

# Jan 21

# COVID-19

# Situation Report 499

Centre for Infectious Disease Epidemiology and Research (CIDER)

# i. Background

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In December, China notified the World Health Organization (WHO) of several cases of human respiratory illness, which appeared to be linked to an open seafood and livestock market in the city of Wuhan. The infecting agent has since been identified as a novel coronavirus, previously known as 2019-nCoV and now called SAR-CoV-2; The new name of the disease has also been termed COVID-19, as of 11<sup>th</sup> February 2020. Although the virus is presumed zoonotic in origin, person-to-person spread is evident. Screening of travellers, travel bans and quarantine measures are being implemented in many countries. Despite these precautions, it is anticipated that more cases will be seen both inside China and internationally. The WHO declared the outbreak of COVID-19 constitutes a Public Health Emergency of International Concern on 30 January. On 11 March, 2020, WHO declared the coronavirus outbreak a pandemic as the global death toll rose above 4,600 and the number of confirmed cases topped 125,000. This report aims to update Global Risk Assessment, Global Epidemiology, Quarantine Orders, Travel Ban/Advisory by countries, WHO's and CDC's Guidance and Protocols and Scientific publication on a daily basis. **New updates in the tables are bolded. A new table on the Omicron variant has been added as Table 5.** 



# ii. Global Risk Assessment

Table 1. Risk assessment of COVID-19 by WHO regions (Updated as of 21 January 2022, 1400H SGT)

Environmental Risk	Transmissihility	Severity	Availability of Treatment/	Overall
	Transmissionery	Disease	Vaccination <sup>#</sup>	Risk <sup>%</sup>
Global (n=198 countries)				
High			Limited Coverage	
Globally, 191 (96.5%) countries (excluding territories <sup>*</sup> ) have reported the outbreak. Using an incidence >20 cases/100,000 people over the past 14-days as cut-off for a surge in cases, the number of countries reporting a surge in cases in each region are as follows: Combined WPRO and SEARO (20 countries), EURO (51 countries), EURO (51 countries), Americas (33 countries), and Africa (31 countries). Only 4 (2%) countries/territories have no reported restrictions on inbound arrivals, while 153 (83%) countries/territories have partially reopened their borders – require arrivals to produce a negative COVID-19 test result and/or undergo self-quarantine upon arrival. 42 (23%) countries/territories are totally closed to international arrivals. [1] On October 7, the Centers for Disease Control and Prevention (CDC) confirmed airborne transmission of SARS-COV-2. [2] The U.S. CDC has revised its guidance on COVID-19 quarantine period from 14 days to 7-10 days, based one's test results and symptoms. Individuals without symptoms only need quarantine for 10 days without testing; those tested negative can quarantine for 7 days. [14] The US Centers for Disease Control and Prevention (CDC) on 10 Feb announced that fully vaccinated people did not need to quarantine if they received their last dose within three months and 14 days after their last shot, the time it takes to develop immunity. [16]	Based on CDC data, median R <sub>0</sub> is estimated to be 5.8 (95% Cl 4.4–7.7), but the estimated effective reproduction number in <b>175</b> <b>countries</b> ranged from <b>0.15</b> to <b>2.2</b> . <sup>\$</sup>	Case fatality rate is currentl y at <b>1.63%</b> globally. Most cases present as flu- like illness.	The number of countries that have commenced mass vaccination in each region are as follows: Combined WPRO and SEARO (33 countries), EURO (53 countries), EMRO (21 countries), Americas (35 countries), and Africa (46 countries). <sup>&amp;</sup> International clinical trials published on 2 September confirm that cheap, widely available steroid drugs can help seriously ill patients survive Covid-19. The World Health Organization issued new treatment guidance, strongly recommending steroids to treat severely and critically ill patients, but not to those with mild disease. [4] Researchers have found all regimens of anticoagulants to be far superior to no anticoagulants in COVID-19 patients. More specifically, patients on both a "therapeutic" or lower dose, showed about a 50% higher chance of survival and roughly a 30% lower chance of intubation, than those not on anticoagulants. It was observed that therapeutic and prophylactic subcutaneous low-molecular weight heparin and therapeutic oral apixaban may lead to better results. [3] A new strain known as B.1.525 containing the same E484K mutation found in the Brazilian and South African variants has been detected in Britain [18]. As of 6 July, the WHO recommended using arthritis drugs Actemra (tocilizumab) and Kevzara (sarilumab) with corticosteroids for severe and critical COVID-19 patients. [27] On 4 Aug, the WHO called for a moratorium on COVID-19 vaccine	High



On January 19. the World Health	boosters until at least the end of
Organization said that international	September to enable that at least 10% of
travel bans "do not provide added value	the population of every country was
and continue to contribute to the	vaccinated [28]
and continue to contribute to the	
[43].	On 3 Sept, emergency use of the Soberana 2 vaccine was authorized in Cuba for minors between the ages of two and 18.
	[31]
	On 8 Sep, World Health Organization called for a moratorium on using coronavirus booster shots until the end of the year or longer especially among healthy people who are fully vaccinated. [32]
	On 29 October, the US Food and Drug Administration (FDA) approved Pfizer's Covid-19 vaccine for emergency use in children aged five to 11 which was later signed off by the CDC on 2 November. [34]
	On 26 November 2021, WHO designated
	the variant B 1 1 529 a variant of concern
	named Omicron This variant has several
	mutations which may impact how it
	hebayes in terms of its transmissibility or
	the severity of illness it causes. [37]
	On 13 January, WHO recommended two new drugs to treat patients with COVID-
	19. Baricitinib in combination with
	corticosteroids for severe or critical covid-
	19 patients and a conditional
	recommendation for the use of the
	monoclonal antibody sotrovimab for non-
	severe covid-19 patients who are at high
	risk for hospitalization [42]
Western Pacific Region and South-Fast Asia Region (n=4	1 countries)

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Moderate 35 (85.4%) countries have reported outbreaks; but only <b>20 (48.8%) countries</b> are reporting a surge in cases. 10 (24.4%) countries have either a constant decreasing change in incidence or no case in the last 14 days.	As of Jan 19, the estimated effective reproduction no. of 25 countries ranged from 0.59-2.2. \$	Case fatality rate is 1.41%.	Low Coverage 33 countries have commenced vaccination as of 21 January 2022. Coverage was available for the following: i) at least 1 dose was at 51-80% for <b>19 countries</b> ; >80% for 10 countries ii) full vaccination was at 51-80% for 18 countries; >80% for 6 countries. <sup>&amp;</sup>	High					
Highest incidence over the past 14 days were reported from Australia, Fiji, Maldives, Mongolia and <b>Palau</b> , and highest	0.59-2.2.*		Indonesia has approved Russian drug Avifavir for emergency use. [22]						



case numbers were reported from Australia, India, <b>Japan</b> , Philippines, and Vietnam. At least 16 countries have closed their borders, 24 countries have opened their borders partially conditionally, and none is allowing free travel.			China has approved the use of 3 traditional chinese medicines, Qingfei Paidu Formula, Huashi Baidu Formula and Xuanfei Baidu Formula, for COVID-19 treatment. [20] As of 4 June, India has approved a combination of monoclonal antibodies, bamlanivimab and etesevimab for restricted use in emergency situations in hospital settings in adults [24]. As of 8 Oct 2021, Philippines authorized the emergency use of Ronapreve as a treatment against mild and moderate COVID-19 for patients aged 12 and above [33].	
European Region (n=53 countries)				
52 (98.1%) countries have reported with outbreaks; <b>51 (96.2%) countries</b> are	As of Jan 19, the estimated	Case fatality	53 countries have commenced vaccination as of 21 January 2022. Coverage was	
reporting a surge in cases.	effective reproduction	rate is <b>1.37%.</b>	available for the following i) at least 1 dose was at 51-80% for <b>32 countries</b> ; >80% for <b>7 countries</b> ; ii) full vaccination	
decreasing change in incidence or no case in the last 14 days.	countries ranged from 0.31-1.7. <sup>\$</sup>		was at 51-80% for 29 countries; >80% for 5 countries. <sup>&amp;</sup>	
Highest incidence over the past 14 days were reported from Andorra, <b>Denmark</b> , France, Israel and San Marino, and highest			On February 28, France authorized its first ever use of synthetic monoclonal antibody, bamlanivab by Eli Lilly, for use	
case numbers were reported from France, <b>Germany,</b> Italy, Spain and United Kingdom.			on severe COVID-19 patients. [19] As of February 14, Italy authorized the use	
At least 5 countries have closed their borders, 47 countries have opened their borders partially conditionally, and only 1 country is allowing free travel.			of the two monoclonal antibodies of companies Eli Lilly and Regeneron aimed mainly at more serious patients with COVID-19 [17].	High
			On 12 November, the European Commission (EC) has authorized Regeneron-Roche's antibody cocktail, Ronapreve, for treatment of adults and adolescents who do not required oxygen supposed and are at high risk of severe diseases in the EU. [35]	
			On 10 December, the French National Authority for Health (HAS) authorised the use of AstraZeneca's antibody cocktail, Evusheld, for high-risk individuals with resistance to COVID-19 vaccines to prevent severe COVID-19 manifestation, and is not recommended for patients with	



