

Nov | 05

COVID-19

Situation Report 488

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.**

ii. Global Risk Assessment

Table 1. Risk assessment of COVID-19 by WHO regions (Updated as of 05 November 2021, 1300H SGT)

Environmental Risk	Transmissibility	Severity of Disease	Availability of Treatment/ Vaccination [#]	Overall Risk [%]
Global (n=198 countries)				
<p>High</p> <p>Globally, 190 (96.0%) 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 (17 countries), EURO (50 countries), EMRO (9 countries), Americas (32 countries), and Africa (8 countries).</p> <p>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]</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 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 177 countries ranged from 0.042 to 1.8.⁵</p>	<p>Case fatality rate is currently at 2.02% globally. Most cases present as flu-like illness.</p>	<p>Limited</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).⁸</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>High</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 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>	
Western Pacific Region and South-East Asia Region (n=41 countries)				
<p>Moderate</p> <p>34 (82.9%) countries have reported outbreaks; but only 17 (41.5%) countries are reporting a surge in cases.</p> <p>13 (31.7%) 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 Brunei, Malaysia, Maldives, Mongolia and Singapore, and highest case numbers were reported from India, Malaysia, Philippines, Thailand and Vietnam.</p> <p>At least 15 countries have closed their borders, 25 countries have opened their borders partially conditionally, and none is allowing free travel.</p>	<p>As of Oct 22, the estimated effective reproduction no. of 25 countries ranged from 0.41-1.6. ⁵</p>	<p>Case fatality rate is 1.54%.</p>	<p>High</p> <p>41 countries have commenced vaccination as of 5 November 2021. 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 15 countries; >80% for 2 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; 50 (94.3%) countries are reporting a surge in cases.</p> <p>2 (3.8%) 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 Estonia, Georgia, Latvia, Lithuania and Slovenia, and highest case numbers were reported from Germany, Russia, Turkey, United Kingdom and Ukraine.</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 Oct 22, the estimated effective reproduction no. of 52 countries ranged from 0.46-1.6.[§]</p>	<p>Case fatality rate is 1.84%.</p>	<p>High</p> <p>53 countries have commenced vaccination as of 29 October 2021. Coverage was available for the following i) at least 1 dose was at 51-80% for 31 countries; >80% for 3 countries; ii) full vaccination was at 51-80% for 30 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>High</p>

Eastern Mediterranean Region (n=22 countries)				
<p>Moderate</p> <p>22 (100%) countries have reported with outbreak; 9 (40.9%) countries are reporting a surge in cases.</p> <p>No 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 Iran, Jordan, Lebanon, Libya and Palestine, and highest case numbers were reported from Egypt, Iran, Iraq, Jordan and Pakistan.</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 Oct 22, the estimated effective reproduction no. of 21 countries ranged from 0.37-1.2.[§]</p>	<p>Case fatality rate is 1.84%.</p>	<p>High</p> <p>22 countries have commenced vaccination as of 5 November 2021. Coverage was available for the following: i) at least 1 dose was at 51-80% for 6 countries; >80% for 2 countries; ii) full vaccination was at 51-80% for 5 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>High</p>
Region of the Americas (n=35 countries)				
<p>High</p> <p>35 (100%) countries have reported with outbreak; 32 (91.4%) countries are reporting a surge in cases.</p> <p>No 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 Barbados, Belize, Dominica, Suriname and USA, and highest case numbers were reported from Brazil, Canada, Chile, Mexico and USA.</p> <p>At least 9 countries have closed their borders, 24 countries have opened their borders partially conditionally, and 2 countries are allowing free travel.</p>	<p>As of Oct 22, the estimated effective reproduction no. of 35 countries ranged from 0.53-1.2.[§]</p>	<p>Case fatality rate is 2.45%.</p>	<p>High</p> <p>35 countries have commenced vaccination as of 5 November 2021. Coverage was available for the following: i) at least 1 dose was at 51-80% for 16 countries; >80% for 2 countries ii) full vaccination was at 51-80% for 13 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>FDA has issued EUA to Eli Lilly's combination antibody therapy of</p>	<p>High</p>

		<p>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>
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			<p>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]</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>	
African Region (n=47 countries)				
<p>Moderate</p> <p>47 (100%) countries have reported with outbreak; 8 (17.4%) countries are reporting a surge in cases.</p> <p>2 (4.3%) 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 Botswana, Congo, Gabon, Mauritius and Seychelles, and highest case numbers were reported from Botswana, Cameroon, Ethiopia, Nigeria and South Africa.</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 Oct 22, the estimated effective reproduction no. of 44 countries ranged from 0.042-1.8.[§]</p>	<p>Case fatality rate is 2.47%.</p>	<p>High</p> <p>47 countries have commenced vaccination as of 5 November 2021. Coverage was available for the following: i) at least 1 dose was at 51-80% for 2 countries; >80% for 1 country; ii) full vaccination was at 50-80% for 2 countries.^{&}</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 05 November 2021, 1500H 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
221	249,342,303	249,244,698	5,045,062	2.02%	2.02%	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

