



COVID-19 Situation Report 500

Centre for Infectious Disease Epidemiology and Research (CIDER)

i. Background

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 11th 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.**



Global Risk Assessment ii.

Table 1. Risk assessment of COVID	-19 by WHO regio	ns (Update	ed as of 28 January 2022, 1400H SGT)	
Environmental Risk	Transmissibility	Severity of Disease	Availability of Treatment/ Vaccination [#]	Overall Risk [%]
Global (n=198 countries)				
High			Limited Coverage	
High Globally, 192 (97.0%) countries (excluding territories*) 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 (22 countries), EURO (51 countries), Americas (33 countries), and Africa (21 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 Ro is estimated to be 5.8 (95% CI 4.4–7.7), but the estimated effective reproduction number in 172 countries ranged from 0.18 to 2.1 . [§]	Case fatality rate is currentl y at 1.54% globally. Most cases present as flu- like illness.	Limited Coverage 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). ^{&} 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 full dose and those on a "prophylactic" 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
			boosters until at least the end of	



On January 19, the World Health			September, to enable that at least 10% of	
Organization said that international travel			the population of every country was	
bans "do not provide added value and			vaccinated. [28]	
continue to contribute to the economic				
and social stress" of countries [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 behaves 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-East Asia	Region (n=41 count	tries)		
High			Low Coverage	
36 (87.8%) countries have reported outbreaks; but only 22 (53.7%) countries are reporting a surge in cases	As of Jan 26, the estimated effective	Case fatality rate is	33 countries have commenced vaccination as of 28 January 2022. Coverage was available for the following: i) at least 1	

reproduction

10 (24.4%) countries have either a constant decreasing change in incidence or no case in the last 14 days.	no. of 24 countries ranged from 0.48-2.1 . ^{\$}
Highest incidence over the past 14 days were reported from Australia, Maldives,	

are reporting a surge in cases.

Mongolia, Palau, and Singapore and highest case numbers were reported from 6 countries.[&]

1.35%.

dose was at 51-80% for **18 countries**;

Indonesia has approved Russian drug Avifavir for emergency use. [22]

>80% for **11 countries** ii) full vaccination

was at 51-80% for 19 countries; >80% for

High



Australia, India, Japan, 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)				
High			Low Coverage	
 52 (98.1%) countries have reported with outbreaks; 51 (96.2%) countries are reporting a surge in cases. 1 (1.9%) country has either a constant decreasing change in incidence or no case in the last 14 days. Highest incidence over the past 14 days were reported from Andorra, Denmark, France, Israel and Slovenia, and highest case numbers were reported from France, Germany, Italy, Spain and United Kingdom. At least 5 countries have closed their borders, 47 countries have opened their borders partially conditionally, and only 1 country is allowing free travel. 	As of Jan 26, the estimated effective reproduction no. of 49 countries ranged from 0.33-1.9 . ^{\$}	Case fatality rate is 1.27%.	 53 countries have commenced vaccination as of 28 January 2022. Coverage was available for the following i) at least 1 dose was at 51-80% for 31 countries; >80% for 8 countries; ii) full vaccination was at 51-80% for 29 countries; >80% for 5 countries. ^{&} On February 28, France authorized its first ever use of synthetic monoclonal antibody, bamlanivab by Eli Lilly, for use on severe COVID-19 patients. [19] As of February 14, Italy authorized the use 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	



			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]	
Eastern Mediterranean Region (n=22 count	ries)	1		[
High			Low Coverage	
 22 (100%) countries have reported with outbreak; 17 (77.3%) countries are reporting a surge in cases. 0 (0%) country has either a constant decreasing change in incidence or no case in the last 14 days. Highest incidence over the past 14 days were reported from Bahrain, Kuwait, Lebanon, Qatar, and Tunisia, and highest case numbers were reported from Jordan, Lebanon, Morocco, Pakistan and Tunisia. At least 4 countries have closed their borders, 17 countries have opened their borders partially conditionally, and only 1 country is allowing free travel. 	As of Jan 26, the estimated effective reproduction no. of 19 countries ranged from 0.46-2 . ^{\$}	Case fatality rate is 1.72% .	 21 countries have commenced vaccination as of 28 January 2022. Coverage was available for the following: i) at least 1 dose was at 51-80% for 6 countries; >80% for 3 countries; ii) full vaccination was at 51-80% for 6 countries; >80% for 3 countries. ^{&} 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] As of April, an Israeli firm is using placenta pluristem cells to treat COVID-19 patients on a compassionate use basis. [5] As of June 4, UAE authorised the emergency use of Sotrovimab, a kind of monoclonal antibody drug [25]. 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] 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] 	High



Region of the Americas (n=35 countries)				
High			Low Coverage	
 35 (100%) countries have reported with outbreak; 33 (94.3%) countries are reporting a surge in cases. 0 (0%) country has either a constant decreasing change in incidence or no case in the last 14 days. 	As of Jan 26, the estimated effective reproduction no. of 35 countries ranged from 0.18-1.5. ^{\$}	Case fatality rate is 1.87%.	35 countries have commenced vaccination as of 28 January 2022. Coverage was available for the following: i) at least 1 dose was at 51-80% for 17 countries ; >80% for 7 countries ii) full vaccination was at 51-80% for 16 countries ; >80% for 2 countries . ^{&}	
 Highest incidence over the past 14 days were reported from Argentina, Barbados, Panama, Uruguay and USA, and highest case numbers were reported from Argentina, Brazil, Mexico, Peru and USA. At least 9 countries have closed their borders, 24 countries have opened their borders partially conditionally, and 2 countries are allowing free travel. 			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]	



			 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. [8] As of October 22, remdesivir is the first and only FDA-approved COVID-19 treatment in the U.S. [7]. 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]	
Atrican Region (n=47 countries) Moderate			Low Coverage	
 47 (100%) countries have reported with outbreak; 21 (45.7%) countries are reporting a surge in cases. 0 (0%) country has either a constant 	As of Jan 26, the estimated effective reproduction no. of 45 countries	Case fatality rate is 2.09%.	46 countries have commenced vaccination as of 28 January 2022. Coverage was available for the following: i) at least 1 dose was at 51-80% for 4 countries ; >80% for 1 country; ii) full vaccination was at 50-	High
decreasing change in incidence or no case in the last 14 days.	ranged from 0.18-1.5 . ^{\$}		80% for 1 country; >80% for 1 country. ^{&}	
, 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 Algeria, Botswana,			
Ethiopia, 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. 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.

