

Jan | 7

COVID-19

Situation Report 497

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.**

ii. Global Risk Assessment

Table 1. Risk assessment of COVID-19 by WHO regions (Updated as of 7 January 2022, 1200H SGT)

Environmental Risk	Transmissibility	Severity of Disease	Availability of Treatment/Vaccination [#]	Overall Risk [%]
Global (n=198 countries)				
<p>High</p> <p>Globally, 191 (96.5%) countries (excluding territories*) have reported the outbreak.</p> <p>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 (15 countries), EURO (49 countries), EMRO (14 countries), Americas (30 countries), and Africa (28 countries).</p> <p>Only 4 (2%) countries/territories have no reported restrictions on inbound arrivals, while 152 (82%) countries/territories have partially reopened their borders – require arrivals to produce a negative COVID-19 test result and/or undergo self-quarantine upon arrival. 43 (23%) countries/territories are totally closed to international arrivals. [1]</p> <p>On October 7, the Centers for Disease Control and Prevention (CDC) confirmed airborne transmission of SARS-CoV-2. [2]</p> <p>The U.S. CDC has revised its guidance on COVID-19 quarantine period from 14 days to 7-10 days, based on 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]</p> <p>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]</p>	<p>Based on CDC data, median R_0 is estimated to be 5.8 (95% CI 4.4–7.7), but the estimated effective reproduction number in 178 countries ranged from 0.36 to 5.8.[§]</p>	<p>Case fatality rate is currently at 1.82% globally. Most cases present as flu-like illness.</p>	<p>Limited Coverage</p> <p>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).[§]</p> <p>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]</p> <p>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]</p> <p>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].</p> <p>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]</p> <p>On 4 Aug, the WHO called for a moratorium on COVID-19 vaccine boosters until at least the end of September, to enable that at</p>	<p>High</p>

			<p>least 10% of the population of every country was vaccinated. [28]</p> <p>On 3 Sept, emergency use of the Soberana 2 vaccine was authorized in Cuba for minors between the ages of two and 18. [31]</p> <p>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]</p> <p>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]</p> <p>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]</p>	
Western Pacific Region and South-East Asia Region (n=41 countries)				
<p>Moderate</p> <p>35 (85.4%) countries have reported outbreaks; but only 15 (36.6%) countries are reporting a surge in cases.</p> <p>11 (26.8%) countries have either a constant decreasing change in incidence or no case in the last 14 days.</p> <p>Highest incidence over the past 14 days were reported from Australia, Fiji, Laos, Maldives and Vietnam, and highest case numbers were reported from Australia, India, Philippines, South Korea, and Vietnam.</p> <p>At least 16 countries have closed their borders, 24 countries have opened their borders partially conditionally, and none is allowing free travel.</p>	<p>As of Jan 5, the estimated effective reproduction no. of 25 countries ranged from 0.59-4. ^{\$}</p>	<p>Case fatality rate is 1.54%.</p>	<p>Low Coverage</p> <p>33 countries have commenced vaccination as of 7 January 2022. Coverage was available for the following: i) at least 1 dose was at 51-80% for 19 countries; >80% for 10 countries ii) full vaccination was at 51-80% for 16 countries; >80% for 6 countries.^{&}</p> <p>Indonesia has approved Russian drug Avifavir for emergency use. [22]</p> <p>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]</p> <p>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].</p> <p>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].</p>	<p>High</p>

European Region (n=53 countries)				
<p>High</p> <p>52 (98.1%) countries have reported with outbreaks; 49 (92.5%) countries are reporting a surge in cases.</p> <p>2 (3.8%) countries have either a constant decreasing change in incidence or no case in the last 14 days.</p> <p>Highest incidence over the past 14 days were reported from Andorra, Denmark, Iceland, Ireland and San Marino, and highest case numbers were reported from France, , Italy, Spain, Turkey and United Kingdom.</p> <p>At least 5 countries have closed their borders, 47 countries have opened their borders partially conditionally, and only 1 country is allowing free travel.</p>	<p>As of Jan 5, the estimated effective reproduction no. of 50 countries ranged from 0.36-2.4.^{\$}</p>	<p>Case fatality rate is 1.56%.</p>	<p>Low Coverage</p> <p>53 countries have commenced vaccination as of 7 January 2022. Coverage was available for the following i) at least 1 dose was at 51-80% for 32 countries; >80% for 7 countries; ii) full vaccination was at 51-80% for 31 countries; >80% for 3 countries. ^{&}</p> <p>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]</p> <p>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].</p> <p>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]</p> <p>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]</p> <p>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]</p>	<p>High</p>

Eastern Mediterranean Region (n=22 countries)				
<p>Moderate</p> <p>22 (100%) countries have reported with outbreak; 14 (63.6%) countries are reporting a surge in cases.</p> <p>0 (0%) country has either a constant decreasing change in incidence or no case in the last 14 days.</p> <p>Highest incidence over the past 14 days were reported from Bahrain, Jordan, Lebanon, Qatar, and United Arab Emirates, and highest case numbers were reported from Iran, Jordan, Lebanon, Morocco and United Arab Emirates.</p> <p>At least 4 countries have closed their borders, 17 countries have opened their borders partially conditionally, and only 1 country is allowing free travel.</p>	<p>As of Jan 5, the estimated effective reproduction no. of 22 countries ranged from 0.78-2.3.[§]</p>	<p>Case fatality rate is 1.83%.</p>	<p>Low Coverage</p> <p>21 countries have commenced vaccination as of 7 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 8 countries; >80% for 1 country.^{&}</p> <p>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]</p> <p>As of April, an Israeli firm is using placenta pluristem cells to treat COVID-19 patients on a compassionate use basis. [5]</p> <p>As of June 4, UAE authorised the emergency use of Sotrovimab, a kind of monoclonal antibody drug [25].</p> <p>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]</p> <p>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]</p>	<p>High</p>
Region of the Americas (n=35 countries)				
<p>High</p> <p>35 (100%) countries have reported with outbreak; 30 (85.7%) countries are reporting a surge in cases.</p> <p>0 (0%) country has either a constant decreasing change in incidence or no case in the last 14 days.</p> <p>Highest incidence over the past 14 days were reported from Argentina, Canada, Grenada, Saint Kitts and Nevis, and USA, and highest case numbers were reported from Argentina, Brazil, Canada, Colombia and USA.</p> <p>At least 9 countries have closed their borders, 24 countries have opened their</p>	<p>As of Jan 5, the estimated effective reproduction no. of 35 countries ranged from 0.39-3.1.[§]</p>	<p>Case fatality rate is 2.21%.</p>	<p>Low Coverage</p> <p>35 countries have commenced vaccination as of 7 January 2022. Coverage was available for the following: i) at least 1 dose was at 51-80% for 19 countries; >80% for 4 countries ii) full vaccination was at 51-80% for 14 countries; >80% for 2 countries.^{&}</p> <p>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]</p>	<p>High</p>

<p>borders partially conditionally, and 2 countries are allowing free travel.</p>			<p>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]</p> <p>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]</p> <p>Health Canada has approved bamlanivimab, 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]</p> <p>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]</p> <p>FDA has issued emergency authorisation for convalescent plasma to treat COVID-19. [9]</p> <p>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]</p> <p>As of October 22, remdesivir is the first and only FDA-approved COVID-19 treatment in the U.S. [7].</p> <p>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]</p> <p>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]</p> <p>As of 5 Aug, FDA has expanded the use of antibody cocktail, REGEN-COV, updating its emergency use authorisation (EUA) to</p>
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			<p>include those at high risk of developing severe COVID-19 who have been exposed to the virus. [29]</p> <p>As of Aug 11, Brazil has issued emergency authorisation to Celltrion's regdanvimab for high-risk patients with mild and moderate Covid-19. [30]</p> <p>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]</p>	
African Region (n=47 countries)				
<p>High</p> <p>47 (100%) countries have reported with outbreak; 28 (60.9%) countries are reporting a surge in cases.</p> <p>0 (0%) country has either a constant decreasing change in incidence or no case in the last 14 days.</p> <p>Highest incidence over the past 14 days were reported from Botswana, Cabo Verde, Eswatini, Namibia, and Seychelles, and highest case numbers were reported from Ethiopia, Kenya, Mozambique, South Africa and Zambia.</p> <p>At least 9 countries have closed their borders, 38 countries have opened their borders partially conditionally, and no country is allowing free travel.</p>	<p>As of Jan 5, the estimated effective reproduction no. of 46 countries ranged from 0.48-5.8.[§]</p>	<p>Case fatality rate is 2.13%.</p>	<p>Low Coverage</p> <p>46 countries have commenced vaccination as of 7 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.^{&}</p> <p>Ethiopia has approved the use of Dexamethasone treatment for seriously ill COVID-19 patients. [13]</p>	High

*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.