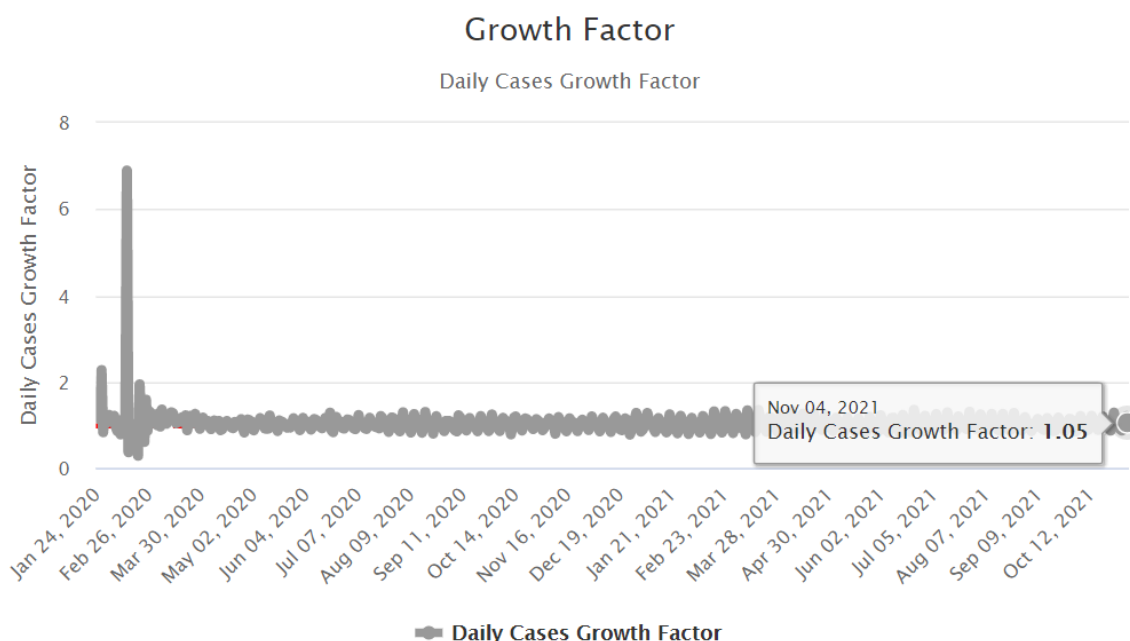
Virus	Incubation Period (Days)	Case Fatality Rate (%)	R ₀
SARS-CoV-2	Median = 5.1 [§] (2-14) or up to 24*	2.02	5.8 (95% CI 4.4–7.7) [^]
SARS-CoV	2-7	9.6	2.0
MERS-CoV	5 (2-14)	34	<1 (higher in health care setting)
Swine Flu	1-4	0.02	1.2-1.6

*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

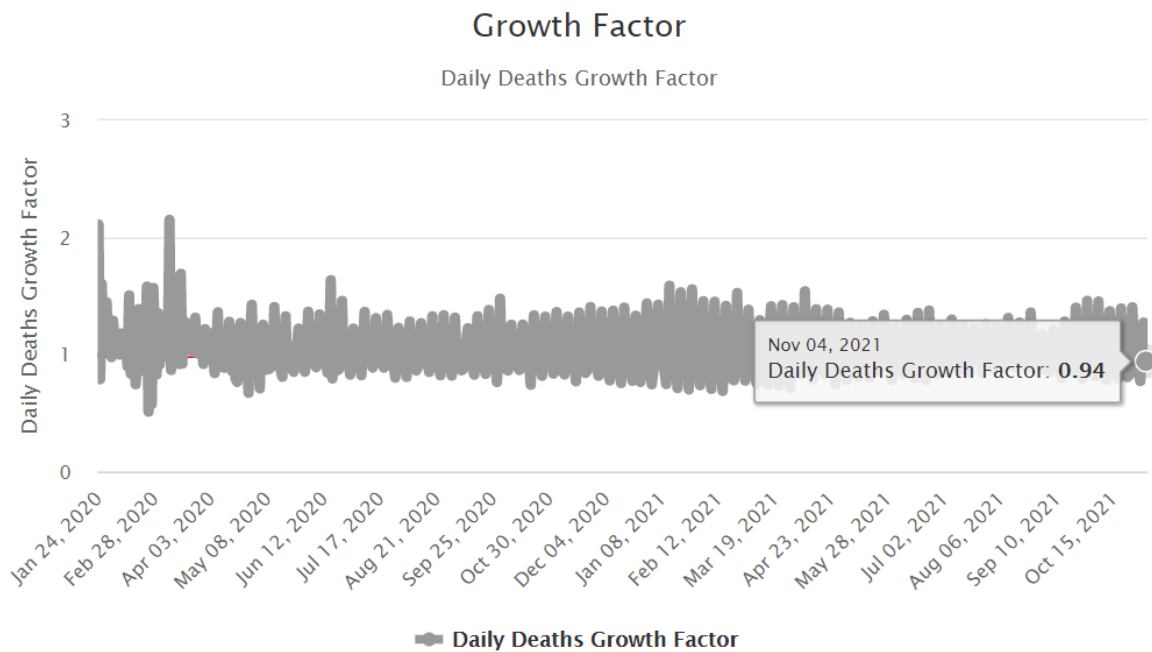
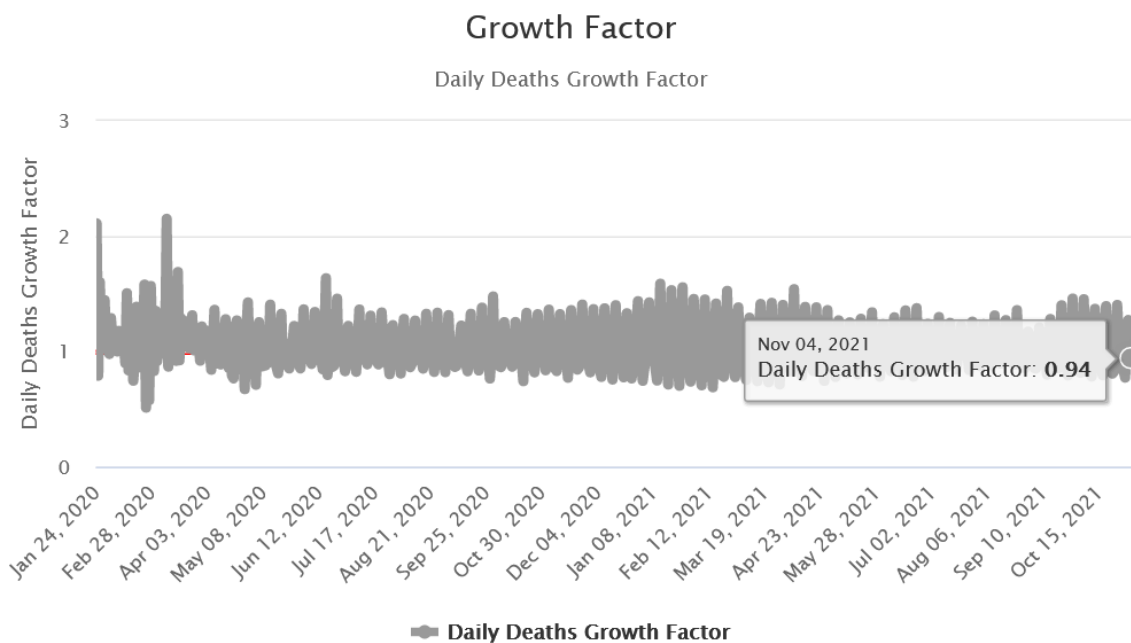