^{\$} https://epiforecasts.io/covid/posts/global/

[^]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

[%] 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 28 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	366,914,671	366,808,796	5,656,952	1.54%	1.54%	5.8 (95% CI 4.4–7.7) [^]

^Based on early release as of 10th 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 (%)	R ₀
SARS-CoV-2	Median = 5.1 ^{\$} (2-14) or up to 24*	1.54	5.8 (95% Cl 4.4–7.7) ^
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 ^{\$}Data on 181 cases outside china

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



Growth Factor

Daily Cases 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



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



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/

Growth Factor outside of China



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 22 – 28 January 2022 (Updated as of 28 January 2022, 1400H SGT)

Country	Total Cases	Change in Cases	Total Deaths	Change in Deaths	Total Recovered	Region
USA	74,695,333	+4,150,471	902,140	+18,237	45,614,212	Americas
France	18,122,724	+2,522,077	130,015	+1,901	11,381,437	EURO
India	40,622,709	+2,056,682	492,356	+3,934	38,024,771	SEARO
Brazil	24,782,922	+1,194,001	625,169	+2,918	22,098,157	Americas
Italy	10,539,601	+1,121,345	145,159	+2,569	7,687,989	EURO
Germany	9,334,637	+937,309	118,065	+1,021	7,443,300	EURO
Spain	9,660,208	+825,845	92,767	+1,168	5,786,381	EURO
UK	16,245,474	+632,191	155,040	+1,838	12,961,845	EURO
Argentina	8,207,752	+631,417	120,352	+1,543	7,272,010	Americas
Israel	2,659,727	+555,782	8,556	+186	2,158,276	EURO
Turkey	11,250,107	+513,892	86,661	+1,242	10,567,427	EURO
Russia	11,404,617	+466,356	328,770	+4,710	10,129,691	EURO
Netherlands	4,131,630	+410,814	21,253	+65	3,064,300	EURO
Japan	2,421,443	+403,912	18,642	+173	1,919,265	WPRO
Portugal	2,443,524	+383,929	19,744	+297	1,865,651	EURO
Australia	2,465,811	+375,001	3,495	+511	1,978,446	WPRO
Belgium	3,007,724	+364,963	28,938	+179	2,023,969	EURO
Peru	3,120,401	+340,352	204,940	+1,072	N/A	Americas
Denmark	1,516,878	+289,983	3,674	+124	1,020,264	EURO
Poland	4,695,435	+288,882	104,636	+1,258	3,880,924	EURO
Mexico	4,828,446	+282,763	304,803	+2,413	3,895,700	Americas
Sweden	2,015,276	+273,566	15,744	+148	1,288,155	EURO
Switzerland	2,082,644	+249,201	12,764	+105	1,265,724	EURO
Austria	1,727,661	+223,993	14,042	+86	1,445,628	EURO
Czechia	2,888,827	+210,060	37,114	+142	2,557,250	EURO
Philippines	3,493,447	+168,969	53,736	+583	3,213,190	WPRO
Colombia	5,816,462	+161,436	133,292	+1,665	5,574,490	Americas
Romania	2,114,834	+150,813	59,797	+369	1,873,747	EURO
Ukraine	3,946,202	+146,820	99,738	+895	3,601,952	EURO
Norway	714,532	+142,877	1,439	+26	88,952	EURO
Canada	2,998,176	+129,354	33,373	+1,153	2,732,104	Americas
Chile	2,045,874	+129,352	39,594	+138	1,762,201	Americas
Greece	1,867,935	+125,572	23,083	+717	1,627,118	EURO
Serbia	1,616,584	+114,963	13,417	+236	1,337,218	EURO
Vietnam	2,203,208	+108,406	37,291	+1,025	1,945,611	WPRO



Hungary	1,490,489	+104,989	41,151	+394	1,233,499	EURO
Bangladesh	1,747,331	+94,149	28,288	+108	1,561,043	SEARO
Georgia	1,110,168	+88,225	14,840	+258	981,531	EURO
Kazakhstan	1,204,769	+87,609	13,194	+83	1,032,639	EURO
Slovenia	656,569	+86,949	5,825	+93	507,018	EURO
Uruguay	631,019	+74,856	6,389	+117	551,355	Americas
S. Korea	793,582	+74,313	6,678	+177	614,712	WPRO
Panama	678,128	+63,171	7,656	+91	586,539	Americas
Bulgaria	923,466	+62,589	33,017	+499	663,168	EURO
Ecuador	691,898	+62,391	34,362	+130	N/A	Americas
Croatia	909,674	+61,524	13,625	+325	828,673	EURO
Jordan	1,184,856	+61,170	13,142	+99	1,097,176	EMRO
Slovakia	957,633	+60,835	17,755	+235	854,756	EURO
Tunisia	876,245	+59,194	26,096	+215	737,652	EMRO
Iran	6,293,695	+57,128	132,333	+181	6,091,880	EMRO
Finland	470,665	+54,586	1,919	+129	46,000	EURO
Thailand	2,415,472	+53,770	22,129	+126	2,309,648	SEARO
Nepal	939,267	+51,498	11,687	+55	837,004	SEARO
Lithuania	639,527	+50,453	7,815	+107	541,642	EURO
Pakistan	1,402,070	+48,591	29,192	+127	1,274,657	EMRO
Réunion	180,531	+46,914	500	+38	108,771	Non
Bolivia	841,757	+46,670	20,824	+320	670,031	Americas
Iraq	2,183,402	+46,135	24,330	+58	2,090,815	EMRO
Latvia	363,821	+44,794	4,846	+73	288,705	EURO
Lebanon	891,982	+44,358	9,544	+99	682,977	EMRO
Morocco	1,120,087	+42,085	15,270	+223	1,049,166	EMRO
Costa Rica	675,178	+37,851	7,521	+80	572,137	Americas
Kuwait	521,341	+37,191	2,490	+8	469,916	EMRO
Ireland	1,164,536	+36,585	6,136	+49	725,331	EURO
Paraguay	559,906	+36,581	17,176	+264	480,315	Americas
Singapore	333,071	+35,522	850	+5	311,589	WPRO
Estonia	313,685	+35,187	2,023	+29	250,826	EURO
Saudi Arabia	670,997	+32,670	8,929	+15	622,087	EMRO
Indonesia	4,309,270	+31,626	144,261	+62	4,129,305	SEARO
Malaysia	2,850,408	+29,481	31,940	+87	2,770,663	WPRO
Moldova	428,934	+28,349	10,600	+112	376,491	EURO
Bahrain	348,655	+27,967	1,402	+4	314,448	EMRO
Dominican Republic	550,020	+25,385	4,295	+21	528,372	Americas
Cuba	1,033,984	+22,173	8,383	+31	1,010,162	Americas
South Africa	3,594,499	+21,639	94,651	+805	3,432,829	Africa
Palestine	471,245	+21,607	4,807	+34	440,607	EMRO
UAE	835,839	+18,894	2,232	+28	772,723	EMRO
Qatar	332,800	+18,727	640	+8	301,289	EMRO
Guatemala	681,308	+18,480	16,317	+94	627,320	Americas