[§] <https://epiforecasts.io/covid/posts/global/>

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

[&] <https://www.bloomberg.com/graphics/covid-vaccine-tracker-global-distribution/>; 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 7 January 2022, 1200H 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]	R ₀
222	300,840,030	300,736,735	5,490,008	1.82%	1.82%	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

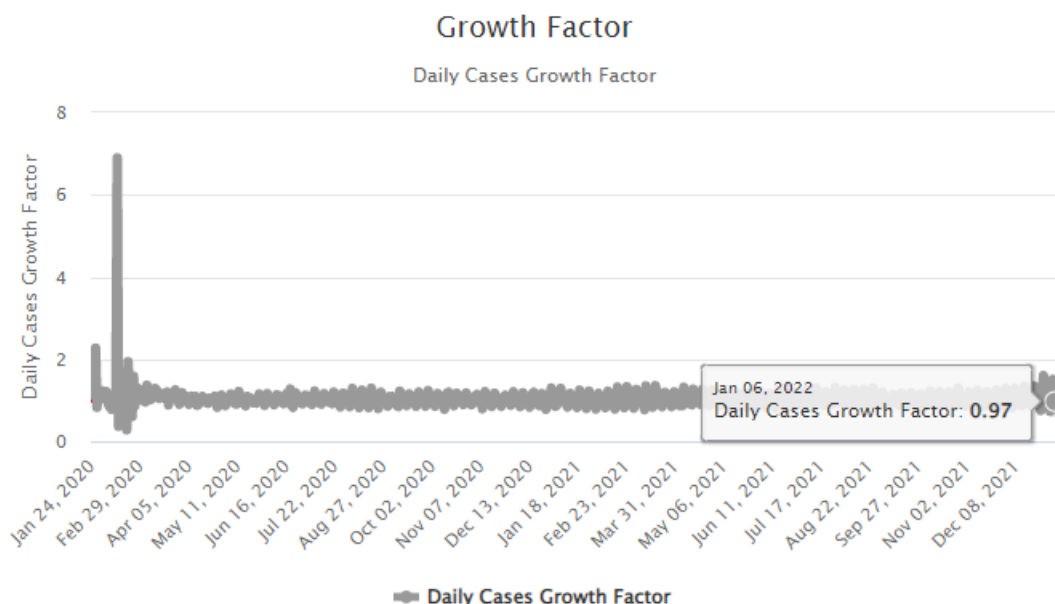
Virus	Incubation Period (Days)	Case Fatality Rate (%)	R ₀
SARS-CoV-2	Median = 5.1 [§] (2-14) or up to 24*	1.82	5.8 (95% CI 4.4–7.7) [^]
SARS-CoV	2-7	9.6	2.0
MERS-CoV	5 (2-14)	34	<1 (higher in health care setting)
Swine Flu	1-4	0.02	1.2-1.6

*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)



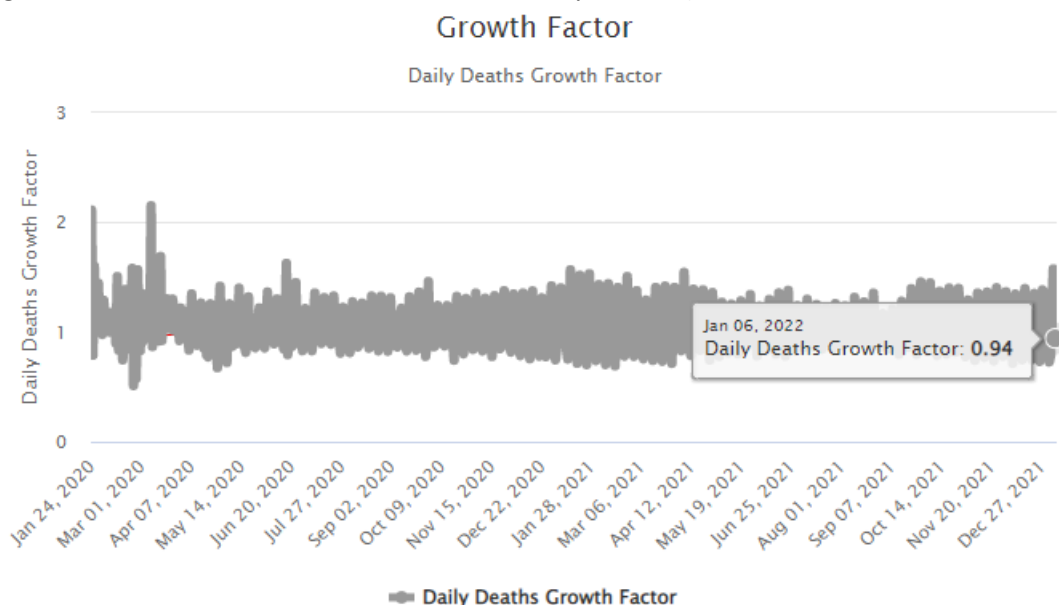
Growth Factor = every day's cases/cases on previous day. A growth factor above 1 indicates an increase, whereas one between 0 and 1 is a sign of decline, with the quantity eventually becoming zero. A growth factor below 1 (or above 1 but trending downward) is a positive sign, whereas a growth factor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

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 1-7 January 2022
(Updated as of 7 January 2022, 1200H SGT)

No.	Country	Total Cases	Change in Cases	Total Deaths	Change in Deaths	Total Recovered	Region
1	USA	59,564,116	+4,311,293	855,843	+10,098	42,089,198	Americas
2	France	11,183,238	+1,442,638	125,013	+1,461	8,393,827	EURO
3	UK	14,015,065	+1,267,015	149,515	+1,094	10,620,728	EURO
4	Italy	6,975,465	+994,037	138,474	+1,227	5,243,412	EURO
5	Spain	6,922,466	+627,721	89,837	+432	5,124,221	EURO
6	Argentina	6,025,303	+418,558	117,386	+240	5,427,191	Americas
7	India	35,226,386	+387,582	483,178	+2,098	34,371,845	SEARO
8	Australia	762,458	+366,888	2,321	+80	351,637	WPRO
9	Turkey	9,787,274	+345,510	83,231	+1,033	9,217,669	EURO
10	Canada	2,437,822	+295,512	30,584	+304	2,030,568	Americas
11	Germany	7,399,003	+256,021	114,207	+1,695	6,626,500	EURO
12	Greece	1,422,020	+251,727	21,185	+477	1,049,718	EURO
13	Portugal	1,539,050	+180,233	19,054	+117	1,272,556	EURO
14	Switzerland	1,448,527	+141,326	12,411	+127	1,068,745	EURO
15	Ireland	908,672	+140,223	5,952	+40	596,774	EURO
16	Netherlands	3,247,900	+131,861	21,041	+149	2,769,789	EURO
17	Vietnam	1,843,563	+128,821	33,644	+1,476	1,464,415	WPRO
18	Denmark	896,566	+126,800	3,333	+77	661,809	EURO
19	Russia	10,601,300	+121,956	313,817	+5,869	9,623,677	EURO
20	Brazil	22,395,322	+118,083	619,730	+706	21,567,845	Americas
21	Belgium	2,206,992	+117,335	28,446	+138	1,840,477	EURO
22	Colombia	5,242,672	+95,633	130,191	+290	5,006,108	Americas
23	Mexico	4,055,095	+85,409	299,933	+648	3,325,558	Americas
24	Poland	4,179,292	+84,684	99,311	+2,896	3,683,571	EURO
25	Israel	1,448,455	+68,402	8,259	+16	1,361,936	EURO
26	Sweden	1,375,267	+60,483	15,326	+55	1,207,521	EURO
27	South Africa	3,504,554	+58,022	92,112	+1,051	3,260,642	Africa
28	Bolivia	641,817	+50,044	19,848	+198	537,477	Americas
29	Philippines	2,888,917	+47,657	51,743	+370	2,780,613	WPRO
30	Finland	295,601	+46,643	1,632	+78	46,000	EURO
31	Czechia	2,510,796	+40,845	36,449	+388	2,372,033	EURO
32	Austria	1,312,939	+37,944	13,823	+122	1,247,752	EURO
33	Norway	428,736	+37,522	1,349	+44	88,952	EURO
34	Croatia	745,544	+35,866	12,764	+271	692,927	EURO
35	Cyprus	192,157	+30,378	650	+14	124,370	EURO
36	Serbia	1,327,455	+30,308	12,850	+162	1,269,630	EURO
37	Lebanon	753,879	+30,239	9,231	+129	672,101	EMRO
38	Thailand	2,252,776	+29,341	21,799	+101	2,188,397	SEARO