Figure 3. Growth Factor of Novel Coronavirus Daily Deaths (Mainland China + Other Countries)



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 30 October – 5 November 23 2021
(Updated as of 05 November 2021, 1300H SGT)

No.	Country	Total Cases	Change in Cases	Total Deaths	Change in Deaths	Total Recovered	Region
1	USA	47,187,256	+502,111	772,315	+8,531	37,194,111	Americas
2	Russia	8,673,860	+281,163	243,255	+8,198	7,477,366	EURO
3	UK	9,208,219	+272,064	141,395	+1,189	7,492,475	EURO
4	Turkey	8,150,708	+189,173	71,526	+1,528	7,617,367	EURO
5	Germany	4,697,673	+143,943	96,763	+701	4,342,600	EURO
6	Ukraine	3,006,463	+127,789	70,146	+3,294	2,479,138	EURO
7	India	34,332,407	+86,250	459,875	+2,654	33,715,722	SEARO
8	Romania	1,685,264	+69,237	49,604	+3,174	1,453,774	EURO
9	Brazil	21,849,137	+67,701	608,715	+1,590	21,047,296	Americas
10	Iran	5,964,824	+65,315	126,921	+1,046	5,560,951	EMRO
11	Poland	3,060,613	+61,722	77,395	+622	2,722,984	EURO
12	Netherlands	2,166,796	+58,247	18,497	+126	1,993,033	EURO
13	Thailand	1,951,572	+57,631	19,542	+472	1,834,730	SEARO
14	Belgium	1,403,548	+51,635	26,105	+129	1,224,242	EURO
15	France	7,190,334	+43,579	117,849	+227	6,962,526	EURO
16	Serbia	1,168,608	+43,006	10,203	+442	1,038,696	EURO
17	Austria	856,002	+42,668	11,419	+103	787,837	EURO
18	Czechia	1,792,707	+40,621	30,878	+173	1,680,718	EURO
19	Vietnam	946,043	+40,566	22,342	+432	835,406	WPRO
20	Malaysia	2,492,343	+37,594	29,155	+386	2,396,244	WPRO
21	Greece	767,376	+36,209	16,151	+350	698,174	EURO
22	Italy	4,788,704	+31,473	132,283	+279	4,569,045	EURO
23	Bulgaria	623,946	+31,003	24,755	+1,037	490,450	EURO
24	Slovakia	499,990	+29,982	13,146	+169	433,159	EURO
25	Georgia	738,171	+26,916	10,238	+277	678,288	EURO
26	Croatia	483,142	+25,052	9,364	+222	448,150	EURO
27	Philippines	2,795,642	+23,151	43,825	+1,250	2,714,658	WPRO
28	Singapore	210,978	+23,127	459	+95	181,595	WPRO
29	Hungary	885,360	+21,941	31,101	+372	803,151	EURO
30	Ireland	458,370	+20,246	5,492	+56	390,151	EURO
31	Mexico	3,818,216	+19,930	289,131	+1,500	3,181,631	Americas
32	Slovenia	346,220	+17,491	4,792	+69	309,388	EURO
33	Canada	1,725,151	+15,622	29,115	+187	1,672,874	Americas
34	Latvia	226,860	+15,158	3,401	+228	191,290	EURO
35	Lithuania	418,078	+15,027	6,010	+210	372,181	EURO
36	S. Korea	375,464	+14,928	2,936	+119	336,548	WPRO