Mongolia	438,295	+17,456	2,104	+11	313,256	WPRO
Maldives	128,089	+17,158	274	+5	110,852	SEARO
Luxembourg	150,883	+16,169	947	+6	118,230	EURO
Algeria	245,698	+15,228	6,539	+86	163,895	Africa
Bosnia and Herzegovina	341,913	+14,918	14,243	+292	192,218	EURO
Libya	416,223	+14,779	5,979	+90	390,207	EMRO
Azerbaijan	643,509	+14,157	8,664	+100	620,182	EURO
Venezuela	477,022	+13,877	5,425	+30	454,418	Americas
Belarus	734,078	+12,975	5,992	+110	725,935	EURO
Albania	254,126	+12,614	3,329	+43	227,629	EURO
Oman	330,767	+12,495	4,134	+9	308,825	EMRO
North Macedonia	263,206	+12,330	8,312	+146	238,452	EURO
Egypt	417,453	+12,060	22,496	+236	351,418	EMRO
Martinique	82,813	+11,620	826	+13	104	Non
Cyprus	246,354	+10,990	724	+24	124,370	EURO
Guadeloupe	105,319	+10,554	773	+11	2,250	Non
Iceland	63,188	+10,067	46	+2	51,550	EURO
Armenia	358,218	+8,889	8,035	+9	334,960	EURO
Sri Lanka	607,104	+7,741	15,369	+114	577,030	SEARO
Uzbekistan	218,477	+7,578	1,551	+19	208,018	EURO
Isle of Man	21,292	+7,166	70	0	20,621	Non
Montenegro	216,856	+7,137	2,541	+45	206,941	EURO
Botswana	250,746	+6,800	2,580	+36	243,325	Africa
Jamaica	122,463	+5,519	2,617	+56	68,949	Americas
Faeroe Islands	17,403	+5,455	18	+3	7,693	Non
Trinidad and Tobago	108,892	+4,887	3,358	+102	84,292	Americas
Belize	49,794	+4,835	624	+12	39,783	Americas
Barbados	42,122	+4,500	277	+4	33,317	Americas
Cameroon	114,113	+4,447	1,867	+14	106,050	Africa
Honduras	391,874	+4,359	10,504	+35	127,038	Americas
Zambia	304,002	+4,031	3,907	+28	294,802	Africa
Suriname	72,548	+3,988	1,256	+28	49,236	Americas
Laos	132,130	+3,882	534	+26	7,660	WPRO
Guyana	58,604	+3,868	1,156	+45	45,440	Americas
Kyrgyzstan	197,437	+3,621	2,867	+24	185,771	EURO
El Salvador	127,012	+3,435	3,871	+28	117,753	Americas
Ethiopia	463,921	+3,319	7,303	+91	395,364	Africa
Sudan	57,106	+3,147	3,422	+29	40,329	EMRO
New Caledonia	17,903	+3,049	283	+1	13,426	Non
French Guiana	75,006	+2,888	370	+13	11,254	Non
Andorra	35,028	+2,827	145	+1	30,112	EURO
Angola	97,901	+2,681	1,893	+12	92,296	Africa
Channel Islands	40,543	+2,591	129	+5	37,528	Non
Seychelles	36,559	+2,192	149	+6	32,811	Africa



Saint Lucia	20 417	+2 095	326	+10	15 877	Americas
Mozambique	223,413	+1.981	2,164	+18	208.770	Africa
Malta	66.938	+1.933	541	+21	62.039	EURO
Uganda	161.192	+1.738	3.510	+56	99.179	Africa
Afghanistan	161.004	+1.701	7,403	+17	146.454	FMRO
Fiii	62.203	+1.694	791	+39	58.656	WPRO
Madagascar	57.375	+1.548	1.223	+54	52.012	Africa
Kenva	320.918	+1.539	5.567	+47	293.017	Africa
Ghana	156,392	+1,501	1,384	+27	152,907	Africa
Curação	36,722	+1,415	225	+15	33,730	Non
Rwanda	128,629	+1,402	1,436	+14	45,522	Africa
Zimbabwe	229,096	+1,401	5,324	+44	216,699	Africa
Mauritania	57,919	+1,253	940	+24	52,743	Africa
Nigeria	252,753	+1,182	3,134	+17	228,137	Africa
San Marino	11,786	+1,147	108	+5	10,091	EURO
Grenada	12,090	+1,130	210	+5	9,954	Americas
Greenland	10,359	+1,103	5	+2	2,761	Non
Somalia	25,388	+1,066	1,335	0	13,182	EMRO
Gibraltar	12,441	+1,049	100	0	10,750	Non
Mayotte	36,225	+1,036	187	+1	2,964	Non
Senegal	84,709	+957	1,939	+22	79,072	Africa
Myanmar	534,671	+939	19,310	+3	512,742	SEARO
Ivory Coast	80,487	+929	782	+18	77,295	Africa
Monaco	8,084	+924	44	0	7,490	EURO
Bhutan	4,225	+908	3	0	2,780	SEARO
Aruba	32,718	+883	193	+6	32,115	Non
Caribbean Netherlands	6,829	+883	27	0	5,912	Non
Malawi	84,224	+821	2,544	+42	68,843	Africa
Palau	1,022	+814	0	0	126	WPRO
Liechtenstein	8,406	+809	73	0	7,920	Non
Gabon	46,469	+806	301	+2	41,461	Africa
Bermuda	10,552	+786	116	+4	9,032	Non
Antigua and Barbuda	6,524	+783	127	+6	5,617	Americas
French Polynesia	48,044	+769	636	0	N/A	Non
Haiti	28,875	+758	784	+4	24,410	Americas
DRC	84,926	+728	1,278	0	50,930	Africa
Namibia	155,623	+726	3,947	+63	145,325	Africa
Cabo Verde	55,595	+704	393	+13	54,497	Africa
Hong Kong	13,790	+694	213	0	12,572	WPRO
Bahamas	32,376	+683	735	+9	24,178	Americas
Solomon Islands	755	+674	5	+5	20	WPRO
Mauritius	25,675	+600	762	0	24,733	Africa
Mali	29,949	+590	711	+7	25,642	Africa
New Zealand	15,991	+590	52	0	14,619	WPRO