Factors Meditorrangen Pacion (n=22 count	rice)		two or more risk factors such as diabetes and obesity. [38] As of 17 December, the European Commission (EC) has granted marketing authorisation to Xevudy (sotrovimab) for treatment of adult and adolescents (aged 12 years and above) who do not require supplemental oxygen and are at high risk of severe COVID-19 in EU. [40]	
Moderate			Low Coverage	
<ul> <li>22 (100%) countries have reported with outbreak; 16 (72.7%) countries are reporting a surge in cases.</li> <li>0 (0%) country has either a constant decreasing change in incidence or no case in the last 14 days.</li> <li>Highest incidence over the past 14 days were reported from Bahrain, Kuwait, Lebanon, Qatar, and Tunisia, and highest case numbers were reported from Lebanon, Morocco, Pakistan, Saudi Arabia and Tunisia.</li> <li>At least 4 countries have closed their borders, 17 countries have opened their borders partially conditionally, and only 1 country is allowing free travel.</li> </ul>	As of Jan 19, the estimated effective reproduction no. of <b>20 countries</b> ranged from <b>0.76-1.7</b> . <sup>§</sup>	Case fatality rate is <b>1.77%.</b>	<ul> <li>Low Coverage</li> <li>21 countries have commenced vaccination as of 21 January 2022. Coverage was available for the following: i) at least 1 dose was at 51-80% for 6 countries; &gt;80% for 3 countries; ii) full vaccination was at 51-80% for 6 countries; &gt;80% for 3 countries. <sup>&amp;</sup></li> <li>As of June 25, the Abu Dhabi Stem Cell Centre has treated more than 2,000 COVID-19 patients using UAECell19. 1,200 have fully recovered. [6]</li> <li>As of April, an Israeli firm is using placenta pluristem cells to treat COVID-19 patients on a compassionate use basis. [5]</li> <li>As of June 4, UAE authorised the emergency use of Sotrovimab, a kind of monoclonal antibody drug [25].</li> <li>As of 19 November, Bahrain approved Astrazeneca's drug Evusheld for emergency use amongst immunodeficient adults, those taking immunosuppressants, or exposed to increased risk of infections due to their occupations. [36]</li> <li>As of 2 January 2022, Bahrain authorised the emergency use of Pfizer Paxlovid in adults aged at least 18 years old, with mild to moderate symptoms and are at high risk of developing severe disease that may lead to death. [41]</li> </ul>	High



Region of the Americas (n=35 countries)				
High			Low Coverage	l
<ul> <li>35 (100%) countries have reported with outbreak; 33 (94.3%) countries are reporting a surge in cases.</li> <li>0 (0%) country has either a constant decreasing change in incidence or no case in the last 14 days.</li> </ul>	As of Jan 19, the estimated effective reproduction no. of 35 countries ranged from <b>0.28-1.8.</b> <sup>\$</sup>	Case fatality rate is <b>1.96%.</b>	35 countries have commenced vaccination as of 21 January 2022. Coverage was available for the following: i) at least 1 dose was at 51-80% for <b>18 countries</b> ; >80% for <b>5 countries</b> ii) full vaccination was at 51-80% for <b>14 countries</b> ; >80% for <b>3 countries</b> . <sup>&amp;</sup>	
<ul> <li>Highest incidence over the past 14 days were reported from Argentina, Barbados, Grenada, Uruguay and USA, and highest case numbers were reported from Argentina, Brazil, Mexico, Peru and USA.</li> <li>At least 9 countries have closed their borders, 24 countries have opened their borders partially conditionally, and 2 countries are allowing free travel.</li> </ul>			With the increase of multiple variants of COVID-19, the U.S. FDA will limit the use of monoclonal antibody treatments developed by Regeneron and Eli Lilly due to concerns the medications are not effective against these new strains. Eli Lilly's bamlanivimab will not be distributed to California, Arizona and Nevada, where those variants are more common. [21]	
			FDA has issued EUA to Eli Lilly's combination antibody therapy of bamlanivimab and etesevimab to treat mild to moderate COVID-19 patients who are at risk of serious illness or hospitalization. [15]	High
			The Food and Drug Administration has allowed the combination use of baricitinib and Remdesivir under emergency use authorization. The EUA covers dosing of patients (above the age of two) who are on supplemental oxygen, receiving invasive mechanical ventilation or extracorporeal membrane oxygenation. [12]	
			Health Canada has approved bamlanvimab, for the treatment of COVID-19 in patients 12 years and older with mild to moderate symptoms who are at risk of severe disease progression. [11] FDA has allowed emergency use of Eli Lilly	
			& Co's bamlanivimab for non-hospitalized patients at risk of serious illness due to age or other conditions. [10] FDA has issued emergency authorisation for convalescent plasma to treat COVID-	
			19. [9]	l



			RLF-100 (aviptadil) by NeuroRx and Relief Therapeutics was approved for emergency use in COVID-19 patients who are too ill to participate in the trial [2]	
			As of October 22, remdesivir is the first and only FDA-approved COVID-19	
			FDA has issued emergency authorisation for sotrovimab to treat mild-to-moderate Covid-19 adults and paediatric patients (12 years old and older weighing at least 40kg) who are at risk of severe disease progression. [23]	
			As of 25 June, US FDA has issued emergency authorisation for Actemra/RoActemra (tocilizumab) to treat hospitalized adults and pediatric patients receiving corticosteroids and requiring supplemental oxygen, breathing support or ECMO. [26]	
			As of 5 Aug, FDA has expanded the use of antibody cocktail, REGEN-COV, updating its emergency use authorisation (EUA) to include those at high risk of developing severe COVID-19 who have been exposed to the virus. [29]	
			As of Aug 11, Brazil has issued emergency authorisation to Celltrion's regdanvimab for high-risk patients with mild and moderate Covid-19. [30]	
			FDA has issued emergency use of authorization to two oral antiviral treatments for COVID-19 – Pfizer's Paxlovid and Merck's Molnupiravir to treat mild-to-moderate COVID-19. [39]	
African Region (n=47 countries)				
High			Low Coverage	
<ul> <li>47 (100%) countries have reported with outbreak; 31 (67.4%) countries are reporting a surge in cases.</li> <li>0 (0%) country has either a constant decreasing change in incidence or no case in the last 14 days.</li> </ul>	As of Jan 19, the estimated effective reproduction no. of 46 countries ranged from <b>0.15-1.7</b> . <sup>\$</sup>	Case fatality rate is <b>2.10%.</b>	46 countries have commenced vaccination as of 21 January 2022. Coverage was available for the following: i) at least 1 dose was at 51-80% for 3 countries; >80% for 1 country; ii) full vaccination was at 50- 80% for 1 country; >80% for 1 country. <sup>&amp;</sup>	High
Highest incidence over the past 14 days were reported from Botswana, Cabo			Ethiopia has approved the use of Dexamethasone treatment for seriously ill COVID-19 patients. [13]	



Verde, Mauritania, Sao Tome and Principe			
and Seychelles, and highest case numbers			
were reported from <b>Botswana,</b> Ethiopia,			
Mozambique, South Africa and Zambia.			
At least 8 countries have closed their			
borders, 39 countries have opened their			
borders partially conditionally, and no			
country is allowing free travel.			

\*Only WHO member states are included. 30 territories that have reported cases (with the exception of Palestine) are excluded from the tabulation of total countries affected/imported/local cases and case fatality rate. Refer to WHO situation reports or table 4 for information.

<sup>\$</sup> https://epiforecasts.io/covid/posts/global/

<sup>^</sup>Differences between R0 and effective R can be found here https://www.coronavirustoday.com/r-number-referseither-basic-or-effective-reproduction-number

<u>https://www.bloomberg.com/graphics/covid-vaccine-tracker-global-distribution/</u>; High vaccine coverage defined as >70% population with full vaccination

<sup>%</sup> In view of the reduction in case fatality rate and effective reproduction number with increasing vaccination, the two metric are no longer conferred a risk level in our risk assessment matrix; overall risk of each region is compiled using risk of the environment and availability of treatment only.