39	Ukraine	3,689,291	+28,671	96,896	+1,206	3,500,914	EURO
40	S. Korea	657,508	+26,670	5,932	+369	549,488	WPRO
41	Peru	2,318,543	+26,289	202,904	+251	N/A	Americas
42	Bulgaria	770,001	+25,703	31,375	+485	617,448	EURO
43	Zambia	274,087	+24,894	3,782	+52	236,878	Africa
44	Ethiopia	440,024	+24,581	7,005	+79	359,608	Africa
45	Hungary	1,276,433	+23,378	39,679	+575	1,133,345	EURO
46	Morocco	983,629	+22,571	14,883	+39	946,289	EMRO
47	Malaysia	2,776,699	+22,186	31,628	+166	2,705,292	WPRO
48	Dominican Republic	439,017	+21,749	4,252	+6	409,832	Americas
49	Romania	1,827,867	+20,644	58,940	+226	1,753,835	EURO
50	Uruguay	430,958	+19,300	6,186	+17	402,224	Americas
51	Mozambique	203,241	+19,022	2,065	+69	165,271	Africa
52	Panama	512,402	+18,695	7,449	+22	478,796	Americas
53	UAE	777,584	+18,073	2,170	+8	750,156	EMRO
54	Slovakia	856,685	+17,947	16,871	+273	802,622	EURO
55	Slovenia	478,860	+16,708	5,634	+51	447,463	EURO
56	Georgia	949,176	+16,535	14,082	+324	908,813	EURO
57	Lithuania	532,807	+15,152	7,493	+120	494,703	EURO
58	Montenegro	183,220	+14,892	2,428	+21	161,435	EURO
59	Kenya	306,686	+14,449	5,411	+35	261,067	Africa
60	Saudi Arabia	568,650	+13,233	8,888	+13	544,161	EMRO
61	Ecuador	559,950	+12,764	33,699	+27	443,880	Americas
62	Chile	1,817,300	+12,618	39,207	+111	1,736,005	Americas
63	Jordan	1,074,007	+12,447	12,810	+190	1,035,143	EMRO
64	Tunisia	735,973	+11,293	25,630	+74	697,844	EMRO
65	Uganda	150,301	+11,222	3,325	+34	98,601	Africa
66	Costa Rica	581,394	+10,838	7,370	+17	561,676	Americas
67	Qatar	260,283	+10,496	618	+1	246,784	EMRO
68	Iran	6,203,046	+10,348	131,802	+230	6,047,528	EMRO
69	Botswana	229,855	+10,346	2,475	+31	216,424	Africa
70	Japan	1,743,547	+10,222	18,398	+5	1,713,567	WPRO
71	Réunion	85,960	+9,358	419	+10	72,447	Non
72	Kuwait	425,455	+8,824	2,469	+1	412,749	EMRO
73	Zimbabwe	220,178	+8,450	5,108	+111	191,000	Africa
74	Iceland	35,239	+8,180	39	+2	25,733	EURO
75	Luxembourg	110,298	+7,812	921	+9	96,933	EURO
76	Rwanda	118,342	+7,784	1,367	+18	45,522	Africa
77	Angola	87,625	+7,754	1,799	+35	70,266	Africa
78	Latvia	283,149	+7,632	4,625	+64	265,669	EURO
79	Ivory Coast	75,715	+7,569	730	+18	63,708	Africa
80	Estonia	247,863	+7,529	1,945	+17	227,373	EURO
81	Belarus	704,907	+7,307	5,669	+108	697,953	EURO
82	Malta	58,275	+7,205	484	+8	42,314	EURO
83	Bosnia and Herzegovina	297,333	+6,862	13,568	+140	192,218	EURO

84	Ghana	148,079	+6,784	1,313	+26	133,190	Africa
85	Cabo Verde	47,376	+6,638	358	+7	41,525	Africa
86	Bahrain	287,939	+6,533	1,395	+1	278,737	EMRO
87	North Macedonia	230,265	+5,758	8,002	+49	214,054	EURO
88	Egypt	390,294	+5,566	21,882	+155	324,425	EMRO
89	Paraguay	472,673	+5,551	16,658	+33	448,747	Americas
90	Aruba	25,254	+5,535	181	0	20,802	Non
91	Albania	214,941	+5,425	3,233	+18	202,386	EURO
92	French Guiana	53,810	+5,411	342	+3	11,254	Non
93	DRC	80,175	+5,382	1,225	+20	50,930	Africa
94	Curaçao	25,988	+5,278	191	+2	19,071	Non
95	Cuba	970,567	+4,996	8,325	+3	958,382	Americas
96	Bangladesh	1,589,947	+4,920	28,097	+27	1,550,364	SEARO
97	Channel Islands	31,704	+4,905	115	+2	25,060	Non
98	Laos	114,787	+4,733	409	+49	7,339	WPRO
99	Burundi	32,076	+4,710	38	0	773	Africa
100	Nigeria	246,195	+4,682	3,066	+36	217,509	Africa
101	Mauritania	45,825	+4,671	880	+17	39,529	Africa
102	Jamaica	98,194	+4,603	2,486	+16	66,236	Americas
103	Pakistan	1,299,848	+4,472	28,955	+28	1,257,847	EMRO
104	Namibia	151,000	+4,280	3,686	+70	134,317	Africa
105	Malawi	78,405	+4,204	2,400	+45	61,495	Africa
106	Guatemala	631,730	+4,168	16,114	+8	609,211	Americas
107	Singapore	283,214	+4,153	835	+8	277,759	WPRO
108	Libya	392,276	+4,093	5,767	+71	379,111	EMRO
109	Trinidad and Tobago	95,096	+3,776	2,992	+142	75,804	Americas
110	Suriname	56,041	+3,772	1,195	+6	49,099	Americas
111	Togo	33,031	+3,615	252	+6	26,540	Africa
112	Guadeloupe	59,355	+3,320	751	+1	2,250	Non
113	Sri Lanka	590,063	+3,317	15,083	+121	561,557	SEARO
114	Azerbaijan	619,502	+3,150	8,422	+76	603,906	EURO
115	Moldova	378,904	+3,124	10,339	+649	363,767	EURO
116	Mongolia	392,430	+3,069	2,068	+9	313,256	WPRO
117	Guyana	42,385	+2,990	1,064	+12	37,866	Americas
118	Mali	23,600	+2,930	670	+12	19,730	Africa
119	Algeria	220,825	+2,788	6,318	+47	151,604	Africa
120	Belize	35,206	+2,718	605	+7	30,856	Americas
121	Bahamas	26,701	+2,432	717	+1	21,964	Americas
122	Iraq	2,095,848	+2,412	24,194	+40	2,066,713	EMRO
123	Senegal	77,272	+2,402	1,892	+2	73,365	Africa
124	Mayotte	24,671	+2,402	186	+1	2,964	Non
125	Fiji	55,649	+2,317	704	+6	51,307	WPRO
126	Barbados	30,597	+2,287	264	+4	28,146	Americas
127	Nepal	830,480	+2,273	11,602	+12	813,447	SEARO
128	Seychelles	26,968	+2,180	134	0	24,347	Africa
129	Kazakhstan	990,039	+2,173	13,043	+31	961,806	EURO

130	Andorra	25,289	+2,167	141	+1	21,511	EURO
131	Madagascar	52,434	+2,155	1,067	+40	44,708	Africa
132	Indonesia	4,264,669	+2,129	144,116	+28	4,115,358	SEARO
133	Guinea	33,700	+2,059	397	+6	30,633	Africa
134	Palestine	441,224	+1,729	4,698	+36	433,130	EMRO
135	Venezuela	446,026	+1,615	5,345	+21	435,794	Americas
136	Lesotho	29,999	+1,591	673	+8	16,313	Africa
137	Gabon	42,640	+1,567	290	+2	37,932	Africa
138	Martinique	50,005	+1,532	788	+9	104	Non
139	Maldives	97,050	+1,510	264	+2	93,865	SEARO
140	Honduras	380,883	+1,341	10,442	+8	126,510	Americas
141	Oman	306,755	+1,266	4,117	+1	300,666	EMRO
142	Tanzania	30,564	+1,258	740	+3	N/A	Africa
143	China	103,295	+1,212	4,636	0	95,300	WPRO
144	Grenada	7,377	+1,196	200	0	5,730	Americas
145	Eswatini	67,021	+1,189	1,326	+27	62,684	Africa
146	Congo	21,277	+1,188	369	+2	18,825	Africa
147	Faeroe Islands	6,855	+1,091	15	+1	5,533	Non
148	Burkina Faso	18,637	+1,005	333	+15	17,150	Africa
149	Myanmar	531,624	+979	19,284	+19	509,600	SEARO
150	Gibraltar	9,459	+926	100	0	8,049	Non
151	Sudan	47,443	+925	3,340	+9	38,714	EMRO
152	Cayman Islands	9,720	+902	12	+1	5,237	Non
153	Saint Martin	5,148	+898	59	+1	1,399	Non
154	Sint Maarten	5,945	+891	75	0	4,878	Non
155	Comoros	7,405	+890	158	+1	5,650	Africa
156	San Marino	8,487	+832	102	+4	7,263	EURO
157	British Virgin Islands	4,207	+810	40	+1	N/A	Non
158	Greenland	3,404	+794	1	0	2,491	Non
159	Saint Lucia	14,232	+759	305	+10	13,293	Americas
160	Saint Kitts and Nevis	3,666	+748	28	0	2,871	Americas
161	Somalia	24,261	+729	1,335	+2	13,182	EMRO
162	Caribbean Netherlands	4,081	+713	23	0	3,313	Non
163	South Sudan	15,937	+695	136	+1	12,934	Africa
164	Gambia	10,792	+656	343	+1	9,798	Africa
165	Kyrgyzstan	185,237	+604	2,811	+11	180,108	EURO
166	Uzbekistan	199,507	+604	1,485	0	196,758	EURO
167	Benin	25,522	+587	161	0	24,823	Africa
168	Liberia	6,851	+573	287	0	5,747	Africa
169	Armenia	345,389	+563	7,993	+25	332,458	EURO
170	Bermuda	6,936	+516	110	0	5,914	Non
171	Monaco	5,593	+508	42	+4	5,037	EURO
172	Chad	6,183	+482	184	+3	4,874	Africa
173	Turks and Caicos	3,755	+472	26	0	3,356	Non
174	St. Barth	2,363	+468	6	0	N/A	Non