37	Azerbaijan	539,710	+14,922	7,182	+187	501,508	EURO
38	Belarus	608,031	+13,828	4,696	+116	582,469	EURO
39	Switzerland	884,595	+13,761	11,280	+47	834,007	EURO
40	Spain	5,022,546	+13,659	87,477	+155	4,876,514	EURO
41	Denmark	395,797	+13,001	2,722	+13	370,106	EURO
42	Chile	1,701,316	+12,862	37,794	+75	1,619,955	Americas
43	Estonia	201,194	+12,672	1,574	+83	172,621	EURO
44	Armenia	315,004	+12,554	6,532	+343	274,878	EURO
45	Jordan	870,505	+12,163	11,088	+88	836,418	EMRO
46	Colombia	5,009,007	+11,563	127,417	+222	4,852,854	Americas
47	Kazakhstan	945,922	+9,838	12,204	+151	896,581	EURO
48	Australia	177,393	+9,570	1,795	+87	153,057	WPRO
49	Moldova	343,261	+8,974	7,958	+293	321,388	EURO
50	Norway	213,289	+8,559	920	+20	88,952	EURO
51	Mongolia	365,233	+8,468	1,788	+77	313,256	WPRO
52	Iraq	2,060,066	+7,943	23,271	+188	2,009,921	EMRO
53	Argentina	5,293,989	+7,915	116,055	+139	5,160,163	Americas
54	Israel	1,332,801	+6,630	8,112	+31	1,317,184	EURO
55	Egypt	334,751	+6,542	18,889	+406	281,325	EMRO
56	Myanmar	503,981	+6,281	18,766	+144	473,903	SEARO
57	Venezuela	410,648	+6,261	4,936	+76	395,240	Americas
58	Portugal	1,094,048	+5,915	18,184	+35	1,043,384	EURO
59	Sweden	1,176,269	+5,847	15,015	+31	1,141,214	EURO
60	Dominican Republic	385,181	+5,845	4,146	+22	376,577	Americas
61	Laos	44,061	+5,780	76	+17	6,558	WPRO
62	Japan	1,723,395	+5,686	18,290	+62	1,701,395	WPRO
63	Peru	2,204,424	+5,388	200,350	+171	N/A	Americas
64	Bosnia and Herzegovina	257,401	+5,318	11,717	+240	192,218	EURO
65	Finland	161,688	+4,729	1,176	+26	46,000	EURO
66	Guatemala	603,641	+4,599	15,281	+353	584,132	Americas
67	Cuba	954,342	+4,595	8,252	+33	942,984	Americas
68	Sri Lanka	543,385	+4,525	13,806	+110	514,234	SEARO
69	Lebanon	644,391	+4,396	8,528	+48	618,398	EMRO
70	Indonesia	4,246,802	+4,270	143,500	+167	4,091,938	SEARO
71	Pakistan	1,275,673	+3,986	28,507	+76	1,224,425	EMRO
72	Montenegro	146,663	+3,856	2,125	+38	139,458	EURO
73	Libya	359,667	+3,581	5,171	+110	303,406	EMRO
74	Bolivia	515,373	+3,519	18,942	+31	477,405	Americas
75	Albania	187,363	+3,490	2,944	+42	176,639	EURO
76	North Macedonia	204,416	+3,124	7,194	+96	189,947	EURO
77	Nepal	814,115	+2,708	11,436	+54	793,789	SEARO
78	Costa Rica	561,829	+2,579	7,124	+103	511,455	Americas
79	Ecuador	518,274	+2,415	32,983	+25	443,880	Americas
80	Barbados	19,188	+2,406	167	+16	12,056	Americas

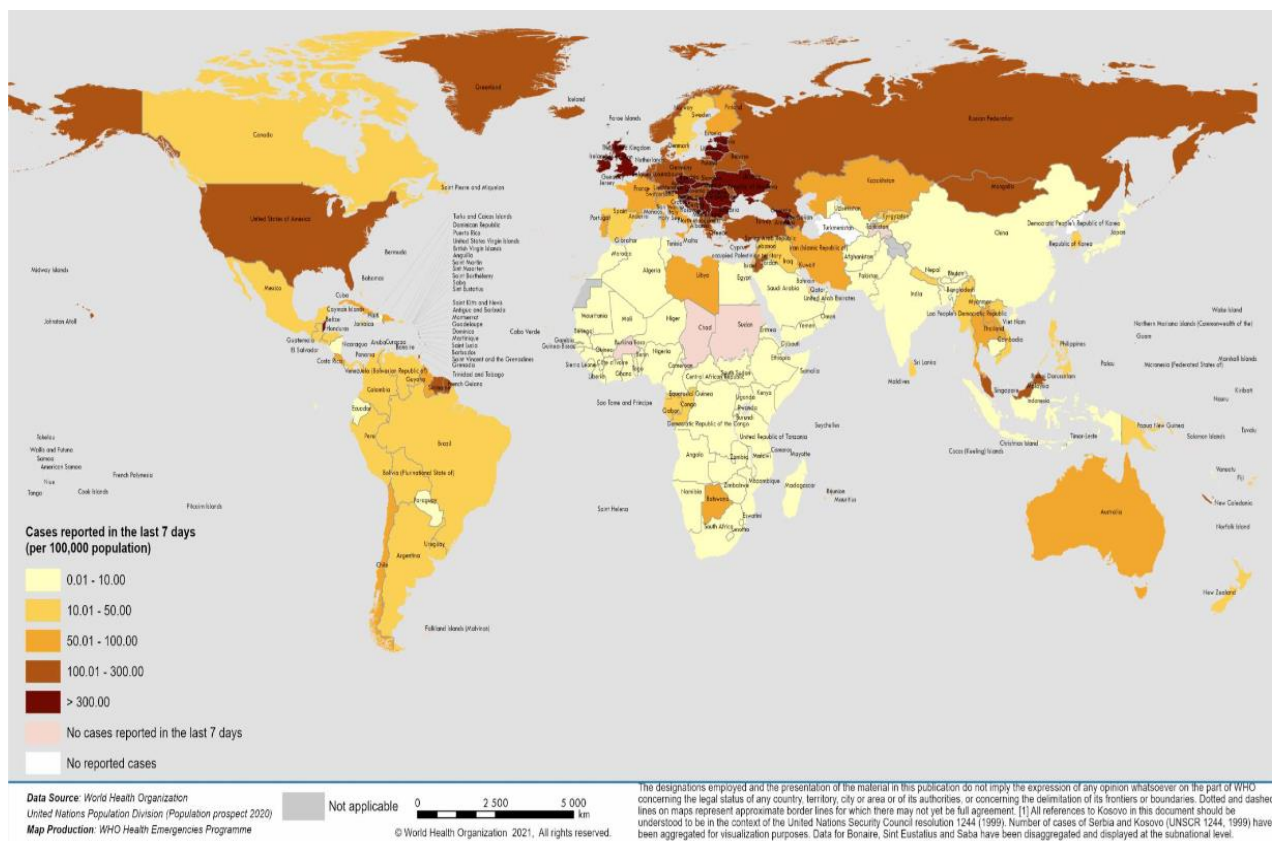
81	Ethiopia	366,424	+2,326	6,509	+81	342,238	Africa
82	Papua New Guinea	31,010	+2,187	392	+47	27,935	WPRO
83	Palestine	424,743	+2,102	4,437	+42	415,713	EMRO
84	South Africa	2,923,054	+1,940	89,251	+147	2,815,840	Africa
85	Trinidad and Tobago	58,441	+1,895	1,739	+71	51,459	Americas
86	Cameroon	104,348	+1,849	1,731	+45	80,433	Africa
87	Uzbekistan	187,085	+1,790	1,332	+14	183,057	EURO
88	Bangladesh	1,570,485	+1,628	27,887	+40	1,534,300	SEARO
89	Syria	44,191	+1,570	2,590	+48	26,652	EMRO
90	Uruguay	394,679	+1,540	6,082	+6	386,227	Americas
91	Morocco	946,957	+1,453	14,698	+44	927,956	EMRO
92	Somalia	22,693	+1,424	1,294	+114	10,767	EMRO
93	Cyprus	123,691	+1,396	576	+4	90,755	EURO
94	Luxembourg	82,623	+1,122	849	+6	79,554	EURO
95	Belize	27,673	+1,048	505	+14	24,830	Americas
96	New Zealand	7,138	+1,014	29	+1	4,773	WPRO
97	Honduras	376,144	+931	10,297	+61	116,109	Americas
98	Maldives	88,386	+899	244	+1	86,168	SEARO
99	Panama	473,089	+892	7,321	+7	463,992	Americas
100	Martinique	43,496	+862	692	+22	104	Non
101	Cayman Islands	2,356	+860	2	0	1,055	Non
102	Tunisia	713,071	+841	25,261	+34	686,659	EMRO
103	Qatar	239,752	+802	611	+2	237,801	EMRO
104	Gabon	36,020	+768	249	+14	29,170	Africa
105	Nigeria	212,446	+768	2,902	+10	204,047	Africa
106	Mauritius	18,314	+728	199	+35	1,854	Africa
107	Brunei	13,545	+722	91	+8	12,098	WPRO
108	Algeria	206,878	+718	5,936	+29	141,966	Africa
109	Botswana	187,281	+687	2,407	+1	183,644	Africa
110	Jamaica	89,349	+683	2,257	+58	58,576	Americas
111	Iceland	14,087	+674	34	+1	13,038	EURO
112	Kenya	253,661	+643	5,296	+26	247,156	Africa
113	Congo	17,944	+621	297	+39	12,421	Africa
114	China	97,605	+603	4,636	0	91,840	WPRO
115	Channel Islands	13,571	+581	100	0	12,678	Non
116	Guyana	35,929	+579	930	+26	32,372	Americas
117	Suriname	49,362	+577	1,101	+19	29,487	Americas
118	UAE	740,209	+555	2,137	+2	734,562	EMRO
119	Faeroe Islands	2,484	+554	5	+3	1,706	Non
120	Cambodia	118,870	+549	2,813	+40	115,207	WPRO
121	Kyrgyzstan	181,590	+485	2,679	+13	175,953	EURO
122	Réunion	55,125	+457	376	+2	54,058	Non
123	Uganda	126,348	+428	3,222	+13	96,787	Africa
124	French Guiana	44,964	+410	313	+7	11,254	Non
125	Mauritania	37,535	+380	801	+7	36,087	Africa