# iii. Global Epidemiology

Table 2. Summary of COVID-19 cases & fatalities globally (Updated as of 21 January 2022, 1400H SGT)

No. of Countries/ Territories with Cases	Total Global Cases	Total Cases Outside Mainland China	Total Deaths	Case- Fatality Rate (%) [overall]	Case- Fatality Rate (%) [outside China]	Ro
222	343,275,061	343,169,577	5,593,465	1.63%	1.63%	5.8 (95% CI 4.4–7.7) <sup>^</sup>

^Based on early release as of 10<sup>th</sup> April, 2020: https://wwwnc.cdc.gov/eid/article/26/7/20-0282\_article

#### Table 3. Comparison with other viruses

Virus	Incubation Period (Days)	Case Fatality Rate (%)	Ro
SARS-CoV-2	Median = 5.1 <sup>\$</sup> (2-14) or up to 24*	1.63	5.8 (95% CI 4.4–7.7) <sup>^</sup>
SARS-CoV	2-7	9.6	2.0
MERS-CoV	5 (2-14)	34	<1 (higher in health care setting)
Swine Flu	1-4	0.02	1.2-1.6

\*Data on 1099 patients from 552 hospitals in 31 provinces of China ^https://wwwnc.cdc.gov/eid/article/26/7/20-0282\_article <sup>\$</sup>Data on 181 cases outside china

#### Figure 1. Growth Factor of Daily New Cases (Mainland China+ Other countries)



#### Growth Factor

Growth Factor = every day's cases/cases on previous day. A growth factor above 1 indicates an increase, whereas one between 0 and 1 is a sign of decline, with the quantity eventually becoming zero. A growth factor below 1 (or above 1 but trending downward) is a positive sign, whereas a growth factor constantly above 1 is the sign of exponential growth.



\*Huge jump in cases on Feb. 12 is attributed to the change in diagnostic criteria in China.

#### Figure 2. Growth Factor excluding mainland China

#### Growth Factor outside of China



#### Figure 3. Growth Factor of Novel Coronavirus Daily Deaths (Mainland China + Other Countries)



#### **Growth Factor**

Daily Deaths Growth Factor

Growth Factor = every day's cases/cases on previous day. A growth factor above 1 indicates an increase, whereas one between 0 and 1 is a sign of decline, with the quantity eventually becoming zero. A growth factor below 1 (or above 1 but trending downward) is a positive sign, whereas a growth factor constantly above 1 is the sign of exponential growth. Source: https://www.worldometers.info/coronavirus/coronavirus-cases/



# Case Breakdown by Countries

Live update of COVID-19 global cases can be found at https://storymaps.arcgis.com/stories/a1746ada9bff48c09ef76e5a788b5910

Table 4. Breakdown of COVID-19 confirmed cases and deaths from 15 – 21 January 2022 (Updated as of 21 January 2022, 1400H SGT)

No.	Country	Total Cases	Change in Cases	Total Deaths	Change in Deaths	Total Recovered	Region
1	USA	70,544,862	+5,308,387	883 <i>,</i> 903	+14,691	44,047,799	Americas
2	France	15,600,647	+2,360,343	128,114	+1,584	9,844,686	EURO
3	India	38,566,027	+1,983,898	488,422	+3,072	36,058,806	SEARO
4	Italy	9,418,256	+1,262,611	142,590	+2,402	6,593,625	EURO
5	Spain	8,834,363	+903,835	91,599	+979	5,417,226	EURO
6	Argentina	7,576,335	+783,216	118,809	+1,001	6,494,224	Americas
7	Brazil	23,588,921	+773,094	622,251	+1,642	21,851,922	Americas
8	UK	15,613,283	+645,466	153,202	+1,860	11,850,874	EURO
9	Germany	8,397,328	+592,179	117,044	+1,178	7,178,000	EURO
10	Australia	2,090,810	+558,170	2,984	+406	903,993	WPRO
11	Turkey	10,736,215	+464,975	85,419	+1,141	9,985,596	EURO
12	Israel	2,103,945	+408,433	8,370	+77	1,683,115	EURO
13	Peru	2,780,049	+306,340	203,868	+613	N/A	Americas
14	Belgium	2,642,761	+295,597	28,759	+193	1,988,428	EURO
15	Mexico	4,545,683	+287,907	302,390	+1,478	3,583,463	Americas
16	Portugal	2,059,595	+285,118	19,447	+244	1,655,580	EURO
17	Netherlands	3,720,816	+255,353	21,188	+61	2,980,273	EURO
18	Philippines	3,324,478	+232,069	53,153	+417	2,995,961	WPRO
19	Russia	10,938,261	+214,956	324,060	+4,888	9,950,333	EURO
20	Colombia	5,655,026	+214,045	131,627	+1,002	5,353,276	Americas
21	Japan	2,017,531	+208,521	18,469	+55	1,768,561	WPRO
22	Sweden	1,741,710	+206,913	15,596	+156	1,252,603	EURO
23	Switzerland	1,833,443	+206,234	12,659	+123	1,191,909	EURO
24	Denmark	1,226,895	+202,957	3,550	+97	893,016	EURO
25	Canada	2,868,822	+180,191	32,220	+1,030	2,538,075	Americas
26	Poland	4,406,553	+141,120	103,378	+1,959	3,813,718	EURO
27	Greece	1,742,363	+129,494	22,366	+634	1,466,739	EURO
28	Vietnam	2,094,802	+119,358	36,266	+1,096	1,794,924	WPRO
29	Czechia	2,678,767	+116,532	36,972	+207	2,447,642	EURO
30	Austria	1,503,668	+109,069	13,956	+58	1,328,340	EURO
31	Serbia	1,501,621	+101,754	13,181	+178	1,289,704	EURO
32	Kazakhstan	1,117,160	+93,156	13,111	+49	980,844	EURO
33	Romania	1,964,021	+88,134	59,428	+278	1,806,581	EURO
34	Norway	571,655	+87,703	1,413	+32	88,952	EURO
35	Bolivia	795,087	+83,788	20,504	+401	624,000	Americas



36	Panama	614,957	+74,885	7,565	+79	529,954	Americas
37	Ukraine	3,799,382	+72,348	98,843	+915	3,571,782	EURO
38	Uruguay	556,163	+72,343	6,272	+61	479,915	Americas
39	Hungary	1,385,500	+67,407	40,757	+593	1,186,319	EURO
40	Chile	1,916,522	+67,057	39,456	+125	1,754,330	Americas
41	Ireland	1,127,951	+66,835	6,087	+52	660,570	EURO
42	Slovenia	569,620	+56,827	5,732	+47	473,157	EURO
43	Finland	416,079	+54,526	1,790	+90	46,000	EURO
44	Tunisia	817,051	+54,334	25,881	+137	711,123	EMRO
45	Croatia	848,150	+53,960	13,300	+294	775,657	EURO
46	Bulgaria	860,877	+53,900	32,518	+596	640,594	EURO
47	Thailand	2,361,702	+53,087	22,003	+102	2,256,982	SEARO
48	Morocco	1,078,002	+52,104	15,047	+102	996,047	EMRO
49	Bangladesh	1,653,182	+48,518	28,180	+57	1,554,845	SEARO
50	Nepal	887,769	+46,472	11,632	+22	818,809	SEARO
51	Lebanon	847,624	+45,823	9,445	+107	682,977	EMRO
52	Georgia	1,021,943	+42,708	14,582	+223	946,255	EURO
53	Dominican Republic	524,635	+42,178	4,274	+15	484,336	Americas
54	Saudi Arabia	638,327	+39,283	8,914	+13	584,050	EMRO
55	Pakistan	1,353,479	+37,645	29,065	+66	1,266,479	EMRO
56	Ecuador	629,507	+35,843	34,232	+43	N/A	Americas
57	S. Korea	719,269	+35,703	6,501	+242	594,023	WPRO
58	Guadeloupe	94,765	+35,410	762	+11	2,250	Non
59	Paraguay	523,325	+33,436	16,912	+201	458,078	Americas
60	Lithuania	589,074	+33,103	7,708	+105	528,559	EURO
61	Kuwait	484,150	+32,720	2,482	+8	436,838	EMRO
62	Costa Rica	637,327	+32,669	7,441	+40	567,581	Americas
63	Iraq	2,137,267	+32,327	24,272	+43	2,072,723	EMRO
64	Jordan	1,123,686	+31,995	13,043	+98	1,070,710	EMRO
65	Réunion	133,617	+31,401	462	+27	86,669	Non
66	Qatar	314,073	+26,982	632	+9	271,741	EMRO
67	South Africa	3,572,860	+26,052	93,846	+857	3,394,527	Africa
68	Slovakia	896,798	+24,287	17,520	+392	839,165	EURO
69	Latvia	319,027	+23,066	4,773	+73	278,524	EURO
70	Cuba	1,011,811	+23,022	8,352	+21	986,012	Americas
71	Malaysia	2,820,927	+22,010	31,853	+103	2,747,457	WPRO
72	Iran	6,236,567	+21,786	132,152	+150	6,073,412	EMRO
73	UAE	816,945	+20,948	2,204	+22	764,731	EMRO
74	Bahrain	320,688	+20,057	1,398	+1	293,212	EMRO
75	Mongolia	420,839	+18,395	2,093	+11	313,256	WPRO
76	Estonia	278,498	+18,102	1,994	+27	240,007	EURO
77	Cyprus	235,364	+16,990	700	+28	124,370	EURO
78	Bosnia and Herzegovina	326,995	+16,972	13,951	+229	1,581,164	EURO