Tanzania	32.920	+527	778	+25	N/A	Africa
Taiwan	18.566	+525	851	0	, 16.407	WPRO
Dominica	8,838	+489	51	+3	8,058	Americas
Congo	23,653	+409	371	0	19,298	Africa
China	105,875	+391	4,636	0	98,971	WPRO
CAR	13,898	+389	110	+1	6,859	Africa
Burundi	37,170	+385	38	0	773	Africa
Yemen	10,842	+357	2,005	+10	7,086	EMRO
Guinea-Bissau	7,519	+317	154	+1	6,538	Africa
Syria	51,177	+315	2,979	+20	37,413	EMRO
Saint Martin	9,439	+296	61	+1	1,399	Non
Guinea	36,013	+294	416	+6	31,870	Africa
Тодо	36,452	+276	267	+1	31,812	Africa
Eritrea	9,436	+276	97	+8	9,004	Africa
Sint Maarten	9,229	+264	79	+2	8,343	Non
Eswatini	68,239	+236	1,373	+7	66,596	Africa
Turks and Caicos	5,678	+236	34	+2	5,425	Non
Saint Kitts and Nevis	5,368	+227	33	+5	4,816	Americas
Brunei	16,206	+220	98	0	15,743	WPRO
Equatorial Guinea	15,774	+216	182	+3	15,121	Africa
Saint Pierre Miquelon	813	+215	0	0	587	Non
Djibouti	15,411	+211	189	0	15,073	EMRO
British Virgin Islands	5,809	+207	49	+2	N/A	Non
Cambodia	121,150	+194	3,015	0	117,286	WPRO
Chad	7,073	+186	190	+5	4,874	Africa
Kiribati	181	+181	0	0	0	WPRO
Tajikistan	17,265	+170	124	0	17,046	EURO
Burkina Faso	20,591	+156	366	+13	19,967	Africa
St. Barth	3,435	+153	6	0	N/A	Non
Papua New Guinea	36,596	+150	597	+1	35,853	WPRO
Lesotho	32,049	+150	690	0	20,990	Africa
Benin	26,450	+141	163	0	25,506	Africa
South Sudan	16,767	+140	137	0	12,934	Africa
Niger	8,632	+129	297	+2	7,863	Africa
Anguilla	2,270	+83	7	0	2,139	Non
Sao Tome and Principe	5,867	+82	69	+2	5,426	Africa
St. Vincent Grenadines	6,663	+48	92	+2	5,711	Americas
Nicaragua	17,650	+46	216	+1	4,225	Americas
Sierra Leone	7,611	+44	125	0	N/A	Africa
Liberia	7,243	+35	289	+1	5,747	Africa
Comoros	7,824	+31	159	0	7,620	Africa
Timor-Leste	19,894	+28	122	0	19,740	SEARO
Samoa	27	+14	0	0	3	WPRO
Montserrat	161	+10	1	0	148	Non



Cayman Islands	11,666	0	15	0	8,093	Non
Gambia	11,572	0	347	0	10,156	Africa
Diamond Princess	712	0	13	0	699	NA
Wallis and Futuna	454	0	7	0	438	Non
Falkland Islands	85	0	0	0	N/A	Non
Macao	79	0	0	0	79	WPRO
Vatican City	29	0	0	0	27	Non
Western Sahara	10	0	1	0	8	Non
MS Zaandam	9	0	2	0	7	NA
Vanuatu	7	0	1	0	6	WPRO
Marshall Islands	7	0	0	0	7	WPRO
Saint Helena	2	0	0	0	2	Non
Micronesia	1	0	0	0	1	WPRO
Tonga	1	0	0	0	1	WPRO
Total	366,914,671	+23,639,610	5,656,952	+63,487	287,952,981	

Figure 4. Areas with reported confirmed cases of COVID-19 (17 – 23 January 2022)



of Singapore



Figure 5. Areas with reported COVID-19 deaths (17 – 23 January 2022)

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



Table 5. COVID-19 cases and deaths reported by states/UT in India between 22 – 28 January 2022 (Updated as of 28 January 2022, 1400H SGT)