175	Mauritius	23,886	+465	762	0	22,130	Africa
176	Antigua and Barbuda	4,715	+432	119	0	4,097	Americas
177	New Zealand	14,525	+407	51	0	13,406	WPRO
178	St. Vincent Grenadines	6,247	+397	84	+3	5,421	Americas
179	Liechtenstein	6,452	+386	71	+2	5,964	Non
180	Sierra Leone	7,352	+369	123	0	N/A	Africa
181	Isle of Man	13,911	+333	68	+1	13,439	Non
182	Dominica	7,137	+323	47	0	6,581	Americas
183	El Salvador	122,063	+322	3,826	+3	113,511	Americas
184	Haiti	26,304	+319	774	+8	23,531	Americas
185	Djibouti	13,948	+316	189	0	13,463	EMRO
186	CAR	12,454	+291	101	0	6,859	Africa
187	Sao Tome and Principe	4,151	+274	61	+4	3,698	Africa
188	Niger	7,590	+259	277	+3	7,003	Africa
189	Eritrea	8,211	+229	79	+4	7,865	Africa
190	Afghanistan	158,275	+219	7,367	+11	145,750	EMRO
191	New Caledonia	12,980	+218	281	0	12,344	Non
192	Taiwan	17,198	+210	850	0	15,936	WPRO
193	Hong Kong	12,832	+201	213	0	12,230	WPRO
194	Syria	50,442	+199	2,918	+25	33,240	EMRO
195	Equatorial Guinea	13,876	+166	175	0	13,424	Africa
196	French Polynesia	46,534	+152	636	0	N/A	Non
197	Guinea-Bissau	6,612	+136	149	0	6,302	Africa
198	Papua New Guinea	36,285	+127	591	+1	35,639	WPRO
199	Anguilla	1,777	+103	6	+1	1,702	Non
200	Brunei	15,532	+62	98	0	15,331	WPRO
201	Cambodia	120,553	+60	3,015	+3	116,982	WPRO
202	Montserrat	90	+44	1	0	44	Non
203	Nicaragua	17,526	+39	213	+1	4,225	Americas
204	Yemen	10,152	+26	1,986	+2	7,043	EMRO
205	Saint Pierre Miquelon	113	+13	0	0	97	Non
206	Timor-Leste	19,844	+11	122	0	19,711	SEARO
207	Bhutan	2,671	+11	3	0	2,654	SEARO
208	Palau	18	+8	0	0	12	WPRO
209	Falkland Islands	84	+1	0	0	N/A	Non
210	Cameroon	109,367	0	1,851	0	106,050	Africa
211	Tajikistan	17,095	0	124	0	16,966	EURO
212	Solomon Islands	24	0	0	0	20	WPRO
213	Western Sahara	10	0	1	0	8	Non
214	Macao	79	0	0	0	77	WPRO
215	Vanuatu	7	0	1	0	6	WPRO
216	Wallis and Futuna	454	0	7	0	438	Non
217	Tonga	1	0	0	0	1	WPRO

218	Diamond Princess	712	0	13	0	699	NA
219	MS Zaandam	9	0	2	0	7	NA
220	Vatican City	27	0	0	0	27	Non
221	Samoa	3	0	0	0	3	WPRO
222	Marshall Islands	4	0	0	0	4	WPRO
223	Saint Helena	2	0	0	0	2	Non
224	Micronesia	1	0	0	0	1	WPRO
	Total	300,840,030	13,948,112	5,490,008	43,693	255,792,949	

Figure 4. Areas with reported confirmed cases of COVID-19 (27 December 2021 – 2 January 2022)

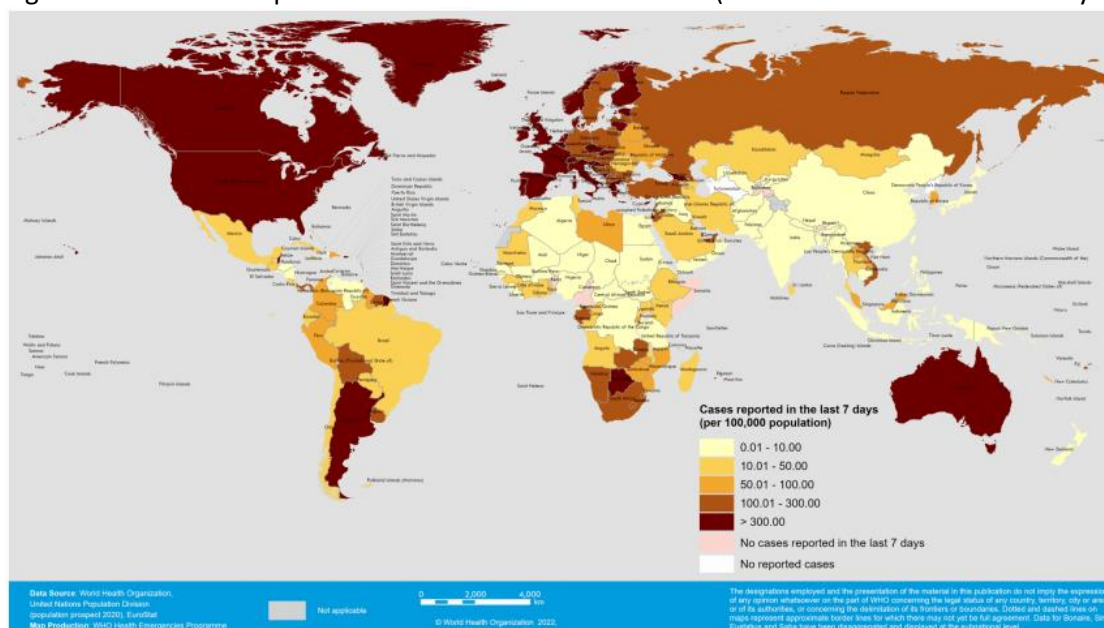
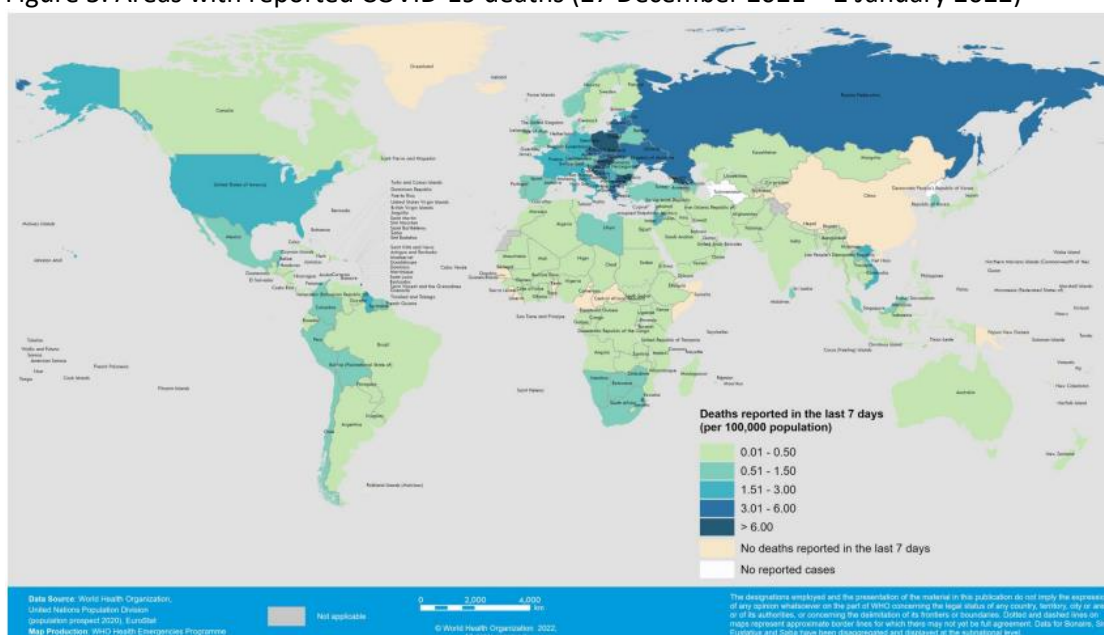