79	Guatemala	662,828	+16,509	16,223	+78	616,276	Americas
80	Moldova	400,585	+15,538	10,488	+72	369,139	EURO
81	Albania	241,512	+14,914	3,286	+31	214,633	EURO
82	Luxembourg	134,714	+13,477	941	+10	107,455	EURO
83	Venezuela	463,145	+12,253	5,395	+22	442,217	Americas
84	Martinique	71,193	+11,610	813	+18	104	Non
85	North Macedonia	250,876	+10,956	8,166	+96	223,606	EURO
86	Montenegro	209,719	+10,862	2,496	+36	196,189	EURO
87	Maldives	110,931	+10,480	269	+5	100,112	SEARO
88	Belarus	721,103	+9,380	5,882	+108	713,965	EURO
89	Iceland	53,121	+9,353	44	+1	42,440	EURO
90	Jamaica	116,944	+9,223	2,561	+47	67,880	Americas
91	Indonesia	4,277,644	+8,754	144,199	+44	4,121,117	SEARO
92	Egypt	405,393	+8,694	22,260	+197	339,259	EMRO
93	Singapore	297,549	+8,464	845	+6	287,004	WPRO
94	Uzbekistan	210,899	+8,426	1,532	+24	201,246	EURO
95	Zambia	299,971	+8,389	3 <i>,</i> 879	+45	285,133	Africa
96	Oman	318,272	+7,934	4,125	+6	303,644	EMRO
97	Ethiopia	460,602	+7,474	7,212	+103	380,674	Africa
98	French Guiana	72,118	+7,035	357	+12	11,254	Non
99	Suriname	68,560	+6,852	1,228	+25	49,190	Americas
100	Guyana	54,736	+6,545	1,111	+36	41,661	Americas
101	Botswana	243,946	+6,268	2,544	+30	235,030	Africa
102	Kyrgyzstan	193,816	+6,196	2,843	+17	181,976	EURO
103	Algeria	230,470	+6,087	6,453	+70	156,859	Africa
104	Laos	128,248	+6,007	508	+37	7,660	WPRO
105	Palestine	449,638	+5,821	4,773	+35	436,776	EMRO
106	Azerbaijan	629,352	+5,797	8,564	+74	610,605	EURO
107	Libya	401,444	+5,757	5,889	+67	386,967	EMRO
108	Trinidad and Tobago	104,005	+5,078	3,256	+122	83,400	Americas
109	Belize	44,959	+5,069	612	+5	35,063	Americas
110	Sri Lanka	599,363	+5,044	15,255	+81	568,829	SEARO
111	Mozambique	221,432	+4,873	2,146	+37	196,850	Africa
112	Curaçao	35,307	+4,443	210	+11	23,324	Non
113	Sudan	53,959	+4,043	3,393	+35	40,329	EMRO
114	Honduras	387,515	+4,031	10,469	+16	127,029	Americas
115	Mauritania	56,666	+3,894	916	+21	46,156	Africa
116	Barbados	37,622	+3,734	273	+4	31,234	Americas
117	Кепуа	319,379	+3,714	5,520	+48	287,963	Africa
118	Rwanda	127,227	+3,341	1,422	+27	45,522	Africa
119	Andorra	32,201	+3,302	144	+3	27,450	EURO
120	Seychelles	34,367	+3,269	143	+7	28,964	Africa
121	Faeroe Islands	11,948	+2,989	15	0	7,693	Non
122	Uganda	159,454	+2,817	3,454	+76	99,016	Africa



123	Mayotte	35,189	+2,667	186	0	2,964	Non
124	Angola	95,220	+2,639	1,881	+34	86,274	Africa
125	Malta	65,005	+2,615	520	+24	55,375	EURO
126	Zimbabwe	227,695	+2,611	5,280	+58	211,582	Africa
127	Armenia	349,329	+2,518	8,026	+12	333,857	EURO
128	DRC	84,198	+2,479	1,278	+53	50,930	Africa
129	Channel Islands	37,952	+2,420	124	+2	34,934	Non
130	Senegal	83,752	+2,386	1,917	+14	76,817	Africa
131	Greenland	9,256	+2,173	3	+1	2,761	Non
132	Cabo Verde	54,891	+2,162	380	+16	52,406	Africa
133	Ghana	154,891	+2,162	1,357	+21	147,310	Africa
134	Aruba	31,835	+2,141	187	+3	30,492	Non
135	Fiji	60,509	+2,018	752	+31	55,676	WPRO
136	Bermuda	9,766	+1,886	112	+2	7,768	Non
137	Tanzania	32,393	+1,829	753	+13	N/A	Africa
138	Saint Lucia	18,322	+1,817	316	+5	14,351	Americas
139	Bahamas	31,693	+1,785	726	+7	23,389	Americas
140	Madagascar	55,827	+1,726	1,169	+52	50,381	Africa
141	Mali	29,359	+1,706	704	+26	25,046	Africa
142	Grenada	10,960	+1,701	205	+3	8,047	Americas
143	Nigeria	251,571	+1,562	3,117	+25	225,280	Africa
144	Malawi	83,403	+1,513	2,502	+57	66,688	Africa
145	New Caledonia	14,854	+1,490	282	+1	12,837	Non
146	Saint Martin	9,143	+1,430	60	0	1,399	Non
147	Namibia	154,897	+1,286	3,884	+101	143,562	Africa
148	San Marino	10,639	+1,121	103	0	8,895	EURO
149	Ivory Coast	79,558	+1,063	764	+17	76,006	Africa
150	Haiti	28,117	+1,035	780	0	24,217	Americas
151	Burundi	36,785	+1,030	38	0	773	Africa
152	Myanmar	533,732	+1,007	19,307	+9	511,798	SEARO
153	Gibraltar	11,392	+992	100	0	9,680	Non
154	China	105,484	+904	4,636	0	97,675	WPRO
155	Caribbean Netherlands	5,946	+882	27	+2	4,969	Non
156	CAR	13,509	+859	109	+3	6,859	Africa
157	Gabon	45,663	+857	299	+2	40,308	Africa
158	Congo	23,244	+826	371	+1	18,993	Africa
159	Monaco	7,160	+798	44	0	6,591	EURO
160	Тодо	36,176	+751	266	+5	30,063	Africa
161	Sint Maarten	8,965	+715	77	+2	7,012	Non
162	Turks and Caicos	5,442	+711	32	+4	4,723	Non
163	Afghanistan	159,303	+701	7,386	+10	146,084	EMRO
164	Equatorial Guinea	15,558	+687	179	+2	14,141	Africa
165	Dominica	8,349	+682	48	+1	7,569	Americas



166	Liechtenstein	7,597	+682	73	+1	7,148	Non
167	British Virgin Islands	5,602	+655	47	+7	N/A	Non
168	Mauritius	25,075	+577	762	0	24,139	Africa
169	El Salvador	123,577	+552	3,843	+14	116,742	Americas
170	Antigua and Barbuda	5,741	+527	121	+1	4,369	Americas
171	Djibouti	15,200	+520	189	0	14,624	EMRO
172	Guinea	35,719	+517	410	+4	31,183	Africa
173	French Polynesia	47,275	+507	636	0	N/A	Non
174	Saint Kitts and Nevis	5,141	+496	28	0	4,090	Americas
175	Burkina Faso	20,435	+463	353	+14	19,419	Africa
176	New Zealand	15,401	+454	52	0	14,300	WPRO
177	Gambia	11,572	+450	347	+3	10,156	Africa
178	Bhutan	3,317	+444	3	0	2,654	SEARO
179	Taiwan	18,041	+417	851	0	16,178	WPRO
180	Eritrea	9,160	+405	89	+4	8,546	Africa
181	Sao Tome and Principe	5,785	+381	67	+2	4,599	Africa
182	St. Barth	3,282	+355	6	0	N/A	Non
183	Chad	6,887	+331	185	0	4,874	Africa
184	Eswatini	68,003	+327	1,366	+14	66,100	Africa
185	Yemen	10,485	+309	1,995	+8	7,051	EMRO
186	Guinea-Bissau	7,202	+304	153	+3	6,374	Africa
187	Lesotho	31,899	+295	690	+3	20,530	Africa
188	Syria	50,862	+282	2,959	+23	35,468	EMRO
189	Benin	26,309	+273	163	+1	25,506	Africa
190	Anguilla	2,187	+245	7	+1	1,997	Non
191	Saint Pierre Miquelon	598	+244	0	0	363	Non
192	Cambodia	120,956	+238	3,015	0	117,180	WPRO
193	Brunei	15,986	+236	98	0	15,506	WPRO
194	South Sudan	16,627	+220	137	+1	12,934	Africa
195	Niger	8,503	+197	295	+9	7,511	Africa
196	Palau	208	+168	0	0	25	WPRO
197	Liberia	7,208	+87	288	+1	5,747	Africa
198	Hong Kong	13,096	+80	213	0	12,474	WPRO
199	Comoros	7,793	+78	159	0	7,480	Africa
200	Sierra Leone	7,567	+67	125	0	N/A	Africa
201	Somalia	24,322	+61	1,335	0	13,182	EMRO
202	Solomon Islands	81	+56	0	0	20	WPRO
203	Nicaragua	17,604	+41	215	+1	4,225	Americas
204	St. Vincent Grenadines	6,615	+40	90	+5	5,652	Americas
205	Montserrat	151	+24	1	0	111	Non
206	Papua New Guinea	36,446	+14	596	+1	35,798	WPRO