126	Isle of Man	9,883	+366	60	+3	9,227	Non
127	Angola	64,583	+357	1,718	+13	56,590	Africa
128	Saudi Arabia	548,805	+331	8,800	+12	537,722	EMRO
129	Burkina Faso	15,103	+310	221	+7	14,661	Africa
130	Rwanda	99,854	+289	1,332	+5	45,515	Africa
131	Mali	16,233	+286	570	+8	14,707	Africa
132	Paraguay	461,225	+281	16,256	+13	444,643	Americas
133	Nicaragua	16,699	+277	207	0	4,225	Americas
134	New Caledonia	11,182	+273	267	+3	55	Non
135	Bahrain	276,983	+265	1,393	0	275,219	EMRO
136	Zimbabwe	133,112	+232	4,685	+10	127,876	Africa
137	Dominica	4,961	+219	32	+1	4,566	Americas
138	Ghana	130,287	+210	1,182	+7	127,396	Africa
139	Haiti	24,032	+209	679	+17	20,431	Americas
140	Guadeloupe	54,737	+200	744	+2	2,250	Non
141	Afghanistan	156,363	+197	7,284	+16	128,877	EMRO
142	Equatorial Guinea	13,407	+171	168	+5	12,918	Africa
143	Malta	37,773	+163	462	+2	36,647	EURO
144	Kuwait	412,768	+149	2,462	+1	409,991	EMRO
145	Gibraltar	6,091	+148	98	0	5,771	Non
146	Zambia	209,815	+143	3,662	+2	205,994	Africa
147	Bahamas	22,485	+134	657	+14	21,312	Americas
148	Seychelles	22,220	+134	119	0	21,952	Africa
149	St. Vincent Grenadines	5,073	+132	69	+4	3,920	Americas
150	Fiji	52,209	+130	674	+1	49,973	WPRO
151	Saint Lucia	12,645	+128	260	+7	12,064	Americas
152	Anguilla	1,019	+127	1	0	913	Non
153	Niger	6,434	+123	220	+8	6,077	Africa
154	Burundi	20,106	+118	38	0	773	Africa
155	DRC	57,587	+117	1,098	+7	50,930	Africa
156	Mayotte	20,612	+115	185	+3	2,964	Non
157	Andorra	15,618	+113	130	0	15,289	EURO
158	Eritrea	6,910	+104	45	0	6,744	Africa
159	Ivory Coast	61,370	+103	696	+5	60,145	Africa
160	South Sudan	12,448	+100	133	0	12,008	Africa
161	Oman	304,329	+88	4,112	+1	299,699	EMRO
162	Namibia	128,967	+87	3,558	+8	124,938	Africa
163	Aruba	15,965	+83	171	0	15,634	Non
164	Yemen	9,831	+80	1,901	+27	6,480	EMRO
165	Mozambique	151,339	+79	1,932	+3	149,270	Africa
166	Curaçao	17,123	+70	175	+1	16,845	Non
167	Liechtenstein	3,618	+67	61	0	3,482	Non
168	Togo	26,102	+66	243	+1	25,720	Africa
169	CAR	11,579	+61	100	0	6,859	Africa
170	San Marino	5,569	+60	92	0	5,391	EURO

