2 Doses(ChAdOx1 nCoV-19)+1Dose(BNT162b2)			**62.4%** (95% CI, 61.8- 63.0) at 2 to 4 weeks[10]
2 Doses (ChAdOx1 nCoV-19)+ 1Dose (mRNA-1273)			**70.1%** (95% CI, 69.5 to 70.7) at 2 to 4 weeks[10]

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
8) Effectiveness of BNT162b2 Vaccine against Omicron Variant in South Africa
9) Effectiveness of mRNA-1273 against SARS-CoV-2 omicron and delta variants
10) Covid-19 Vaccine Effectiveness against the Omicron (B.1.1.529) Variant
11) Effect of mRNA Vaccine Boosters against SARS-CoV-2 Omicron Infection in Qatar

3. Latest Relevant Articles

- Evaluating COVID-19 vaccines in the real world
- Neutralizing immunity in vaccine breakthrough infections from the SARS-CoV-2 Omicron and Delta variants
- Protection of prior natural infection compared to mRNA vaccination against SARS-CoV-2 infection and severe COVID-19 in Qatar

4. Other Information

- UK Health Security Agency:COVID-19 vaccine surveillance report Week 11(17 March 2022)
- CDC: Waning 2-Dose and 3-Dose Effectiveness of mRNA Vaccines Against COVID-19–Associated Emergency Department and Urgent Care Encounters and Hospitalizations Among Adults During Periods of Delta and Omicron Variant Predominance — VISION Network, 10 States, August 2021–January 2022
- Pfizer and BioNTech Submit for U.S. Emergency Use Authorization of an Additional Booster Dose of their COVID-19 Vaccine for Older Adults
- Moderna asks FDA to authorize 4th dose of its COVID-19 vaccine for all adults
- FDA to Hold Advisory Committee Meeting on COVID-19 Vaccines to Discuss Future Boosters(March 21, 2022)