207	Samoa	13	+10	0	0	3	WPRO
208	Timor-Leste	19,866	+6	122	0	19,730	SEARO
209	Vatican City	29	+2	0	0	27	Non
210	Cameroon	109,666	0	1,853	0	106,050	Africa
211	Tajikistan	17,095	0	124	0	16,966	EURO
212	Isle of Man	14,126	0	70	0	13,755	Non
213	Cayman Islands	11,666	0	15	+1	8,093	Non
214	Wallis and Futuna	454	0	7	0	438	Non
215	Vanuatu	7	0	1	0	6	WPRO
216	Macao	79	0	0	0	79	WPRO
217	Falkland Islands	85	0	0	0	N/A	Non
218	MS Zaandam	9	0	2	0	7	NA
219	Tonga	1	0	0	0	1	WPRO
220	Diamond Princess	712	0	13	0	699	NA
221	Western Sahara	10	0	1	0	8	Non
222	Marshall Islands	7	0	0	0	7	WPRO
223	Saint Helena	2	0	0	0	2	Non
224	Micronesia	1	0	0	0	1	WPRO
	Total	343,275,061	22,330,108	5,593,465	54,305	274,213,480	

Figure 4. Areas with reported confirmed cases of COVID-19 (10 – 16 January 2022)



of Singapore





Source: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports

Table 5. Breakdown of COVID-19 omicron confirmed cases and deaths
(Updated as of 21 January 2022, 1400H SGT)

6 /N	Location	Cases	Deaths	Prevalence*
5/ IN	Location	confirmed	confirmed	estimate %
1	United Kingdom	246,780	75	96%
2	Denmark	66,563	18	94%
3	Germany	62,974	16	44%
4	United States	62,480	1	95%
5	Norway	26,818	-	65%
6	Canada	23,620	-	-
7	Austria	9,506	-	-
8	France	5,591	-	49%
9	Estonia	3,857	-	71%
10	Australia	3,665	1	-
11	Singapore	3,592	-	18%
12	India	3,044	1	-
13	Israel	2,978	-	-
14	Thailand	2,338	-	-
15	South Africa	2,223	-	98%
16	Switzerland	1,725	_	61%



17	Sweden	1,614	-	-
18	Japan	1,601	-	30%
19	Slovenia	1,418	-	67%
20	South Korea	1,318	2	-
21	Italy	1,251	-	60%
22	Belgium	1,215	-	86%
23	Spain	1,181	-	51%
24	Netherlands	1,083	-	51%
25	Jordan	832	-	-
26	Chile	684	-	-
27	Mexico	648	-	-
28	Latvia	644	-	-
29	Georgia	600	-	-
30	Argentina	454	-	-
31	Lebanon	433	-	65%
32	Pakistan	419	-	-
33	Brazil	406	-	30%
34	Ireland	383	-	92%
35	Botswana	382	-	-
36	Finland	363	-	-
37	Indonesia	337	-	-
38	Kenya	334	-	-
39	Peru	332	-	-
40	Liechtenstein	319	-	58%
41	Portugal	302	-	90%
42	Romania	295	-	-
43	Hungary	283	-	78%
44	Turkey	252	-	10%
45	Malaysia	245	-	-
46	Palestinian Territory	242	-	-
47	Luxembourg	223	-	-
48	Bermuda	212	-	-
49	Dominican Republic	210	-	-
50	Iceland	200	-	90%
51	Zambia	197	-	-
52	Iran	194	-	-
53	Cape Verde	175	-	-
54	Gibraltar	168	-	-
55	Poland	156	-	-
56	Taiwan	138	-	-
57	French Guiana	135	-	70%
58	Lithuania	128	-	90%
59	Czechia	124	-	50%
60	New Zealand	116	-	-



61	Hong Kong	114	-	-
62	Croatia	113	-	-
63	Russia	103	-	-
64	Cambodia	94	-	-
65	Cuba	92	-	-
66	Cayman Islands	89	-	-
67	Nigeria	85	-	-
68	Ivory Coast	78	-	-
69	Colombia	72	-	62%
70	Ecuador	68	-	-
71	Ghana	66	-	-
72	Cyprus	63	-	-
73	Costa Rica	62	-	-
74	Panama	55	-	-
75	Sri Lanka	52	-	-
76	Zimbabwe	50	-	-
77	Slovakia	47	-	-
78	Uruguay	44	-	-
79	Philippines	43	-	-
80	South Sudan	41	-	-
81	Gambia	40	-	-
82	Malta	34	-	-
83	Malawi	34	-	-
84	Greece	33	-	89%
85	North Macedonia	33	-	-
86	Tunisia	33	-	-
87	Vietnam	30	-	-
88	Morocco	28	1	-
89	Nepal	27	-	-
90	Senegal	26	-	-
91	Uganda	25	-	-
92	Bangladesh	21	-	-
93	Republic of the Congo	21	-	-
94	Mauritius	21	-	-
95	Reunion	20	-	50%
96	Namibia	18	-	-
97	Mozambique	17	-	-
98	Angola	16	-	-
99	Algeria	16	-	-
100	Oman	16	-	-
101	China	15	-	-
102	Trinidad and Tobago	15	-	-
103	Bosnia and Herzegovina	14	-	-
104	Guinea	14	-	-



105	Mauritania	14	-	-
106	Kuwait	13	-	-
107	Bulgaria	12	-	-
108	Montenegro	12	-	-
109	Grenada	11	-	-
110	Maldives	10	-	-
111	Serbia	10	-	-
112	Brunei	9	-	-
113	Venezuela	9	-	-
114	Kosovo	9	-	-
115	Kazakhstan	8	-	-
116	Rwanda	6	-	-
117	Ukraine	6	-	-
118	Iraq	5	-	-
119	Тодо	5	-	25%
120	Belarus	4	-	-
121	Curacao	4	-	-
122	Myanmar	4	-	-
123	Qatar	4	-	-
124	Egypt	3	-	-
125	Paraguay	3	-	-
126	Burkina Faso	2	-	-
127	Fiji	2	-	-
128	Saint Kitts and Nevis	2	-	-
129	Libya	2	-	-
130	Saint Martin	2	-	-
131	Seychelles	2	-	-
132	Mayotte	2	-	-
133	United Arab Emirates	1	-	-
134	Antigua and Barbuda	1	-	-
135	Albania	1	-	-
136	Aruba	1	-	-
137	Barbados	1	-	-
138	Bahrain	1	-	-
139	Bolivia	1	-	-
140	Dem. Rep. of the Congo	1	-	29%
141	Gabon	1	-	23%
142	Guadeloupe	1	-	46%
143	Jamaica	1	-	-
144	Laos	1	-	-
144	Martinique	1	-	_
144	Niger	1	-	-
144	Saudi Arabia	1	_	_
144	Sierra Leone	1	-	-



144	Tanzania	1	-	-
144	Saint Vincent and the Grenadines	1	-	-
	Total (worldwide)	552,191	115	0%

Source: <a href="https://newsnodes.com/omicron\_tracker">https://newsnodes.com/omicron\_tracker</a>

# Table 6. COVID-19 cases and deaths reported by states/UT in India between 15 – 21 January 2022 (Updated as of 21 January 2022, 1400H SGT)