Name of State / UT	Total Diagnosed Cases	Change from previous week	Total Active Cases	Change from previous week	Total Recovered	Change from previous week	Total Deaths	Change from previous week
Andaman and Nicobar Islands	9624	+591	504	+39	8991	+552	129	0
Andhra Pradesh	2236047	+95991	109493	+55622	2111975	+40317	14579	+52
Arunachal Pradesh	61247	+2976	3332	+1072	57630	+1901	285	+3
Assam	708530	+30473	36522	-5943	665629	+36297	6379	+119
Bihar	818859	+16117	10322	-16352	796332	+32426	12205	+43
Chandigarh	87983	+5420	5420	-4502	81455	+9909	1108	+13
Chhattisgarh	1113095	+31917	27290	-4446	1072007	+36262	13798	+101
Dadra and Nagar Haveli and Daman and Diu	11261	+151	151	-92	11106	+243	4	0
Delhi	1815288	+55016	33175	-35555	1756369	+90330	25744	+241
Goa	235039	+12542	13269	-9191	218125	+21673	3645	+60
Gujarat	1120660	+119097	117884	+12996	992431	+105955	10345	+146
Haryana	932976	+50081	35581	-26062	887158	+76048	10237	+95
Himachal Pradesh	265734	+11324	10336	-5282	251430	+16554	3968	+52
Jammu and Kashmir	419731	+41070	46657	+15613	368432	+25401	4642	+56
Jharkhand	425229	+9841	12076	-13502	407862	+23287	5291	+56
Karnataka	3692496	+315543	328741	+35480	3325001	+279824	38754	+239
Kerala***	5826596	+315752	310202	+110453	5463960	+204366	52434	+933
Ladakh	25348	+1314	1250	+203	23875	+1110	223	+1
Lakshadweep	10944	+285	280	+59	10612	+225	52	+1
Madhya Pradesh	933693	+71664	71203	+21462	851893	+50158	10597	+44
Maharashtra	7630606	+258849	291247	+28893	7197001	+229569	142358	+387
Manipur	131704	+3025	3760	+1376	125908	+1630	2036	+19
Meghalaya	89841	+2437	2415	+786	85917	+1636	1509	+15
Mizoram	167725	+10472	13721	+4374	153413	+6083	591	+15
Nagaland	34059	+800	850	+281	32500	+514	709	+5
Odisha	1231169	+53707	59223	-20705	1163396	+74363	8550	+49
Puducherry	157698	+12356	15751	+2698	140031	+9639	1916	+19
Punjab	732135	+39609	36941	-10459	678065	+49821	17129	+247
Rajasthan	1171429	+87346	87268	+9169	1074980	+78040	9181	+137
Sikkim	37651	+1553	1622	-817	35602	+2360	427	+10



For citation: Centre for Infectious Disease Epidemiology and Research-NUS. COVID-19 Situation Report 500. 28 January 2022

Tamil Nadu	3252751	+209955	213534	+34329	3001805	+175326	37412	+300
Telangana	751099	+28696	39520	+12887	707498	+15795	4081	+14
Tripura	99804	+3382	6631	-1145	92284	+4498	889	+29
Uttarakhand	412701	+25750	31322	+7067	373865	+18629	7514	+54
Uttar Pradesh	1989095	+88638	72393	-24936	1893577	+113449	23125	+125
West Bengal	1982862	+42942	55725	-89084	1906656	+131775	20481	+251
Total	40622709	+2056682	2105611	+86786	38024771	+1965965	492327	+3931

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



iv. Travel Bans/Advisories & Quarantine Orders

- [1] **Austria** Starting from January 24, travellers from the United Kingdom, Demark, Netherlands and Norway are subjected to milder entry for entry into Austria. Citizens will no longer be required to quarantine if they have received the full immunization course or recovered fully from the virus. Proof of a negative test conducted not more than 48 hours upon arrival in Austria is required.
- [2] **Denmark** Starting February 1, travellers to Denmark will no longer be required to undergo a postarrival test and mandatory quarantine.
- [3] **Europe** With effect from February 1, residents of member nations will be able to move freely within the bloc if they have proof of full vaccination, proof of recent recovery from COVID-19 or a negative result from a test conducted within 72 hours. Separately, EU members can still place further restrictions such as testing and quarantine on visitors.
- [4] France has shifted 12 countries from the red list to the orange list, subjecting them to less stringent entry rules. Arrivals from countries on the orange list do not have to self-isolate if they hold valid vaccination certificates and will need to present a negative test taken within 48 hours before arrival in France. The 12 countries are Ukraine, Moldova, Russia, Mozambique, Botswana, Lesotho, Eswatini, South Africa, Zambia, Zimbabwe, Malawi and Namibia. Conversely, Australia and Argentina have been moved from the green list to the orange list in view of their worsening COVID-19 situations.
- [5] Hong Kong Starting February 5, Hong Kong will shorten the quarantine requirement for inbound travellers by a week. Travellers will be required to stay in a hotel for 14 days before undertaking 7 days of self-monitoring, where travellers are allowed to travel freely on the condition of completing compulsory testing on 2 days.
- [6] **Italy** will ease coronavirus restrictions for EU arrivals by removing the 5-day quarantine and coronavirus test requirement from February 1. Inbound EU travellers will only be required to show proof of vaccination, recent recovery or a negative test.
- [7] **Norway** With effect from January 26, Norway has scrapped mandatory quarantine requirements for unvaccinated inbound travellers. All unvaccinated and unrecovered travellers are allowed to enter Norway without quarantine, albeit subject to a pre-entry test.
- [8] United Arab Emirates Starting January 29, United Arab Emirates will lift the entry ban on arrivals from Kenya, Tanzania, Ethiopia, Nigeria, the Republic of Congo, the Republic of South Africa, Botswana, Eswatini, Lesotho, Mozambique, Namibia, and Zimbabwe. Travellers from these countries will now be required to obtain a negative PCR test conducted 48 hours prior to departure and a negative PCR test at the departure airport. Those travelling from Uganda, Ghana and Rwanda will be additionally tested upon arrival.
- [9] United Kingdom On January 25, Britain scrapped all coronavirus testing requirements for fully vaccinated travellers. Britain currently requires all fully vaccinated inbound travellers to take a rapid test within 2 days of arriving in the UK. Unvaccinated travellers will have to continue taking tests before and after travelling to Britain, but will no longer be required to quarantine. The changes will come into effect on February 11.

[10, 11] United States

- Starting from January 23, all Canadians entering the US via the land border are required to be fully vaccinated against COVID-19. Vaccinations authorized in the US, Canada, or under the Emergency Use Listing by World Health Organization are accepted. Requirements apply to both essential and non-essential travellers, including commercial truckers, with some exemptions. This aligns the land border rules with the air travel rules, which have been in place since November.
- The Centers for Disease Control and Prevention has issued level 4 travel advisories to 15 countries and territories, including Costa Rica, the United Arab Emirates, and 5 Caribbean destinations.

v. Lockdowns

- [1] Austria Starting January 31, Austria will lift the lockdown implemented on unvaccinated individuals. The lifting of restrictions means that unvaccinated people will be allowed to leave their homes freely and enter essential shops. Most activities remain off-limits. Wearing of FFP2 face masks in most public spaces will continue to apply.
- [2] **China** On January 24, the lockdown in Xi'an that was implemented since December 22 came to an end.
- [3] **Denmark** Starting February 1, domestic restrictions such as wearing a face mask, presenting vaccination certificate to enter leisure facilities, curfew will be lifted in Denmark. This comes as the country no longer classifies the coronavirus as a socially critical disease.
- [4] **Hong Kong** On January 25, Hong Kong expanded a partial lockdown in a housing complex and tightened pandemic restrictions, which sees the closure of schools and prohibition of in-house dining after 6pm.