Figure 5. Areas with reported COVID-19 deaths (27 December 2021 – 2 January 2022)



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 7 January 2022, 1200H SGT)

S/N	Location	Cases	Deaths	Prevalence*
		<i>confirmed</i>	<i>confirmed</i>	<i>estimate %</i>
1	United Kingdom	246,780	75	96%
2	Denmark	61,563	18	91%
3	Germany	51,472	15	25%
4	United States	51,022	1	95%
5	Norway	23,446	-	0.65
6	Canada	22,167	-	-
7	Austria	8,843	-	-
8	France	5,591	-	0.49
9	Estonia	3,857	-	0.71
10	Singapore	3,057	-	0.18
11	Australia	2,855	1	-
12	India	2,822	1	-
13	Israel	2,582	-	-
14	Thailand	2,338	-	-
15	South Africa	1980	-	0.98
16	Sweden	1614	-	-
17	Japan	1480	-	0.3
18	Slovenia	1418	-	0.67
19	South Korea	1318	2	-
20	Switzerland	1316	-	61%
21	Belgium	1109	-	0.86
22	Spain	1057	-	-
23	Italy	1026	-	60%
24	Jordan	832	-	-
25	Chile	684	-	-
26	Latvia	644	-	-
27	Netherlands	634	-	51%
28	Argentina	454	-	-
29	Lebanon	433	-	0.65
30	Pakistan	419	-	-
31	Ireland	383	-	0.92
32	Botswana	382	-	-
33	Mexico	374	-	-
34	Brazil	373	-	0.3
35	Finland	363	-	-
36	Kenya	334	-	-
37	Peru	309	-	-
38	Portugal	302	-	0.9
39	Hungary	283	-	78%
40	Liechtenstein	283	-	0.58
41	Indonesia	254	-	-
42	Georgia	253	-	-
43	Turkey	252	-	0.1
44	Malaysia	245	-	-
45	Luxembourg	223	-	-

46	Bermuda	212	-	-
47	Dominican Republic	210	-	-
48	Iceland	200	-	0.9
49	Zambia	197	-	-
50	Iran	194	-	-
51	Romania	183	-	-
52	Cape Verde	175	-	-
53	Gibraltar	168	-	-
54	Lithuania	128	-	0.9
55	Palestinian Territory	126	-	-
56	New Zealand	116	-	-
57	Czechia	114	-	0.5
58	Hong Kong	114	-	-
59	Croatia	113	-	-
60	Poland	107	-	-
61	Russia	103	-	-
62	Cambodia	94	-	-
63	Taiwan	94	-	-
64	Cuba	92	-	-
65	French Guiana	91	-	0.7
66	Cayman Islands	89	-	-
67	Nigeria	85	-	-
68	Colombia	72	-	0.62
69	Ecuador	68	-	-
70	Ghana	66	-	-
71	Cyprus	63	-	-
72	Costa Rica	62	-	-
73	Panama	55	-	-
74	Sri Lanka	52	-	-
75	Zimbabwe	50	-	-
76	Slovakia	47	-	-
77	Uruguay	44	-	-
78	Philippines	43	-	-
79	South Sudan	41	-	-
80	Malta	34	-	-
81	Malawi	34	-	-
82	Greece	33	-	0.89
83	North Macedonia	33	-	-
84	Tunisia	33	-	-
85	Morocco	28	1	-
86	Senegal	26	-	-
87	Uganda	25	-	-
88	Vietnam	25	-	-
89	Republic of the Congo	21	-	-
90	Mauritius	21	-	-
91	Bangladesh	20	-	-
92	Reunion	20	-	0.5
93	Namibia	18	-	-
94	Mozambique	17	-	-

95	Angola	16	-	-
96	Algeria	16	-	-
97	Oman	16	-	-
98	China	15	-	-
99	Trinidad and Tobago	15	-	-
100	Guinea	14	-	-
101	Mauritania	14	-	-
102	Kuwait	13	-	-
103	Bulgaria	12	-	-
104	Montenegro	12	-	-
105	Grenada	11	-	-
106	Bosnia and Herzegovina	10	-	-
107	Maldives	10	-	-
108	Serbia	10	-	-
109	Brunei	9	-	-
110	Venezuela	9	-	-
111	Kosovo	9	-	-
112	Kazakhstan	8	-	-
113	Rwanda	6	-	-
114	Ukraine	6	-	-
115	Iraq	5	-	-
116	Togo	5	-	25%
117	Belarus	4	-	-
118	Myanmar	4	-	-
119	Qatar	4	-	-
120	Egypt	3	-	-
121	Nepal	3	-	-
122	Paraguay	3	-	-
123	Burkina Faso	2	-	-
124	Fiji	2	-	-
125	Saint Kitts and Nevis	2	-	-
126	Libya	2	-	-
127	Saint Martin	2	-	-
128	Seychelles	2	-	-
129	Mayotte	2	-	-
130	United Arab Emirates	1	-	-
131	Albania	1	-	-
132	Aruba	1	-	-
133	Barbados	1	-	-
134	Bahrain	1	-	-
135	Dem. Rep. of the Congo	1	-	0.29
136	Curacao	1	-	-
137	Guadeloupe	1	-	0.46
138	Jamaica	1	-	-
139	Martinique	1	-	-
140	Niger	1	-	-
141	Saudi Arabia	1	-	-
142	Sierra Leone	1	-	-
143	Tanzania	1	-	-

144	Saint Vincent and the Grenadines	1	-	-
	Total (worldwide)	513773	114	

Source: https://newsnodes.com/omicron_tracker

Table 6. COVID-19 cases and deaths reported by states/UT in India between 1-7 January 2022
(Updated as of 7 January 2022, 1200H 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	7848	+128	105	+96	7614	+32	129	0
Andhra Pradesh	2078923	+1944	2266	+1185	2062157	+752	14500	+7
Arunachal Pradesh	55436	+97	103	+82	55051	+13	282	+2
Assam	623332	+2759	4036	+1909	613120	+838	6176	+12
Bihar	732804	+6066	5786	+5452	714920	+612	12098	+2
Chandigarh	66824	+978	979	+850	64765	+127	1080	+1
Chhattisgarh	1014528	+6531	6905	+6308	994017	+217	13606	+6
Dadra and Nagar Haveli and Daman and Diu	10730	+39	38	+38	10688	+1	4	0
Delhi	1489463	+43048	31498	+28417	1432838	+14611	25127	+20
Goa	184766	+4106	4613	+3757	176625	+342	3528	+7
Gujarat	844856	+13778	14346	+11975	820383	+1794	10127	+9
Haryana	781696	+8335	7935	+6865	763694	+1466	10067	+4
Himachal Pradesh	230285	+1515	1655	+1225	224750	+285	3880	+5
Jammu and Kashmir	342768	+1601	2049	+755	336186	+839	4533	+7
Jharkhand	365222	+14236	14255	+12884	345814	+1342	5153	+10
Karnataka	3022603	+16098	22202	+13950	2962043	+2117	38358	+31
Kerala***	5268064	+23563	25855	+5330	5193093	+16558	49116	+1675
Ladakh	22370	+197	269	+65	21880	+130	221	+2
Lakshadweep	10420	+4	4	0	10365	+4	51	0
Madhya Pradesh	796396	+2508	2475	+2115	783386	+391	10535	+2
Maharashtra	6793297	+122543	118549	+96643	6533154	+25824	141594	+76
Manipur	125964	+186	316	+126	123639	+53	2009	+7
Meghalaya	85021	+204	212	+151	83324	+52	1485	+1
Mizoram	143772	+2372	3018	+1360	140200	+1000	554	+12
Nagaland	32247	+56	82	+13	31462	+42	703	+1
Odisha	1059773	+5167	5588	+4034	1045718	+1124	8467	+9
Puducherry	129821	+360	399	+271	127541	+89	1881	0
Punjab	611102	+6508	6687	+6105	587753	+385	16662	+18
Rajasthan	963109	+7090	7268	+6495	946874	+591	8967	+4
Sikkim	32570	+68	86	+25	32075	+43	409	0
Tamil Nadu	2767432	+20542	22828	+15899	2707779	+4583	36825	+60
Telangana	687456	+5869	7847	+4284	675573	+1574	4036	+11
Tripura	85400	+331	359	+264	84212	+67	829	0
Uttarakhand	347098	+2158	1425	+1170	338250	+982	7423	+6
Uttar Pradesh	1719246	+7887	8224	+7579	1688105	+306	22917	+2
West Bengal	1693744	+58710	41101	+32325	1632797	+26296	19846	+89
Total	35226386	+387582	371363	+280002	34371845	+105482	483178	+2098