	Total	Change	Total	Change		Change		Change
Name of State / UT	Diagnosed	from	Active	from	Total	from	Total	from
	Cases	previous week	Cases	previous week	Recovered	previous week	Deaths	previous week
Andaman and Nicobar	9033	+568	465	+4	8439	+564	129	0
Islands								
Andhra Pradesh	2140056	+47829	53871	+39667	2071658	+8142	14527	+20
Arunachal Pradesh	58271	+2133	2260	+1484	55729	+649	282	0
Assam	678057	+39769	42465	+27333	629332	+12368	6260	+68
Bihar	802742	+33891	26674	-4703	763906	+38553	12162	+41
Chandigarh	82563	+9922	9922	+4106	71546	+5805	1095	+11
Chhattisgarh	1081178	+37103	31736	+2939	1035745	+34101	13697	+63
Dadra and Nagar Haveli	11110	+228	243	+81	10863	+147	4	0
and Daman and Diu								
Delhi	1760272	+113689	68730	-25430	1666039	+138887	25503	+232
Goa	222497	+21673	22460	+5573	196452	+16058	3585	+42
Gujarat	1001563	+104669	104888	+54276	886476	+50336	10199	+57
Haryana	882895	+62788	61643	+25641	811110	+37090	10142	+57
Himachal Pradesh	254410	+16055	15618	+7503	234876	+8524	3916	+28
Jammu and Kashmir	378661	+28494	31044	+23112	343031	+5348	4586	+34
Jharkhand	415388	+19862	25578	-6672	384575	+26488	5235	+46
Karnataka	3376953	+252429	293261	+177499	3045177	+74812	38515	+118
Kerala***	5510844	+184229	199749	+134517	5259594	+48580	51501	+1132
Ladakh	24034	+1061	1047	+449	22765	+612	222	0
Lakshadweep	10659	+220	221	+202	10387	+18	51	0
Madhya Pradesh	862029	+47556	49741	+32089	801735	+15457	10553	+10
Maharashtra	7371757	+290690	262354	+6793	6967432	+283663	141971	+234
Manipur	128679	+1974	2384	+1527	124278	+442	2017	+5
Meghalaya	87404	+1608	1629	+845	84281	+759	1494	+4
Mizoram	157253	+6715	9347	+1288	147330	+5416	576	+11
Nagaland	33259	+643	569	+282	31986	+360	704	+1
Odisha	1177462	+75856	79928	+36973	1089033	+38854	8501	+29
Puducherry	145342	+11476	13053	+8783	130392	+2679	1897	+14
Punjab	692526	+50344	47400	+17016	628244	+33154	16882	+174
Rajasthan	1084083	+76076	78099	+32534	996940	+43486	9044	+56
Sikkim	36098	+2453	2439	+1376	33242	+1070	417	+7
Tamil Nadu	3042796	+174296	179205	+75595	2826479	+98519	37112	+182



For citation: Centre for Infectious Disease Epidemiology and Research-NUS. COVID-19 Situation Report 499. 21 January 2022

Telangana	722403	+19602	26633	+6171	691703	+13413	4067	+18
Tripura	96422	+7201	7776	+4017	87786	+3156	860	+28
Uttarakhand	386951	+26727	24255	+14319	355236	+12383	7460	+25
Uttar Pradesh	1900457	+115201	97329	+26307	1780128	+88840	23000	+54
West Bengal	1939920	+98868	144809	+13256	1774881	+85367	20230	+245
Total	38566027	+1983898	2018825	+746752	36058806	+1234100	488396	+3046

Source: https://www.mohfw.gov.in/

# iv. Travel Bans/Advisories & Quarantine Orders

- [1] Australia Western Australia has cancelled its plans to reopen its borders on Feb 5.
- [2] China On Jan 14, additional flights from USA have been cancelled citing the country's COVID-19 containment policies. Flights from other countries, including France, Indonesia and the United Arab Emirates, are also being banned over the coming weeks.
- [3] **Cyprus** Effective Mar 1, fully vaccinated travellers and those that recovered from COVID-19 will be exempted from quarantine or testing requirements that apply to their country of origin.
- [4] European Union On Jan 17, Australia, Argentina and Canada were removed from a list of countries where easier travel restrictions apply regardless of vaccination status, thereby not allowing entry to unvaccinated people excluding EU citizens, their family members as well as longterm residents, health care and transport personnel arriving from the three countries.
- [5] Germany Starting Jan 16, 35 countries have been added to the high-risk list and travelers will be subject to stricter entry restrictions. These 35 countries are in addition to 39 countries that were added last week.
- [6] **India** The suspension of Scheduled International commercial passenger services to/from India has been extended till 28th February 2022. However, current flights under travel air bubble arrangements and *Vande Bharat* flights would remain unaffected from the ban including cargo flights.
- [7] Indonesia Starting Jan 12, ban on all 14 heavily-infected nations including South Africa and UK was lifted, allowing travellers to enter its borders and keeping the required isolation period at 7 days.
- [8] Italy On Jan 14, travel ban for eight southern African states: South Africa, Lesotho, Botswana, Zimbabwe, Mozambique, Namibia and Swaziland was removed.
- [9] **Kenya** Suspension of all inbound and transit passenger flights from the United Arabs Emirates (UAE) has been extended till January 24, 2022.
- [10]**Malaysia** Effective Jan 24, travellers who have received booster shots will only be required to undergo a five-day quarantine upon arrival in Malaysia.
- [11]Philippines On Jan 17, isolation and testing rules for persons arriving from overseas was updated. Travelers now require a COVID-19 swab test 48 hours before their departure, while fully vaccinated foreigners will be allowed to enter starting Feb 16 and local commuters who are not fully vaccinated will not be allowed to use all public transportation to, from, and within Metro Manila.
- [12]**Sweden** From January 21, travelers will have to show a digital certificate proving full vaccination and will no longer require a negative Covid-19 test result to gain entry at the border. However, entry ban on non-essential travel from outside the EU/EEA remains in place.
- [13]**Taiwan** From Jan 20, all passengers arriving on short-haul flights from India, the Philippines, Cambodia, Thailand, Vietnam, Myanmar, Indonesia, Malaysia, and Singapore will have to wait at the airport for their on-arrival COVID-19 test results before completing clearance procedures.
- [14] Thailand On Jan 18, the COVID-19 alert level was lowered to 3, from 4, on 5-level system. This will entail easing more restrictions and establishing more "sandbox" areas for tourists, who can skip quarantine if they stay in specified areas for seven days and undergo two COVID-19 tests.

Lockdowns

v.

# [1] **China** - Xi'an gradually began lifting restrictions as of Jan 16 with certain counties and development zones restoring production. Lockdown measures have been either partially or completely lifted in some communities designated as lower risk, allowing people to leave their homes for a limited time to purchase daily necessities.

- [2] **France** On Jan 16, a final approval was given to a more restrictive vaccine pass which requires people to have a certificate of vaccination to enter public places like restaurants, cafes, cinemas and long-distance trains.
- [3] France On Jan 20, it was announced that restrictions will be lifted in two stages: beginning Feb 2, masks will no longer be mandatory outside; remote working will no longer be mandatory; crowd limit at sports and cultural events will be lifted when the audience is seated and masked; from Feb 16, nightclubs will reopen; standing concerts will be allowed again; the consumption of alcohol while standing in bars will be permitted.
- [4] Japan Effective Jan 21, widening of COVID-19 restrictions will take place in Tokyo and three additional regions where strict restrictions are already in place until Feb 13.
- [5] India (Jammu and Kashmir) On Jan 15, a weekend lockdown was imposed following a decision for complete restriction on non-essential movement.
- [6] India (Jharkhand) On January 15, the ongoing COVID-19 restrictions were extended till Jan 31.
- [7] India (Tamil Nadu) A complete lockdown was announced on Jan 16 and restrictions including night curfew have been extended while fresh restrictions until Jan 31 were imposed around the Pongal festival.
- [8] India (West Bengal) On Jan 15, the ongoing COVID-19 restrictions were extended till Jan 31.
- [9] **Netherlands** Starting Jan 15, COVID-19 restrictions will be eased allowing shops, gyms, hairdressers and sex workers to reopen.
- [10]Pakistan Starting Jan 20 until Jan 31, COVID-19 restrictions will be implemented in cities where coronavirus positivity rate is above 10 percent. The new measures include a ban on indoor dining and weddings in COVID-19 hotspots. The ban on weddings will remain effective until February 15 and these new rules apply to the fully vaccinated individuals as the unvaccinated are already locked out of public life.
- [11]**Scotland** Starting Jan 24, all restrictive measures will be lifted which include; nightclub closures, attendance limits on indoor events. However, work from home and masking will still be required in public indoor settings and on public transport.
- [12] **Switzerland** As of Jan 19, quarantine and mandatory work-from-home rules will be extended tentatively until the end of March. Some other curbs on public life like need for people to prove they have been vaccinated or recovered from COVID-19 to gain entry to many indoor venues, will also be extended.
- [13] UK On Jan 19, restrictions that were re-imposed last month would be lifted with guidance advising people to work from home being lifted immediately. From middle of next week masks will no longer be required in any setting or use a so-called COVID-19 pass to enter venues such as nightclubs.



# vi. Military Surveillance

# United States Forces Germany [1]

On Jan 14, 68 new infections among U.S. forces were confirmed during the week which is an increase from 45 reported the previous week and much higher than four cases reported by the U.S. forces in the week ending Dec. 17. Base officials at Ramstein on Jan 19 did not confirm the latest figures, however it was reported that an upward trend in active COVID cases is being experienced.