[5,6] Kiribati

- On January 23, Kiribati implemented a lockdown after 36 out of 54 passengers on a flight from Fiji tests positive for COVID-19. This marks the first pandemic lockdown in Kiribati, which just reopened its borders to international travellers earlier this month for the first time since the start of the pandemic. It is unclear how long the 24-hour lockdown that went into effect on January 23 will last. Residents are only allowed to leave their homes for essential services such as hospitals, police departments, grocery stores and banks. Apart from a restriction in operating hours for essential services, public transportation is also halted; social gatherings are banned; and travel between islands is prohibited.
 - The lockdown in South Tarawa, Betio and Buota has been extended for 7 days as of January 28.
- [7] **Netherlands** has reopened bars, restaurants, museums, theatres and other venues after more than a month of closure. However, opening hours are limited to 10pm, while professional sports teams can only fill stadiums to a third of their normal capacities.



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- [8] **New Zealand** With effect from January 24, New Zealand will enter the red-setting, which includes heightened measures such as mandatory mask wearing and limits on gathering. Businesses are allowed to remain open, and people are still allowed to move about freely.
- [9] **Rwanda** has tightened restrictions on unvaccinated individuals; vaccine mandates have been issued for public spaces and events, in addition to crowded and specific places like markets, places of worship, restaurants and bars announced previously.

[10-12] Samoa

- On January 23, Samoa implemented a 48-hour COVID-19 lockdown after 15 out of 73 passengers who arrived on a flight from Brisbane tested positive. The lockdown mandates that all residents except essential workers stay at home. Businesses, schools, restaurants are closed, travel are prohibited and mass gatherings are banned.
- The nationwide lockdown was subsequently extended for another 72 hours after 5 frontline workers tending to the cases tested positive. Some services, including petrol and cashpower outlets, banks, money transfer and chemists, were opened temporarily on Monday, while some restrictions were eased.
- The lockdown in Samoa has been further extended for 24 hours until Friday.

vi. Military Surveillance

Australia [1]

• As of January 25, nearly two dozen sailors on an Australian military relief ship have tested positive for the coronavirus. The ship was on a mission to deliver aid to Tonga following the recent volcano eruption.

South Korea [2-6]

- On January 24, South Korea's military reported 24 cases of COVID-19, including 22 breakthrough infections. This raised the total caseload to 3,942, including 2,098 breakthrough cases. Of the new cases, 15 were from the Army, 4 were from the Marine Corps, 1 was from the Navy, 4 were from units under the defense ministry. 384 military personnel are under treatment.
- On January 25, South Korea's military reported 78 cases of COVID-19, including 67 breakthrough infections. This raised the total caseload to 4,020, including 2,165 breakthrough cases. Of the new cases, 63 were from the Army, 7 were from the Marine Corps, 4 were from the Air Force and 4 were from units under the defense ministry. 406 military personnel are under treatment.
- On January 26, South Korea's military reported 160 cases of COVID-19, including 147 breakthrough infections. This raised the total caseload to 4,180, including 2,312 breakthrough cases. Of the new cases, 101 were from the Army, 5 were from the Marine Corps, 15 were from the Navy, 28 were from the Air Force and 11 were from units under the defense ministry. 547 military personnel are under treatment.
- On January 27, South Korea's military reported 104 cases of COVID-19, including 101 breakthrough infections. This raised the total caseload to 4,284, including 2,413 breakthrough cases. Of the new cases, 79 were from the Army, 2 were from the Marine Corps, 15 were from the Air Force and 2 were from units under the defense ministry. 635 military personnel are under treatment.
- On January 28, South Korea's military reported 95 cases of COVID-19, including 90 breakthrough infections. This raised the total caseload to 4,378, including 2,503 breakthrough cases. Of the new cases, 72 were from the Army, 2 were from the Marine Corps, 2 were from the Navy, 12 were from the Air Force and 5 were from units under the defense ministry. 658military personnel are under treatment.

United States [7, 8]

- The commander of Special Operations Command in the United States military tested positive for the coronavirus on January 23.
- As of January 28, the United States military recorded 350,452 COVID-19 cases, including 298,296 recoveries, 2,489 hospitalisations and 91 deaths. The distribution of cases are as follows Army (115,542), Marine Corps (36,513), Navy (77,193), Air Force (67,486), National Guard (51,222), and other agencies (2,496). A total of 1,623,797 service members have been fully vaccinated Army (593,756), Marine Corps (194,335), Navy (384,263), Air Force (451,443); 339,369 service members have received one dose of the vaccine Army (272,777), Marine Corps (6,447), Navy (8,346) and Air Force (51,799).

United States Forces Japan [9, 10]

- On January 25, 202 cases were reported across 16 installations. This is a slight decline compared to 246 infections, excluding 15 unconfirmed cases reported on January 24.
- On January 27, 327 new infections, including 16 pending confirmation, were detected in the last 24 hours.

United States Forces Korea [11]

• In the week ending January 24, the US military population in Korea reported 379 new COVID-19 cases. This is a decline compared to 662 cases reported in the previous week.

vii. WHO Guidance & Other Protocols

No updates were published by WHO from 22 – 28 January 2022.

viii. CDC Guidance & Protocols

US CDC

No updates were published by the US CDC from 22 – 28 January 2022.