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

iv. Travel Bans/Advisories & Quarantine Orders

- [1] **Cuba** – From 5 January 2022, all international arrivals will be required to provide a proof of vaccination and a negative PCR test result taken within 72 hours from arrival. In addition, random PCR testing will be implemented at the airport, and arrivals from South Africa, Lesotho, Botswana, Eswatini, Namibia, Zimbabwe, Malawi, and Mozambique must quarantine at designated quarantine hotels for a week upon arrival, at their own expense.
- [2] **Estonia** – From 3 January 2022, arrivals from Holy See and Romania will be able to enter Estonia with no restrictions as these 2 countries are added to Estonia's green list.
- [3] **France** – From 6 January 2022, vaccinated travellers from South Africa will be allowed to enter the territory without quarantine requirements, but unvaccinated arrivals will be still subjected to a 10-day quarantine upon arrival.
- [4] **Hong Kong** – From 8 January to 21 January 2022, all direct and transit flights arriving from Australia, Canada, France, India, Pakistan, the Philippines, the United Kingdom and the United States will be banned from entering the country.
- [5] **Israel**
 - a. From 9 January, Israeli citizens will be allowed to leave quarantine upon receiving a negative coronavirus test result after returning to the country.
 - b. From 6 January 2021, the ban on countries on the red list will be rescinded, allowing all international travel to resume for vaccinated travellers.
- [7] **Macau** – From 8 January 2022, all inbound international flights except those arriving from China, will be banned for 2 weeks.
- [8] **Pakistan** – From 5 January 2022, all travellers aged above 6 years are to present a valid negative PCR test result taken 48 hours prior to departure, and a proof of COVID-19 vaccination prior to travel will be required from travellers aged above 15 years. Inbound air travellers will also be subjected to selective rapid testing, other than all direct flights from Europe (all flights subjected to testing), and KSA, UAE and Qatar (at least 50% flights will be subjected to testing).
- [9] **United Arab Emirates** – Citizens who are unvaccinated or have yet to obtain their booster dose will be banned from travelling from 10 January 2022.
- [10] **United Kingdom** – The Foreign Office updated entry restrictions for Britons travelling to the following countries on 31 December 2021.
 - a. **Australia** – Travellers who fall under the exempt categories, or granted individual exemption will be allowed to enter the country. Exempt categories include Australian citizens, permanent residents of Australia, immediate family members of Australian citizens or permanent residents, and (from 15 December) fully vaccinated holders of eligible visas. Travellers in these categories are still required to provide a negative COVID-19 test result within 72 hours of the trip, before departure.
 - b. **Ghana** – A proof of full vaccination with a vaccine approved by Ghana, with a negative COVID-19 test result taken 72 hours before departure are required. Upon arrival, travellers have to complete additional health declaration forms and another COVID-19 test.
 - c. **Greece** – Arrivals are to complete a Passenger Locator Form before arrival and present a negative PCR (within 72 hours) or rapid antigen test result (within 24 hours) taken

before arrival. Self-isolation will be required for individuals who test positive upon arrival, with the duration varying with vaccination status.

- d. Spain – Arrivals are to show proof of completing the health control form and full vaccination upon arrival, with no quarantine requirements for all arrivals.
- e. United States – All arrivals to present negative COVID-19 test result taken within 24 hours before travel, and all fully vaccinated travellers who were never infected within the past 90 days recommended to take a viral test within 3 to 5 days of arrival. All fully vaccinated travellers are not required to quarantine to arrival, while non-fully vaccinated Britons are banned from entering US unless they have an exception to do so.

[11]**United Kingdom** – From 7 January 2021, pre-departure tests for fully vaccinated passengers will be replaced with post-arrival PCR tests. From 9 January 2022, post-arrival PCR can be replaced with a lateral flow test result booked before travelling, and taken within 2 days upon arrival. Further PCR testing will only be required from individuals with a positive lateral flow result.

[12]**United States (Hawaii)** – From 4 January, all travellers entering Hawaii will not need to fill out a pre-travel health declaration form, and unvaccinated travellers only need to undergo a 5-day quarantine upon arrival, a shortened duration from the original 10-day requirement.

v. Lockdowns

[1-3] Australia

- a. **Western Australia** – From 3 January 2022, Tasmania and the Australian Capital Territory will be shifted into a the list of “high risk areas”, banning travel from those regions except for approved travellers.
- b. **Northern Territory** – From 4 January 2022, pre-arrival PCR tests for interstate travellers will be replaced with a rapid antigen test and online declaration submitted within 2 hours upon arrival.
- c. **Victoria** – From 7 January 2022, the state will reintroduce density limits of one person per 2 square metres at indoor hospitality and entertainment venues, and require visitors to aged care facilities and hospitals to report a negative rapid antigen test result before their visit to these venues. Individuals with a positive result are required to isolate immediately for 7 days and notify the the local health authorities and their contacts.

[4] **Austria** – From 6 Januaray 2022, outdoor mask usage will be mandatory when at least 2 metres cannot be maintained between individuals, and there will be a stricter enforcement of existing measures. The quarantine duration for infected individuals will also be reduced to 5 days with a negative test result.

[5] **Canada (British Columbia)** – A reduction in quarantine period will allow fully vaccinated individuals to exit self-isolation 5 days after testing positive, so long they are asymptomatic or have resolved symptoms. However, these individuals must wear a mask around others for another 5 days after exit.

[6-9] China –

- a. **Xi'an** – Enhanced restrictions from 3 January 2022 to restrict inhabitants to leaving their homes to participate in a COVID-19 test or for emergencies. From 4 January 2022, businesses in Yan'an city were ordered to closed and its inhabitants were asked to remain indoors. From 5 January 2022, all inbound and outbound international flights at the province's Xianyang International Airport have been cancelled until further notice.
- b. **Yuzhou** – From the night of 3 January 2022, the city of Yuzhou was ordered into lockdown. The city's inhabitants were ordered to stay indoors, motor traffic was banned from the city's roads unless prior clearance was obtained from virus control authorities, and all retail, cultural and tourist activities are suspended except for the supply of daily necessities in supermarkets.
- c. **Zhengzhou** – The provincial capital of Henan restricted movement of residents in risky areas, and advised residents in other parts of the city against non-essential travel out of the city.

[10]**France** – From 3 January 2022, quarantine periods for infected individuals will be adjusted to 7 days for vaccinated individuals and 10 days for unvaccinated individuals. The quarantine period can be shortened to 5 days and 7 days for the respective groups, with a negative test result. Self-isolation of fully vaccinated contacts will no longer be required to self-isolate, given they self-test every other day for 6 days, whilst unvaccinated contacts will be required to isolate for 7 days.

[11]**Hong Kong** – Enhanced restrictions from 7 January 2022 will ban indoor dining after 6 pm, cancel all cruises, and close exercise, cultural, entertainment and drinking venues for at least 2 weeks.