171	Greenland	846	+59	0	0	767	Non
172	Eswatini	46,454	+58	1,243	+1	45,140	Africa
173	Caribbean Netherlands	2,468	+57	19	0	2,363	Non
174	Benin	24,804	+55	161	0	24,346	Africa
175	Cabo Verde	38,233	+52	349	0	37,770	Africa
176	Comoros	4,291	+52	147	0	4,082	Africa
177	Lesotho	21,672	+48	658	+1	12,682	Africa
178	Tanzania	26,196	+42	725	0	N/A	Africa
179	Chad	5,105	+38	175	+1	4,874	Africa
180	Saint Kitts and Nevis	2,701	+37	25	+4	2,563	Americas
181	Antigua and Barbuda	4,072	+32	104	+2	3,808	Americas
182	Taiwan	16,430	+31	847	0	15,478	WPRO
183	Guinea	30,681	+28	385	0	29,571	Africa
184	Bermuda	5,665	+28	106	+6	5,502	Non
185	Turks and Caicos	3,003	+28	23	0	2,916	Non
186	Senegal	73,931	+27	1,879	+1	72,036	Africa
187	Grenada	5,857	+23	198	+1	5,567	Americas
188	Hong Kong	12,360	+22	213	0	12,035	WPRO
189	Saint Martin	3,872	+22	56	+1	1,399	Non
190	Malawi	61,803	+21	2,302	+4	57,752	Africa
191	Monaco	3,428	+21	36	0	3,363	EURO
192	Djibouti	13,489	+17	183	+2	13,269	EMRO
193	Guinea-Bissau	6,149	+16	143	+2	5,671	Africa
194	Sint Maarten	4,501	+13	75	0	4,401	Non
195	Sao Tome and Principe	3,718	+13	56	0	3,625	Africa
196	Gambia	9,973	+10	341	+1	9,618	Africa
197	Timor-Leste	19,794	+9	122	0	19,656	SEARO
198	Liberia	5,815	+3	287	0	5,458	Africa
199	Bhutan	2,622	+1	3	0	2,613	SEARO
200	French Polynesia	40,178	0	636	0	33,500	Non
201	El Salvador	113,422	0	3,664	+60	94,980	Americas
202	Tajikistan	17,086	0	124	0	16,960	EURO
203	Madagascar	42,898	0	958	0	41,322	Africa
204	St. Barth	1,589	0	6	0	462	Non
205	Sierra Leone	6,396	0	121	0	4,393	Africa
206	Vanuatu	6	0	1	0	3	WPRO
207	Sudan	40,238	0	3,099	0	32,905	EMRO
208	Diamond Princess	712	0	13	0	699	NA
209	British Virgin Islands	2,725	0	37	0	2,649	Non
210	Montserrat	41	0	1	0	34	Non
211	Macao	77	0	0	0	73	WPRO

212	Saint Pierre Miquelon	32	0	0	0	32	Non
213	Falkland Islands	68	0	0	0	67	Non
214	Wallis and Futuna	445	0	7	0	438	Non
215	Palau	8	0	0	0	8	WPRO
216	Vatican City	27	0	0	0	27	Non
217	Samoa	3	0	0	0	3	WPRO
218	Solomon Islands	20	0	0	0	20	WPRO
219	Western Sahara	10	0	1	0	8	Non
220	MS Zaandam	9	0	2	0	7	NA
221	Marshall Islands	4	0	0	0	4	WPRO
222	Saint Helena	2	0	0	0	2	Non
223	Micronesia	1	0	0	0	1	WPRO
	Total	249,342,303	+3,019,693	5,045,062	+47,792	224,123,664	

Figure 4. Areas with reported confirmed cases of COVID-19 (25 – 31 October 2021)



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 30 October–5 November, 2021 (Updated as of 5 November 2021, 1300H 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	7659	+8	10	+4	7520	+4	129	0
Andhra Pradesh	2067556	+2321	3830	-913	2049338	+3211	14388	+23
Arunachal Pradesh	55174	+40	68	-47	54826	+87	280	0
Assam	611656	+1828	3430	-320	602207	+2118	6019	+30
Bihar	726120	+41	44	-2	716415	+43	9661	0
Chandigarh	65357	+22	32	+3	64505	+19	820	0
Chhattisgarh	1006129	+172	279	-6	992267	+170	13583	+8
Dadra and Nagar Haveli and Daman and Diu	10682	0	1	-5	10677	+5	4	0
Delhi	1440003	+252	303	-42	1414609	+294	25091	0
Goa	178245	+229	337	-100	174542	+326	3366	+3
Gujarat	826680	+176	220	+36	816370	+138	10090	+2
Haryana	771287	+70	110	-23	761127	+92	10050	+1
Himachal Pradesh	224619	+1000	1646	-310	219205	+1287	3768	+23
Jammu and Kashmir	332651	+688	981	+118	327232	+564	4438	+6
Jharkhand	348828	+108	127	-27	343563	+134	5138	+1
Karnataka	2989275	+1962	8296	-290	2942884	+2211	38095	+41
Kerala***	4995255	+48914	75171	-3557	4887350	+50422	32734	+2049
Ladakh	21005	+75	98	+49	20698	+25	209	+1
Lakshadweep	10365	0	0	0	10314	0	51	0
Madhya Pradesh	792888	+65	114	-1	782250	+66	10524	0
Maharashtra	6615299	+7345	18691	-3675	6456263	+10809	140345	+211
Manipur	123957	+431	704	-138	121326	+560	1927	+9
Meghalaya	83763	+236	391	-125	81916	+354	1456	+7
Mizoram	124026	+3938	6141	-920	117445	+4845	440	+13
Nagaland	31894	+122	195	-15	31012	+134	687	+3
Odisha	1042773	+2543	3537	-717	1030889	+3235	8347	+25
Puducherry	128134	+243	350	-103	125924	+343	1860	+3
Punjab****	602466	+146	240	-10	585664	+150	16562	+6
Rajasthan	954450	+32	48	+22	945448	+10	8954	0
Sikkim	32019	+80	174	-4	31447	+81	398	+3