## United States Forces Japan [2-4]

- On Jan 14, U.S. Forces Japan reported 608 new COVID-19 cases at 18 bases along with two hospitalizations and another 107 cases pending confirmation. Kadena Air Base on Okinawa accounted for the most cases with 214 people testing positive since Jan 13 followed by Yokosuka Naval Base, reporting 64 infected people. Okinawa prefecture recorded another 480 cases in the U.S. military community on Jan 14.
- On Jan 19, U.S. Forces Japan reported 331 new COVID-19 cases at 16 installations. Yokosuka Naval Base in Kanagawa prefecture reported the highest one-day total, 128 cases followed by Yokota Air Base, with 34 cases and Camp Zama, in Kanagawa, reported 33 cases. Six Marine Corps bases on Okinawa accounted for 56 COVID-19 cases while hospitalization was at 3.3%.
- On Jan 20, U.S. Forces Japan reported 434 new COVD-19 cases at 17 bases across Japan. Another 12 individuals were pending confirmation while no cases were severe and only 1 hospitalized. Marine Corps Air Station Iwakuni had the maximum cases (82 new cases) followed by Kadena Air Base on Okinawa and Yokosuka Naval Base with 74 new cases each. Kadena reported a total of 806 active cases on as of Jan 20 while Camp Zama reported a total of 159 cases between Jan 12-Jan 19. MCAS Iwakuni reported a total of 77 cases on Jan 19 and 5 cases on Jan 20. The air station has reported 851 infections this month.

# South Korea [5-10]

• Between Jan 15 and Jan 21, a total of 240 cases of COVID-19 were reported, including 213 breakthrough infections, raising the total caseload among its personnel to 3,828. Of the new cases, 192 are from the Army, 28 from the Air Force, eight from the Navy, six from the Marine Corps and six from a unit under the direct control of the defense ministry. The Army infection count included 29 trainees at the KATUSA training academy located in Pyeongtaek, 17 service members and trainees at a boot camp in Nonsan. Currently, 345 military personnel are under treatment. Of the total military caseload, 1,990 are breakthrough cases.

# United States [11]

As of January 19, a total of 320,601 cases with 2,413 hospitalizations and 90 deaths have been reported in the US military. There were 103,663 cases in the Army, 71,779 cases in the Navy, 58,572 cases in the Air Force, 48,795 cases in the National Guard, 35,462 cases in the Marine Corps and 2,330 cases in the DoD Agencies.



# vii. WHO Guidance & Other Protocols

The following updates were published by WHO from 15 – 21 January 2022.

• <u>WHO calls for comments on the revised Target Product Profile for COVID-19 vaccines</u> Available at: <u>https://www.who.int/publications/m/item/who-calls-for-comments-on-the-revised-target-product-profile-for-covid-19-vaccines</u>

# viii. CDC Guidance & Protocols

# US CDC

The following updates were published by the US CDC from 15 – 21 January 2022:

- Operational Considerations for the Identification of Healthcare Workers and Inpatients with
   Suspected COVID-19 in non-U.S. Healthcare Settings
   Available at: <u>https://www.cdc.gov/coronavirus/2019-ncov/hcp/non-us-settings/guidance-identify-hcw-patients.html</u>
- Ending Isolation and Precautions for People with COVID-19: Interim Guidance Available at: https://www.cdc.gov/coronavirus/2019-ncov/hcp/duration-isolation.html
- Operational Considerations for Adapting a Contact Tracing Program to Respond to the COVID-19 Pandemic in non-US Settings Available at: <u>https://www.cdc.gov/coronavirus/2019-ncov/global-covid-19/operational-</u> <u>considerations-contact-tracing.html</u>
- Interim Guidelines for COVID-19 Antibody Testing Available at: <u>https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/antibody-tests-guidelines.html</u>
- <u>Guidance for Vaccinating Older Adults and People with Disabilities: Ensuring Equitable COVID-19</u> <u>Vaccine Access</u> Available at: <u>https://www.cdc.gov/vaccines/covid-19/clinical-considerations/older-adults-and-disability/access.html</u>
- <u>Guidance for General Laboratory Safety Practices during the COVID-19 Pandemic</u> Available at: https://www.cdc.gov/coronavirus/2019-ncov/lab/lab-safety-practices.html
- Interim Guidance for Antigen Testing for SARS-CoV-2
   Available at: <u>https://www.cdc.gov/coronavirus/2019-ncov/lab/resources/antigen-tests-guidelines.html</u>

# EU CDC

The following update was published by the EU CDC from 15 – 21 January 2022:

 Interim analysis of COVID-19 vaccine effectiveness against Severe Acute Respiratory Infection due to laboratory-confirmed SARS-CoV-2 among individuals aged 50 years and older, ECDC multi-country study – first update Available at: https://www.ecdc.europa.eu/en/publications-data/interim-analysis-covid-19-

Available at: <u>https://www.ecdc.europa.eu/en/publications-data/interim-analysis-covid-1</u> vaccine-effectiveness-against-severe-acute-respiratory

# ix. Vaccines/Therapeutics Development

Noteworthy reports are included to inform main developments of COVID-19 pharmaceutics. Past updates are available from situation report 211 onwards. A global map and registry of trials is also visualised & accessible at: <u>https://www.covid-nma.com/dataviz/</u> and trial results are available at: <u>https://covid-nma.com/dataviz/</u> and trial results are available at: <u>https://covid-nma.com/living\_data/index.php</u>. A living systematic review of vaccine trials is also accessable at <u>https://covid-nma.com/vaccines/ or https://covid-nma.com/</u>.

# Vaccines

- [1] **Australia** Novavax's NUVAXOVID vaccine candidate has been granted provisional approval on Jan 20 for people aged 18 years and older.
- [2] **Austria** The national COVID-19 vaccine mandate for adults has been approved effective Feb. 1, making it the first EU country to do so.
- [3] **France** On Jan 19, preliminary studies of Valneva's vaccine candidate, VLA2001 showed that three doses neutralised the Omicron variant in 87% of the samples and 100% samples of the ancestral virus and Delta variant.
- [4] Japan On Jan 21, Pfizer Inc.'s COVID-19 vaccine was approved for children aged between 5 and 11.
- [5] Malaysia Beginning Feb 3, Pfizer vaccination will be initiated for children aged five to 12.
- [6] Nepal On Jan 17, COVID-19 vaccine booster was approved to be given to frontline workers first followed by people aged 60 and older. Booster will be given at least six months after the second dose and will be the same vaccine that had been administered.
- [7] Switzerland On Jan 19, an early-stage study was launched to test the new PepGNP-Covid19 vaccine candidate which focuses on T-cells to eliminate cells infected by the virus and prevent it from replicating. This vaccine will be administered via an arm patch.
- [8] USA Findings from the phase 2 clinical trial of a new antibody called CERC-002 show a significantly higher proportion of hospitalized patients with COVID-19 remaining alive and free of respiratory failure for 28 days after receiving treatment. These findings have been published on Dec 6 in the Journal of Clinical Investigation.

#### Therapeutics

- [9] Australia Provisional approval has been given by the Australian Therapeutic Goods Administration for two oral Covid-19 treatments, Lagevrio (molnupiravir) and Paxlovid (nirmatrelvir and ritonavir). Both products are indicated for use in adult patients at an increased risk of disease progression to hospitalisation or death and who do not require oxygen.
- [10] Canada On Jan 17, Health Canada authorized the use of Pfizer's COVID-19 antiviral treatment Paxlovid, for adults aged 18 and older to treat mild to moderate cases of COVID-19, if are at a high risk of becoming seriously ill.
- [11] Canada Resverlogix has initiated subject enrolment and dosing in a Phase IIb clinical trial of its small molecule therapeutic candidate, apabetalone (RVX-208), as a possible oral therapy to treat Covid-19 at various centres in Canada and Brazil.
- [12] **India -** On Jan 18, DCGI cleared stem cell product, Stempeucel for label extension Phase 3 clinical trials to treat COVID-19 patients suffering from acute respiratory distress syndrome (ARDS).
- [13] **Mexico** Mexican health regulator on Jan 14, approved Pfizer's antiviral oral treatment, Paxlovid for emergency use in adults with light or moderate risk of complications.

#### **Vaccine Approval Status**

Table 7: Number of approving countries per vaccine as of 19 January 2022.