[12-17]India

- a. **Rajasthan** – Enhanced restrictions will close schools (grades 1 to 8) from 3 January to 9 January 2022, and from 7 January limit the capacity at all mass gatherings such as weddings, rallies and educational meetings to 100 people. Domestic arrivals are also to provide proof of double vaccination or a negative RT-PCR test result from 72 hours before arrival.
 - b. **Telangana** – Enhanced restrictions from 1 January 2022 will ban rallies, public meetings and all types of mass gatherings including religious, political and cultural events. Mask mandates, social distancing and frequent sanitising have also been imposed in public transport and indoor spaces such as shops, malls, offices and schools.
 - c. **Karnataka** – From 4 January until 19 January 2022, weekend curfews will be re-imposed from 10pm on Friday till 5am the following Monday and theatres, malls, pubs and bars are only allowed to admit vaccinated people and operate at 50% capacity, and all gatherings at public places to be banned.
 - d. **Goa** – From 4 January 2022, a daily night curfew from 11pm to 6am will be imposed until at least 26 January 2022.
 - e. **Bihar** – A daily night curfew from 10pm to 5am will be implemented for 2 weeks, from 4 January to 21 January 2022.
 - f. **West Bengal** – Enhanced restrictions imposed until 15 January include reduced capacity in government and private offices, retail spaces, bars, restaurants, cinemas and theatres to 50%, the closure of beauty, wellness and recreation facilities, and reduced the frequency of inbound and outbound domestic flights to Mumbai and Delhi.
- [18]**Philippines** – From 5 January to 15 January 2022, Bulacan, Cavite and Rizal has been placed under Alert Level 3 to combat rising cases in these areas. Metro Manila has been placed under Alert Level 3 since 3 January (until 15 January), and unvaccinated residents in this area have been banned from leaving homes except for essential purposes.
- [19]**Switzerland** – From 3 January 2022, some cantons have shortened the mandated quarantine period for infected individuals from 10 days to 7 days, provided a negative test result has been obtained on the 7th day. These cantons include the two Appenzells, Basel-City, Bern, Geneva, Lucerne, Neuchâtel, Nidwald, Obwald Schwyz, St.Gallen, Ticino, Vaud, Fribourg, Jura, Uri, Valais, Zug, and Zurich.
- [20]**Turkey** – On 5 January 2022, the country announced that infected individuals, regardless of vaccination status, will be able to end their self-isolation after 7 days if they test negative on day 5 of self-isolation. In addition, contacts of an infected individual will not be forced to quarantine if they have received booster shots or contracted the virus in the last three months.
- [21]**Thailand** – On 6 January 2022, the country's alert level was increased to Level 4, which discourages dining and drinking in restaurants, leaving the house and travelling on public transport or abroad.
- [22,23]**United Kingdom** –
- a. **England, Scotland, Wales** – Asymptomatic people testing positive with lateral flow devices will be required to self-isolate immediately without a confirmatory PCR test from 11 January in England, and 6 January in Scotland and Wales.
 - b. **England** – The current “Plan B” restriction measures will be further extended beyond 28 January 2022, with the end date unspecified.
 - c. **Scotland** – From 5 January 2022, the self-isolation period for individuals testing positive will be decreased from 10 days to 7 days, provided the individuals have negative lateral

flow test results on days 6 and 7 of isolation. Nonetheless, current restrictions, including on gathering size limits and closing nightclubs, are expected to remain until at least mid-January 2022.

vi. Military Surveillance

South Korea [1-6]

- On 2 January, a total of 25 new cases, including 23 breakthrough cases, were reported from the Army (12 cases), Air Force (7 cases) and Navy (6 cases). This brings the total caseload in the South Korean military to 3,303 with 271 active infections as of 2 January 2022.
- On 3 January, 8 cases were reported, including 5 cases from the Army, and one case each from the Air Force and a unit under direct control of the defense ministry. Of the newly reported cases, 7 were breakthrough cases. This brings the total number of cases in the military to 3,311 cases, with 1507 breakthrough cases and 240 active cases.
- On 4 January, a total of 25 new cases were reported in overseas (4 cases) and domestic (21 cases). Cases were reported from troops stationed in Lebanon (Dongmyeong unit, 2 cases) and South Sudan (Hanbit unit, 2 cases). The new domestic cases were reported from the Army (14 cases), the Air Force (4 cases), units under direct control of the defense ministry (2 cases) and the Navy (1 case). The total number of cases in the military domestically is 3,332 cases including 1,527 breakthrough cases.
- On 5 January, 28 new cases were reported from the Army (14 cases), units directly under the defense ministry's control (9 cases), Air Force (2 cases), Marine Corps (2 cases), and the Navy (1 case). A total of 25 of the new infections were breakthrough cases. This brings the total caseload in the military to 3,360 cases with 1,552 breakthrough cases.
- On 6 January, 16 cases were reported, including 15 breakthrough cases, bringing the total caseload in the military to 3,376 cases. Of the new cases, 14 were breakthrough infections which brings the total number of breakthrough cases to 1,566. The new cases were reported from the Army and Air Force (6 cases each), and units under the direct command of the defense ministry (4 cases).

United States [7]

- On 4 January 2022, a total of 3 cases were reported from the US Army Garrison-Kwajalein Atoll, Marshall Islands from 37 army personnel and their families under the 2-week entry quarantine.

United States Forces Japan [8-14]

- Between 27 December 2021 and 3 January 2022, a total of 143 cases were reported from Marine Corps Air Station Iwakuni, of which 73 cases were reported between 31 December 2021 and 3 January 2022.
- Between 27 and 28 December 2021, the Combined Arms Training Centre Camp Fuji reported 10 new infections as of 29 December 2021.
- As of 2 January 2022, 234 new cases were reported from 9 U.S. Forces bases in Okinawa Prefecture. No additional details of the cases were reported, but the high number of cases follows the decision to test all military personnel and related individuals for COVID-19 within 24 hours upon entry into Japan, from 30 December 2021. As of 1 January 2022, a total of 522 new infections was reported amongst the US military in Japan in December 2021.
- On 5 January 2022, 338 cases were reported across US bases in Japan. The new cases included 156 cases from the previous week, but were mainly attributed to 182 new cases reported from Marine

Corps Air Station Iwakuni on 4 January 2022. In response to increased cases across the USFJ bases, all bases have increased the Health Protection Condition Level to Bravo on 5 January 2021. The latest guidelines mandates mask-wearing for all USFJ-affiliated individuals while off-base and in indoors and public areas within bases, regardless of vaccination status. The latest case updates at the following bases are as follows:

- Marine Corps Air Station Iwakuni: The base has reported 422 cases as of 4 January 2022, since cluster initiation on 24 December 2021.
- Combined Arms Training Center Camp Fuji: 41 cases as of 5 January, since late December 2021
- Yokota Air base: 57 new cases reported on 5 January 2021, bringing the total caseload to 64. 30 of the new cases were returning to Japan from the U.S. and were in quarantine, 4 cases were close contacts of previous cases, and remaining 23 cases were identified by the base public health authorities.
- Naval Air Facility Atsugi: 69 new cases reported on 5 January 2021, of which 42 recently arrived in Japan, 18 were symptomatic, 4 were close contacts, and 5 cases pending investigation on their source of infection.
- U.S Army Japan: 14 new cases reported between 29 December 2021 and 5 January 2022. Of the new cases. 7 were recent arrivals to Japan, 4 were close contacts and 3 were symptomatic.
- Sasebo Naval Base: 17 cases as of 4 January 2021, of which 16 cases were reported since 28 December 2021. Of the active cases, 11 were symptomatic and the remaining were detected during medical screening
- Okinawa bases: 6 cases were reported at Kadena Air Base (2 cases) , Marine's Camp Foster (1 case) and unspecified locations (3 cases) on 5 January 2022.
- As of 6 January 2022, a total of 1,784 active cases were reported across 18 US bases through Japan. New cases were reported from Marine Corps Air Station Iwakuni (115 new cases) and the US bases in Okinawa (162 cases) on 6 January 2022. The high active case numbers are mainly attributed to those from Marine Corps Air Station Iwakuni (529 cases), Camp Hansen (282 cases) and Yokosuka Naval Base (213 cases) as of 6 January 2022.

United States Forces Korea[15]

- Between 27 December 2021 and 3 January 2021, a total of 682 cases were reported from US bases in South Korea, the highest weekly count ever reported by USFK. The previous peak was 467 cases reported between 21 December and 27 December 2021. Of the 682 new cases, all but one case were domestic cases, with the last case being a new arrival to South Korea.

vii. WHO Guidance & Other Protocols

No update was published by WHO from 1 – 7 January 2022.

viii. CDC Guidance & Protocols

US CDC

The following updates were published by the US CDC from 1 – 7 January 2022:

- **CDC Recommends Pfizer Booster at 5 Months, Additional Primary Dose for Certain Immunocompromised Children**
Available at: <https://www.cdc.gov/media/releases/2022/s0104-Pfizer-Booster.html>
- **Receipt of COVID-19 Vaccine During Pregnancy and Preterm or Small-for-Gestational-Age at Birth — Eight Integrated Health Care Organizations, United States, December 15, 2020–July 22, 2021**
Available at: https://www.cdc.gov/mmwr/volumes/71/wr/mm7101e1.htm?s_cid=mm7101e1_x
- **CDC Expands Booster Shot Eligibility and Strengthens Recommendations for 12-17 Year Olds**
Available at: <https://www.cdc.gov/media/releases/2022/s0105-Booster-Shot.html>
- **Risk Factors for Severe COVID-19 Outcomes Among Persons Aged ≥18 Years Who Completed a Primary COVID-19 Vaccination Series — 465 Health Care Facilities, United States, December 2020–October 2021**
Available at: https://www.cdc.gov/mmwr/volumes/71/wr/mm7101a4.htm?s_cid=mm7101a4_x

EU CDC

No update was published by the EU CDC from 1 – 7 January 2022.