Tamil Nadu	2706493	+6939	10895	-1156	2659407	+7976	36191	+119
Telangana	672052	+1052	3879	-247	664212	+1290	3961	+9
Tripura	84557	+108	146	+32	83595	+76	816	0
Uttarakhand	343924	+55	146	0	336377	+54	7401	+1
Uttar Pradesh	1710181	+56	95	-7	1687184	+61	22902	+2
West Bengal	1596332	+6300	8193	+84	1568951	+6133	19188	+83
Total	34333754	+87597	148922	-12412	33724959	+97327	459873	+2682

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

iv. Travel Bans/Advisories & Quarantine Orders

- [1] **Argentina** – Starting 1 November, borders will re-open to all vaccinated foreign tourists or those with a negative PCR test result within 72h prior to entry.
- [2] **Australia** – From 31 October, fully vaccinated tourists arriving from New Zealand are permitted to fly into New South Wales and Victoria without quarantining. From 1 November, vaccinated Australians will be able to travel internationally without an exemption and residents and their families will be able to return without quarantining if they fly into New South Wales or Victoria.
- [3] **Australia** – From 5 November, fully vaccinated Victorian residents can travel into NSW unless they have been to a place of high concern while those over the age of 16 who are not fully vaccinated are not allowed to enter NSW for recreation or a holiday.
- [4] **Costa Rica** – Starting January 8, 2022, all of the country's hotels, resorts, restaurants, bars, casinos, shops, museums, art and dance academies, gymnasiums and adventure tourism businesses will only be allowed to admit people who have been fully vaccinated with an approved COVID-19 vaccine such as Moderna, Pfizer-BioNTech and AstraZeneca and Janssen and only fully vaccinated travelers and those under the age of 12 will be exempt from the travel insurance policy.
- [5] **European union** – As of 29 October, Argentina, Colombia, Namibia and Peru have been added to the list of countries for which travel restrictions for non-essential travel into the EU should be lifted.
- [6] **European union** - The European Centre for Disease Prevention and Control has now categorized Bulgaria, Croatia, Estonia, Latvia, Lithuania, Romania, Slovenia, half of Greece, half of Ireland, half of Belgium, and half of Slovakia as dark red, meaning that travel to and from these areas is highly discouraged.
- [7] **France** – As of 31 October, some of the restrictions for travellers to New Caledonia have been relaxed with no longer a need to prove urgent personal circumstances to be allowed into the territory. Travellers, however, must be fully vaccinated, undergo a test on arrival and spend a week in isolation either at a hotel or at home.
- [8] **Greece** – As of 30 October, entry restrictions for arrivals from Argentina, India, Uruguay, Oman and Chile have been lifted, taking the number of third countries on the safe travel list from 36 to 41. They are also required to present a pre-departure test, taken 72 hours or 48 hours before departure.
- [9] **India** - The ban on international passenger flights has been extended until November 30, 2021. However, special international flights can be operated by airlines of around 25 countries that have air bubble agreements which include US, the UK, the UAE, Kenya, Bhutan and France.
- [10] **Japan** – On 2 November, gradual easing of COVID-19 border restrictions was confirmed. Quarantine for business travelers would be cut from 10 days to 3 going into effect from 8 November while daily border entrants would be raised from 3,500 people to 5,000 later this month.
- [11] **Laos** - Foreign tourists who have had two doses of a COVID-19 vaccine, especially from China and South Korea will be allowed to travel in 2022.
- [12] **Latvia** – As of 30 October, travelers from Spain, Italy, Malta, and the Vatican City State, who have been fully vaccinated or recovered from the virus are allowed entry for non-essential

purposes without having to undergo testing before or after their arrival and are also exempt from the self-isolation requirement.

- [13]**Myanmar** - Entry restrictions for travelers has been extended and the issuance of all sorts of visas, and visa exemption services have been suspended until November 30.
- [14]**Norway** – As of 31 October, strict entry bans on most non-EU/EEA residents including those planning to visit for the purposes of tourism has been extended with no indication as to how long it will last. This excludes residents from so-called purple countries and those with close family members in Norway, foreign students or people with urgent work reasons.
- [15]**Spain** - The entry ban imposed against the majority of third countries for non-essential purposes has been extended until November 30.
- [16]**Spain** - Travellers who enter from Norway, Sweden, and Poland or any of the regions of France and Italy are now required to present proof of immunisation with one of the approved vaccine doses or proof of recovery.
- [17]**Thailand** – As of 2 November, travelers from 63 low-risk countries, including USA, UK and Canada will only have to face one night in quarantine while waiting for their test results. Those traveling from other countries not on the eligible list can still enter through stay in a government-approved hotel or resort in one of 17 destinations for seven nights and those unvaccinated tourists must quarantine for ten days upon arrival.
- [18]**USA** – Travel bans impacting visitors will end on 8 November for all noncitizen non-immigrants. There will be a need for vaccination for all travelers as of 29 October, with the accepted vaccines being Moderna, Johnson & Johnson, Pfizer-BioNTech, AstraZeneca, Covishield, BIBP/Sinopharm and Sinovac.
- [19]**USA** - The US Centers for Disease Control and Prevention added Russia, Belgium, Burkina Faso and Slovakia to its list of "very high" risk travel destinations starting 1 November.
- [20]**Vietnam** - International travelers who are either fully vaccinated or recovered Covid-19 patients can visit five destinations in Vietnam starting November without quarantine mandate. For entry requirements, travelers are also required to show a negative coronavirus test taken within 72 hours before departure.