EU CDC

The following update was published by the EU CDC from 22 – 28 January 2022:

 Assessment of the further spread and potential impact of the SARS-CoV-2 Omicron variant of concern in the EU/EEA, 19th update Available at: <u>https://www.ecdc.europa.eu/en/publications-data/covid-19-omicron-risk-</u> assessment-further-emergence-and-potential-impact

ix. Vaccines/Therapeutics Development

Saw Swee Hock

School of Public Health

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/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] Pfizer and BioNTech has begun a clinical trial on a new version of their vaccine specially designed for the Omicron variant. The trial intends to enrol more than 1,400 participants. The Omicron-based vaccine will be tested as a three-shot regimen in unvaccinated people and as a booster shot for people who have received two doses of the original vaccine. Separately, the companies are also testing a fourth dose of the current vaccine against a fourth dose of the Omicron-based vaccine in people who received all three doses of the original vaccine 3-6 months earlier.
- [2] Moderna has begun clinical trials of its Omicron-specific COVID-19 booster. The study will test mRNA-1273.529 in 600 adults who have received the existing vaccine; half of whom have received 2 doses and the other half would have received 3 doses including the first booster.
- [3] Australia Novavax's COVID-19 vaccine, Nuvaxovid, will be rolled out in Australia from February 21. Australia's drug regulator recommends its administration in people aged 18 or older, in 2 doses spaced at least 2 weeks apart. This marks the countries fourth approved COVID-19 vaccine after AstraZeneca, Pfizer-BioNTech and Moderna.
- [4] **India**'s drug regulator has approved the market authorization of Covaxin and Covishield under certain conditions. The upgrade from restricted use in emergency situations to market approval with conditions in the adult population was recommended by the Central Drug Standard Control Organization.

[5,6] Israel

- On January 23, the Israel Ministry of Health reported that a fourth dose of COVID-19 vaccine given to people over 60 year old made them three times more resistant to serious illness than those who have only been vaccinated thrice in the same age group. The fourth dose also made them twice as resistant to infection.
- Israel has broadened eligibility for the fourth dose of COVID-19 vaccine. Adults under 60 years old with underlying medical conditions, their caretakers, those aged 18 and above with significant exposure risk will now be eligible for the second booster.
- [7] Japan The Japanese health ministry has approved free COVID-19 vaccination for children aged 5 to 11. Inoculations will begin as early as March. While people aged 12 and above, expect expectant mothers, are obliged to make an effort to receive COVID-19 vaccine, it is unsure if such an obligation would be imposed on guardians to vaccinate their children aged 5 to 11.
- [8] **Philippines** Starting February 4, the Philippines government will begin vaccinating 5 to 11 year old children with a specially formulated Pfizer vaccine.



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- [9] **Singapore** Starting February, Singapore will extend COVID-19 booster vaccination to adolescents aged 12 to 17 years old.
- [10] Thailand is ramping up the rollup of the fourth COVID-19 vaccine in the tourism dependent regions. AstraZeneca and Pfizer vaccines are offered to those who have received their third dose at least 3 months ago in Bangkok, Phuket, Krabi and seven other provinces.

Therapeutics

- [11] **Egypt** On January 24, Egypt approved Merck's Molnupiravir for emergency use. The drug will be locally produced by 5 companies at least.
- [12] European Union The European Medicines Agency has recommended the conditional marketing authorization of Pfizer's Paxlovid for treating COVID-19 adult patients who do not require supplemental oxygen but are at risk of progression to severe disease. This will be the first oral antiviral medicine recommended in the European Union for treating COVID-19.
- [13] United Kingdom British scientists will begin a trial to test Merck and Ridgeback Biotherapeutics' antiviral pill 800mg doses of molnupiravir will be given twice daily for five days in addition to standard care for adult patients hospitalized due to COVID-19. This addition of molnupiravir to the RECOVERY trial allows study of the drug individually and in combination with other COVID-19 treatments.

[14, 15] United States

- The US Food and Drug Administration has revised authorizations for two monoclonal antibody treatments – bamlanivimab and etesevimab (administered together) and REGEN-COV (casirivimab and imdevimab), limiting their use to when the patient is likely to be infected with or exposed to variants that are susceptible to these treatment.
- The US Food and Drug Administration has approved Remdesivir for treatment of COVID-19 patients who are not hospitalized, but are at high risk for disease progression, including hospitalization or death. The pediatric emergency use authorization (EUA) was also expanded to include the treatment of non-hospitalized pediatric patients at high risk of disease progression.



Vaccine Approval Status

Table 6: Number of approving countries per vaccine as of 28 January 2022

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Source: <u>https://covid19.trackvaccines.org/vaccines/</u>

Adverse Reactions & Effects

No updates were published from 22 – 28 January 2022.

x. Scientific Publications with Epidemiology and Clinical Focus

<u>Clinical, anamnestic, and sociodemographic predictors of positive SARS-CoV-2 testing in children: A</u> <u>cross sectional study in a tertiary hospital in Italy [1]</u>

Objectives: We aimed to identify clinical, anamnestic, and sociodemographic characteristics associated with a positive swab for SARS-CoV2, and to provide a predictive score to identify at risk population in children aged 2-14 years attending school and tested for clinical symptoms of COVID-19.

Design: Cross sectional study.

Setting: Outpatient clinic of the IRCCS Burlo Garofolo, a maternal and child health tertiary care hospital and research centre in Italy.

Data collection and analysis: Data were collected through a predefined form, filled out by parents, and gathered information on sociodemographic characteristics, and specific symptoms, which were analysed to determine their association with a positive SARS-CoV-2 swab. The regression coefficients of the variables included in the multivariate analysis were further used in the calculation of a predictive score of the positive or negative test.

Results: Between September 20th and December 23rd 2020, from 1484 children included in the study, 127 (8.6%) tested positive. In the multivariate analysis, the variables retained by the model were the presence of contact with a cohabiting, non-cohabiting or unspecified symptomatic case (respectively OR 37.2, 95% CI 20.1-68.7; 5.1, 95% CI 2.7-9.6; 15.6, 95% CI 7.3-33.2); female sex (OR 1.49, 95% CI 1.0-2.3); age (6-10 years old: OR 3.2, 95% CI 1.7-6.1 p<0.001; >10 years old: OR 4.8, 95% CI 2.7-8.8 p<0.001); fever (OR 3.9, 95% CI 2.3-6.4); chills (OR 1.9, 95% CI 1.1-3.3); headache (OR 1.45, 95% CI 0.9-2.4); ageusia (OR 1.3, 95% CI 0.5-4.0); sore throat (OR 0.48, 95% CI 0.3-0.8); earache (OR 0.4, 95% CI 0.1-1.3); rhinorrhoea (OR 0.8, 95% CI 0.5-1.3); and diarrhoea (OR 0.52, 95% CI 0.2-1.1). The predictive score based on these variables generated 93% sensitivity and 99% negative predictive value.