ix. Vaccines/Therapeutics Development

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

Vaccines

- [1] **India** – Preliminary results from COVAXIN (BBV152) Phase 2/3 trial amongst 525 children between 2 to 18 years old in 16 clinical trial sites across India indicated no serious adverse events, with most being mild (368 events) to moderate (6 events) resolving within 24 hours. At 4 weeks from the second vaccination, 95-98% seroconversion was achieved in all participants and the mean SARS-CoV-2 antibody GMT was > 30% higher in children aged 2-18 than that from Phase 3 clinical trial involving 25,800 adult subjects aged 18+. This indicates superior antibodies in children compared to adults and suggests vaccine efficacy in this age group.
- [2] **Israel** – Approval for fourth vaccine shots for people over 60 and medical workers were announced on 2 January 2022.
- [3] **Malaysia** – On 6 January 2022, conditional approval was given for the following vaccines: the Pfizer BioNTech vaccine Comirnaty for inoculating children aged between 5 to 11 years (10mcg), the new 30 mcg Comirnaty formulation for adolescents aged at least 12 years, and the Cansino vaccine Convidecia as a booster dose for persons aged at least 18 years at 3 to 6 months after the first dose of the same vaccine.
- [4] **Turkey** – The health ministry approved a fifth vaccine shot for citizens who received 2 doses of each vaccine - Sinovac and Pfizer BioNTech vaccines, on 2 January 2022. Citizens who had received the fourth shot for at least 3 months will be eligible for the fifth shot.
- [5] **United States** – On 3 January 2022, the Food and Drug Administration authorised the use of a third dose of the Pfizer BioNTech COVID-19 vaccine for children aged 12 to 15 years old, and immunocompromised children aged 5 to 11 years old. For the former, the interval for booster shot eligibility with this vaccine has also been shortened from 6 months to 5 months.
- [6] **United States** – A 19-week follow up on a cohort of 243 adolescents aged 12 to 17 years in the PROTECT study indicated a 92% vaccine effectiveness of full immunisation (95% confidence interval 79%-97%) against COVID-19 infections, regardless of symptom status. The figure is obtained after adjusting for sociodemographic characteristics, health information, frequency of social contact, mask use, location, and local virus circulation.
- [7] **United States** – On 6 January 2022, the CDC Advisory Committee on Immunization Practice recommended booster shots for those aged 12 to 15 years at least 5 months after their second dose.
- [8] **United States** – The Food and Drug Administration granted the long-acting antibody combination of tixagevimab (AZD8895) co-packaged with cilgavimab (AZD1061; Evusheld) emergency use authorization (EUA) for the pre-exposure prophylaxis of COVID-19, on 6 January 2022. This combination is approved for moderately to severely immunocompromised adults and adolescents aged at least 12 years old, or those not recommended to receive vaccination.

Therapeutics

- [9] **Bahrain** – The National Health Regulatory Authority 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, on 2 January 2022.
- [10] **Israel** – Merck's anti-COVID pill molnupiravir was approved for use in the country on 2 January 2022.
- [11] **United Kingdom** – The Medicine and Health products Regulatory Agency has approved Pfizer's COVID-19 pill Paxlovid, for adults who have mild to moderate infection and are at high risk of their illness worsening. The agency recommends the pill to be used within 5 days of the first symptoms for highest effectiveness. This is the third antiviral pill to be approved for use in the Britain.

Vaccine Approval Status

Table 7: Number of approving countries per vaccine as of 5 January 2022.

Developer	Vaccine	Number of 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 Biotechnology (CIGB)	CIGB-66	6
Chumakov Center	KoviVac	3
FBRI	EpiVacCorona	4
FBRI	EpiVacCorona-N	1
Gamaleya	Sputnik Light	24
Gamaleya	Sputnik V	74
Health Institutes of Turkey	ERUCOV-VAC	1
Instituto Finlay de Vacunas Cuba	Soberana Plus	1
Instituto Finlay de Vacunas Cuba	Soberana 02	4
Johnson & Johnson	Ad26.COV2.S	99
Kazakhstan RIBSP	QazVac	2
Medigen	MVC-COV1901	1
Minhai Biotechnology Co	SARS-CoV-2 Vaccine (Vero Cells)	2
Moderna	mRNA-1273	83
Novavax	NVX-CoV2373	30
Organization of Defensive Innovation and Research	FAKHRAVAC (MIVAC)	1
Oxford/AstraZeneca	AZD1222	134
Pfizer/ BioNTech	BNT162b2	130
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 Pharm Industrial Co	COVID-19 Inactivated Vaccine	1
Sinopharm	BBIBP-CorV	83
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

- [1] **Malaysia** – A total of 18 AEFI reports amongst 2,782 shots administered amongst inmates at the Kajang prison, Selangor. These included 2 deaths and instances of heart inflammation, paralysis and lung infection following vaccination. The reports are currently under investigation by the Special Pharmacovigilance Committee for Covid-19 Vaccine Monitoring to confirm linkage between the vaccines and the reported adverse events. The exact vaccine administered to inmates was unspecified.
- [2] **Malaysia** – Since the National Immunisation Programme started, a total of 24,042 AEFI reports including 812 reports from booster doses, were received from the 57,119,777 vaccine administered (including 5,719,456 booster doses) as of 31 December 2021. The AEFI reporting rate for booster doses was 0.14 per 1,000 doses, compared to the overall AEFI reporting rate of 0.42 per 1,000 doses. Only 4.91% (38 reports) of the AEFIs arising from booster doses were classified as serious events, with the most commonly reported AEFIs being fever, injection site pain, headache, and fatigue. The AEFIs were tracked through the National Pharmaceutical Regulatory Division AEFI reporting system, and includes AEFIs from all registered vaccines used in Malaysia.

x. Scientific Publications with Epidemiology and Clinical Focus

Real-world effectiveness of COVID-19 vaccines: a literature review and meta-analysis [1]

Objective: To estimate the coronavirus disease 2019 (COVID-19) vaccine effectiveness (VE) against concerned outcomes in real-world settings.

Methods: Studies reporting COVID-19 VE from August 6, 2020 to October 6, 2021 were included. The summary VE (with 95% confidence intervals (95% CI)) against disease related to COVID-19 was estimated. The results were presented in forest plots. Predefined subgroup analyses and sensitivity analyses were also performed.

Results: A total of 51 records were included in this meta-analysis. In fully vaccinated populations, the VE against severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection, COVID-19-related hospitalization, admission to the intensive care unit, and death was 89.1% (95% CI 85.6-92.6%), 97.2% (95% CI 96.1-98.3%), 97.4% (95% CI 96.0-98.8%), and 99.0% (95% CI 98.5-99.6%), respectively. The VE against infection in the general population aged ≥ 16 years, the elderly, and healthcare workers was 86.1% (95% CI 77.8-94.4%), 83.8% (95% CI 77.1-90.6%), and 95.3% (95% CI 92.0-98.6%), respectively. For those fully vaccinated against infection, the observed effectiveness of the Pfizer-BioNTech vaccine was 91.2% and of the Moderna vaccine was 98.1%, while the effectiveness of the CoronaVac vaccine was found to be 65.7%.

Conclusions: The COVID-19 vaccines are highly protective against SARS-CoV-2-related diseases in real-world settings.

Autoimmune complications of COVID-19 [2]

Coronavirus disease 2019 (COVID-19) is still propagating a year after the start of the pandemic. Besides the complications patients face during the COVID-19 disease period, there is an accumulating body of evidence concerning the late-onset complications of COVID-19, of which autoimmune manifestations have attracted remarkable attention from the first months of the pandemic. Autoimmune hemolytic anemia, immune thrombocytopenic purpura, autoimmune thyroid diseases, Kawasaki disease, Guillain-Barre syndrome, and the detection of autoantibodies are the cues to the discovery of the potential of COVID-19 in inducing autoimmunity. Clarification of the pathophysiology of COVID-19 injuries to the host, whether it is direct viral injury or autoimmunity, could help to develop appropriate treatment.

Biomarkers of ageing and frailty may predict COVID-19 severity [3]

Coronavirus Disease 2019 (COVID-19) is caused by the novel coronavirus, Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) - the culprit of an ongoing pandemic responsible for the loss of over 3 million lives worldwide within a year and a half. While the majority of SARS-CoV-2 infected people develop no or mild symptoms, some become severely ill and may die from COVID-19-related complications. In this review, we compile and comment on a number of biomarkers that have been identified and are expected to enhance the detection, protection and treatment of individuals at high risk of developing severe illnesses, as well as enable the monitoring of COVID-19 prognosis and responsiveness to therapeutic interventions. Consistent with the emerging notion that the majority of COVID-19 deaths

occur in older and frail individuals, we researched the scientific literature and report the identification of a subset of COVID-19 biomarkers indicative of increased vulnerability to developing severe COVID-19 in older and frail patients. Mechanistically, increased frailty results from reduced disease tolerance, a phenomenon aggravated by ageing and comorbidities. While biomarkers of ageing and frailty may predict COVID-19 severity, biomarkers of disease tolerance may predict resistance to COVID-19 with socio-economic factors such as access to adequate health care remaining as major non-biomolecular influencers of COVID-19 outcomes.

xi. Sources

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