		Number of
Developer	Vaccine	countries
		approving
Anhui Zhifei Longcom	ZF2001	3
Bharat Biotech	Covaxin	13
Biological E Limited	BECOV2A	1
CanSino	Ad5-nCoV	10
Center for Genetic Engineering and	CIGB-66	6
Biotechnology (CIGB)		
Chumakov Center	KoviVac	3
FBRI	EpiVacCorona	4
FBRI	EpiVacCorona-N	1
Gamaleya	Sputnik Light	24
Gamaleya	Sputnik V	74
Health Institutes of Turkey	Turkovac	1
Instituto Finlay de Vacunas Cuba	Soberana Plus	1
Instituto Finlay de Vacunas Cuba	Soberana 02	4
Johnson & Johnson	Ad26.COV2.S	101
Kazakhstan RIBSP	QazVac	2
Medigen	MVC-COV1901	2
Minhai Biotechnology Co	SARS-CoV-2 Vaccine (Vero Cells)	2
Moderna	mRNA-1273 (Spikevax)	85
National Vaccine and Serum Institute	Recombinant SARS-CoV-2 Vaccine (CHO Cell)	1
Novavax	NVX-CoV2373	31
Organization of Defensive Innovation and Research	FAKHRAVAC (MIVAC)	1



Oxford/AstraZeneca	AZD1222	134
Pfizer/ BioNTech	BNT162b2	132
Razi Vaccine and Serum Research Institute	Razi Cov Pars	1
Serum Institute of India	Covishield	47
Serum Institute of India	COVOVAX (Novavax formulation)	3
Shifa Pharmed Industrial Co	COVID-19 Inactivated Vaccine	1
Sinopharm	BBIBP-CorV	85
Sinopharm	Inactivated	2
Sinovac	CoronaVac	51
Takeda	TAK-919 (Moderna formulation)	1
Vaxine/CinnaGen Co.	COVAX-19	1
Zydus Cadila	ZyCoV-D	1

Source: https://covid19.trackvaccines.org/vaccines/

### **Adverse Reactions & Effects**

- Australia On Jan 18, a report from the Therapeutic Goods Administration (TGA) found that swollen lymph nodes were the most common adverse event reported following a booster shot. Of the 2.5 million booster doses administered, approximately 600 reports of suspected adverse events were reported.
- [2] European Union On Jan 14, the European Medicines Agency's safety committee recommended adding a rare spinal inflammation called transverse myelitis as a side effect of AstraZeneca's Covid-19 vaccine. They also reiterated its recommendation of a similar warning to be included for Johnson & Johnson's one-shot vaccine.
- [3] Ireland As of Jan 20, a total of 269 reports of suspected side effects were reported after administration of the 659,000 doses of the Pfizer vaccine to under-18-year-olds up to Jan 11th. Majority of the reports were mild to moderate with the most commonly reported side effect (257 reports) being general symptoms and local reactions such as tiredness, weakness, chest pain and feeling hot. Other significant categories were nervous system issues such dizziness, headache, fainting or feeling faint (189) and gastrointestinal complaints such as nausea, vomiting and abdominal pain (112).
- [4] Singapore As of Jan 19, six non-serious and no serious adverse events to the Pfizer-BioNTech/Comirnaty vaccine have been reported in children aged five to 11. As for children aged 12 and above, 83 serious adverse events including allergic reactions, skin conditions, seizures, dizziness, syncope (fainting and brief episode of loss of consciousness), myocarditis, pericarditis and tachycardia have been reported.
- [5] South Korea On Jan 18, The National Cancer Center reported that two elderly patients with diffuse large B-cell lymphoma in complete remission after combined immunochemotherapy, developed the Guillain-Barré syndrome after receiving Pfizer–BioNTech Covid-19 vaccines. However, a temporal relationship between vaccination and Guillain-Barré syndrome was established but it requires additional research to establish causality.



#### Scientific Publications with Epidemiology and Clinical Focus Χ.

# The effect of ivermectin on non-severe and severe COVID-19 disease and gender-based difference of its effectiveness [621]

The COVID-19 pandemic has led to mortality and morbidity since December 2019. Many possible treatment options have been advised till date. The role of ivermectin in the treatment of COVID-19 disease remains controversial. The aim of our study was to evaluate the effect of ivermectin in hospitalized patients with non-severe and severe COVID-19 disease. We conducted a retrospective cohort study that compared outcomes in 2 groups of COVID-19 patients hospitalized at the largest tertiary care center of Pakistan. The study group was given ivermectin along with standard treatment of covid-19 disease; the comparison group was not. Data on mortality, inflammatory markers such as C-reactive protein (CRP) and ferritin, length of hospital stay and baseline characteristics were collected from Aga Khan University's database from October 2020 till February 2021. Statistical analysis was done to determine the effectiveness of ivermectin in non-severe and severe COVID-19. Comparison of effectiveness of Ivermectin in both the genders was also conducted. The cohort included 188 patients out of which 90 were treated with ivermectin. Mortality and length of hospitalization was not found to be significantly different in the study group compared with the control group (5.6% vs 5.1%; p=0.87 and 5 days vs 4 days; p=0.27). Analysis of secondary outcomes did not yield statistically significant results, apart from ferritin levels which were significantly less in patients treated with ivermectin (547.1 vs 756.7; p=0.03). The ferritin and CRP levels in affected males were higher than in females on admission and discharge. Our findings suggest ivermectin does not significantly affect all-cause mortality, length of hospitalization and CRP levels in hospitalized COVID-19 patients. Large scale randomized controlled trials (RCTs) are required to further evaluate the role of ivermectin in covid-19 disease.

# Risk and Protective Factors for COVID-19 Morbidity, Severity, and Mortality [622]

The outbreak of the coronavirus disease 2019 (COVID-19), caused by the novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has become an evolving global health crisis. Currently, a number of risk factors have been identified to have a potential impact on increasing the morbidity of COVID-19 in adults, including old age, male sex, pre-existing comorbidities, and racial/ethnic disparities. In addition to these factors, changes in laboratory indices and pro-inflammatory cytokines, as well as possible complications, could indicate the progression of COVID-19 into a severe and critical stage. Children predominantly suffer from mild illnesses due to COVID-19. Similar to adults, the main risk factors in pediatric patients include age and pre-existing comorbidities. In contrast, supplementation with a healthy diet and sufficient nutrition, COVID-19 vaccination, and atopic conditions may act as protective factors against the infection of SARS-CoV-2. COVID-19 vaccination not only protects vulnerable individuals from SARS-CoV-2 infection, more importantly, it may also reduce the development of severe disease and death due to COVID-19. Currently used therapies for COVID-19 are off-label and empiric, and their impacts on the severity and mortality of COVID-19 are still unclear. The interaction between asthma and COVID-19 may be bidirectional and needs to be clarified in more studies. In this review, we highlight the clinical

mortality of COVID-19.



# Assessment of Clinical Outcomes Among Children and Adolescents Hospitalized With COVID-19 in 6 Sub-Saharan African Countries [623]

Importance: Little is known about COVID-19 outcomes among children and adolescents in sub-Saharan Africa, where preexisting comorbidities are prevalent.

Objective: To assess the clinical outcomes and factors associated with outcomes among children and adolescents hospitalized with COVID-19 in 6 countries in sub-Saharan Africa.

Design, setting, and participants: This cohort study was a retrospective record review of data from 25 hospitals in the Democratic Republic of the Congo, Ghana, Kenya, Nigeria, South Africa, and Uganda from March 1 to December 31, 2020, and included 469 hospitalized patients aged 0 to 19 years with SARS-CoV-2 infection.

Exposures: Age, sex, preexisting comorbidities, and region of residence.

Main outcomes and measures: An ordinal primary outcome scale was used comprising 5 categories: (1) hospitalization without oxygen supplementation, (2) hospitalization with oxygen supplementation, (3) ICU admission, (4) invasive mechanical ventilation, and (5) death. The secondary outcome was length of hospital stay.

Results: Among 469 hospitalized children and adolescents, the median age was 5.9 years (IQR, 1.6-11.1 years); 245 patients (52.4%) were male, and 115 (24.5%) had comorbidities. A total of 39 patients (8.3%) were from central Africa, 172 (36.7%) from eastern Africa, 208 (44.3%) from southern Africa, and 50 (10.7%) from western Africa. Eighteen patients had suspected (n = 6) or confirmed (n = 12) multisystem inflammatory syndrome in children. Thirty-nine patients (8.3%) died, including 22 of 69 patients (31.9%) who required intensive care unit admission and 4 of 18 patients (22.2%) with suspected or confirmed multisystem inflammatory syndrome in children. Among 468 patients, 418 (89.3%) were discharged, and 16 (3.4%) remained hospitalized. The likelihood of outcomes with higher vs lower severity among children younger than 1 year expressed as adjusted odds ratio (aOR) was 4.89 (95% CI, 1.44-16.61) times higher than that of adolescents aged 15 to 19 years. The presence of hypertension (aOR, 5.91; 95% CI, 1.89-18.50), chronic lung disease (aOR, 2.97; 95% CI, 1.65-5.37), or a hematological disorder (aOR, 3.10; 95% CI, 1.04-9.24) was associated with severe outcomes. Age younger than 1 year (adjusted subdistribution hazard ratio [aSHR], 0.48; 95% CI, 0.27-0.87), the presence of 1 comorbidity (asHR, 0.54; 95% CI, 0.40-0.72), and the presence of 2 or more comorbidities (asHR, 0.26; 95% CI, 0.18-0.38) were associated with reduced rates of hospital discharge.

Conclusions and relevance: In this cohort study of children and adolescents hospitalized with COVID-19 in sub-Saharan Africa, high rates of morbidity and mortality were observed among infants and patients with noncommunicable disease comorbidities, suggesting that COVID-19 vaccination and therapeutic interventions are needed for young populations in this region.

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