Conclusions: The timely identification of SARS-CoV2 cases among children is useful to reduce the dissemination of the disease and its related burden. The predictive score may be adopted in a public health perspective to rapidly identify at risk children.

Overall and cause-specific hospitalisation and death after COVID-19 hospitalisation in England: A cohort study using linked primary care, secondary care, and death registration data in the OpenSAFELY platform [2]

Background: There is concern about medium to long-term adverse outcomes following acute Coronavirus Disease 2019 (COVID-19), but little relevant evidence exists. We aimed to investigate whether risks of hospital admission and death, overall and by specific cause, are raised following discharge from a COVID-19 hospitalisation.

Methods and findings: With the approval of NHS-England, we conducted a cohort study, using linked primary care and hospital data in OpenSAFELY to compare risks of hospital admission and death, overall and by specific cause, between people discharged from COVID-19 hospitalisation (February to December 2020) and surviving at least 1 week, and (i) demographically matched controls from the 2019 general population; and (ii) people discharged from influenza hospitalisation in 2017 to 2019. We used Cox regression adjusted for age, sex, ethnicity, obesity, smoking status, deprivation, and comorbidities considered potential risk factors for severe COVID-19 outcomes. We included 24,673 postdischarge COVID-19 patients, 123,362 general population controls, and 16,058 influenza controls, followed for ≤315 days. COVID-19 patients had median age of 66 years, 13,733 (56%) were male, and 19,061 (77%) were of white ethnicity. Overall risk of hospitalisation or death (30,968 events) was higher in the COVID-19 group than general population controls (fully adjusted hazard ratio [aHR] 2.22, 2.14 to 2.30, p < 0.001) but slightly lower than the influenza group (aHR 0.95, 0.91 to 0.98, p = 0.004). All-cause mortality (7,439 events) was highest in the COVID-19 group (aHR 4.82, 4.48 to 5.19 versus general population controls [p < 0.001] and 1.74, 1.61 to 1.88 versus influenza controls [p < 0.001]). Risks for cause-specific outcomes were higher in COVID-19 survivors than in general population controls and largely similar or lower in COVID-19 compared with influenza patients. However, COVID-19 patients were more likely than influenza patients to be readmitted or die due to their initial infection or other lower respiratory tract infection (aHR 1.37, 1.22 to 1.54, p < 0.001) and to experience mental health or cognitive-related admission or death (aHR 1.37, 1.02 to 1.84, p = 0.039); in particular, COVID-19 survivors with preexisting dementia had higher risk of dementia hospitalisation or death (age- and sex-adjusted HR 2.47, 1.37 to 4.44, p = 0.002). Limitations of our study were that reasons for hospitalisation or death may have been misclassified in some cases due to inconsistent use of codes, and we did not have data to distinguish COVID-19 variants.

Conclusions: In this study, we observed that people discharged from a COVID-19 hospital admission had markedly higher risks for rehospitalisation and death than the general population, suggesting a substantial extra burden on healthcare. Most risks were similar to those observed after influenza hospitalisations, but COVID-19 patients had higher risks of all-cause mortality, readmission or death due to the initial infection, and dementia death, highlighting the importance of postdischarge monitoring.

Racial, ethnic and socioeconomic disparities in SARS-CoV-2 infection amongst children [3]

Background: COVID-19 disproportionately affects racial and ethnic minority populations, but comparatively few epidemiologic studies have been performed on children as compared to adults.

Objectives: To characterise factors associated with SARS-CoV-2 infections amongst children from Chicago, Illinois, USA.

Methods: A test-negative case-control study of children tested for SARS-CoV-2 (0-18 years) at three medical centres of the Rush University System for Health between 12 March and 7 December 2020 was conducted. Of 8462 children, 1,302 tested positive by real-time PCR or rapid (NAAT) testing. Infection with SARS-CoV-2 was analysed as the outcome variable; effects of predictors were assessed by logistic regression analysis. A Paediatric Risk Score Index with a concordance index of 72% of accuracy was created to predict SARS-CoV-2 infection.

Results: The median age of cases was 13 years. On multivariable analysis, factors associated with SARS-CoV-2 infection were being Hispanic/Latinx (odds ratio [OR] 2.45, 95% CI 1.99, 3.03); Black/African-American (OR 1.31, 95% CI 1.03, 1.66); overweight/obese (OR 1.27, 95% CI 1.02, 1.58); older age, 10-14 years (OR 1.70, 95% CI 1.39, 2.08), 15-18 years (OR 2.06, 95% CI 1.71, 2.47); from households with income <\$50,000 (OR 1.36, 95% CI 1.17, 1.60); or residing in predominantly minority neighbourhoods (OR 1.45, 95% CI 1.17, 1.80). Infections were higher during the second "fall" wave (5 October 2020 onward) compared with the first "spring" wave (OR 2.30, 95% CI 2.01, 2.63). Within Chicago, racial/ethnic minority neighbourhoods had striking positivity rates, as high as 39% in majority Hispanic/Latinx West Lawn neighbourhood. In suburban Chicago, highest positivity rates (20%-28%) were in zip codes within Hispanic/Latinx communities.

Conclusions: Infection with SARS-CoV-2 is more likely amongst children of Hispanic/Latinx ethnicity, Black/African-American race, aged 10-18 years, who are overweight/obese, from lower income households, and from minority neighbourhoods. Future studies should focus on the prevention of COVID-19 infection in children of highest risk.

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NIL

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Acknowledgement:

Dr. Pang Junxiong, Vincent

Ms Chua Ee Yong Pearleen

Ms Chua Hui Lan

Ms Gwee Xiao Wei Sylvia

Ms Shah Shimoni Urvish

Ms Wang Min Xian

Any queries? Email Sylvia Gwee @ ephsgxw@nus.edu.sg

Centre for Infectious Disease Epidemiology and Research

Saw Swee Hock School of Public Health National University of Singapore Tahir Foundation Building 12 Science Drive 2 #10-01 Singapore 117549

For more information, please visit:

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