v. Lockdowns

- [1] **Australia** – Starting 8 November, Covid-19 curbs will be lifted in Sydney for vaccinated residents who will be allowed unlimited numbers of guests in their homes. Pubs and clubs will also be able to accommodate more guests and reopen dance floors. However, unvaccinated people will remain under the tougher restrictions until Dec 15, or when New South Wales state's double-vaccination rate reaches 95 per cent.
- [2] **Cambodia** – Starting 1 November, full reopening of the country in all areas will begin with theatres and museums opening during the weekend. Three tourist locations will also open to vaccinated visitors from the end of November, with quarantine reduced to five days in Sihanoukville, Koh Rong and Koh Kong provinces.
- [3] **China** – As of 29 October, third Chinese city of Heihe has been put under a lockdown with mass gatherings banned and only one person from a family allowed to go outside every two days to buy essentials. Fever checks have been made mandatory for people entering public spaces and road traffic has also been restricted.
- [4] **China** – As of 2 November, people coming from a city or county where a confirmed coronavirus case has been found cannot enter Beijing. Those coming from areas with no Covid cases need to present Covid test results from the last 48 hours and monitor their health for 14 days after entering the city.
- [5] **India (West Bengal)** – Due to rising cases of the AY.4.2 variant of coronavirus, COVID-19 restrictions in the state of west Bengal have been extended till November 30, 2021. All outdoor activities will remain prohibited between 11 pm to 5 am.
- [6] **Laos** – As of 30 October, ongoing lockdown in the country has been extended for 15 more days.
- [7] **Netherlands** - On 2 November, certain measures were re-imposed, including the wearing of face masks and extending the use of corona pass as of Nov 6 to public places including museums, gyms and outdoor terraces.
- [8] **New Zealand** – As of 2 November, part of the Northland region of New Zealand will enter a level 3 lockdown from midnight.
- [9] **South Korea** – Starting 1 November, range of curbs have been eased and the vaccine passports have been introduced at high-risk venues such as gyms, saunas and bars. Changes include lifting of curfews on restaurants and cafes, increasing the capacity to 50% for outdoor sporting events and dropping of recommendation that at least 30% of companies' employees work from home.
- [10] **Tonga** – From midnight on 1 November, island of Tongatapu will go into a snap lockdown for seven days. Residents will be required to stay home, except to access essential services or to purchase essential goods, including medical supplies. A curfew will also be enforced between 8pm and 6am, with all bars, restaurants and non-essential businesses to close temporarily.
- [11] **Turkmenistan** – Restrictions which were to end on 1 November have been extended by two weeks. The measures include closing of private shops and restaurants, street vendors to cease their activities and banning of weddings, burials, or other ceremonies across the country.
- [12] **Ukraine** – From 1 November, residents of Kyiv will have to present vaccine certificates to use restaurants, gyms and public transport as restriction in the capital have been tightened. On 28 October, Kyiv was declared a 'red zone' area, a designation that carries the most severe restrictions.

vi. Military Surveillance

[1] United States

- As of 3 Nov, a total of 250,902 cases with 2,269 hospitalizations and 73 deaths have been reported in the US military. There were 87,426 cases in the Army, 48,862 cases in the Navy, 43,701 cases in the Air Force, 40,592 cases in the National Guard, 28,691 cases in the Marine Corps and 1,630 cases in the DoD Agencies.

[2-4] South Korea

- On 3 Nov, 6 new cases were reported among two Navy officers, two Army soldiers, a civilian employee of the Army and an officer of a military unit attached to the defense ministry.
- On 4 Nov, 9 new cases were reported among 3 Army officers stationed in Damyang, an Army officer based in Chuncheon, in Uijeongbu, an officer of a military unit attached to the defense ministry, a civilian employee of the Army and two conscripts.
- On 5 Nov, 8 new cases were reported, bringing the total caseload among its personnel to 2,067. Cases were reported among five Army draftees, including a trainee at a boot camp in Nonsan, an Army officer stationed in Gapyon and another officer based in Paju. Of the cumulative cases in the military, 51 patients are still under treatment.

vii. WHO Guidance & Other Protocols

The following updates were published by WHO from 30 October – 5 November 2021:

- **Interim recommendations for an extended primary series with an additional vaccine dose for COVID-19 vaccination in immunocompromised persons**
Available at: <https://www.who.int/publications/i/item/WHO-2019-nCoV-vaccines-SAGE-recommendation-immunocompromised-persons>
- **Interim recommendations for use of the inactivated COVID-19 vaccine BIBP developed by China National Biotech Group (CNBG), Sinopharm**
Available at: <https://www.who.int/publications/i/item/WHO-2019-nCoV-vaccines-SAGE-recommendation-BIBP>
- **Key planning recommendations for mass gatherings in the context of COVID-19**
Available at: <https://www.who.int/publications/i/item/10665-332235>
- **Interim recommendations for use of the Bharat Biotech BBV152 COVAXIN® vaccine against COVID-19**
Available at: <https://www.who.int/publications/i/item/WHO-2019-nCoV-vaccines-SAGE-recommendation-bbv152-covaxin>

viii. CDC Guidance & Protocols

US CDC

The following update was published by the US CDC from from 30 October – 5 November 2021:

- **Interim Guidance on People Experiencing Unsheltered Homelessness**
Available at: <https://www.cdc.gov/coronavirus/2019-ncov/community/homeless-shelters/unsheltered-homelessness.html>
- **Interim Guidance for Homeless Service Providers to Plan and Respond to Coronavirus Disease 2019 (COVID-19)**
Available at: <https://www.cdc.gov/coronavirus/2019-ncov/community/homeless-shelters/plan-prepare-respond.html>
- **COVID-19 Guidance for Operating Early Care and Education/Child Care Programs**
Available at: <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/child-care-guidance.html>
- **Guidance for COVID-19 Prevention in K-12 Schools**
Available at: <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/k-12-guidance.html>
- **Guidance for Institutions of Higher Education (IHEs)**
Available at: <https://www.cdc.gov/coronavirus/2019-ncov/community/colleges-universities/considerations.html>
- **COVID-19 Guidance for Operating Early Care and Education/Child Care Programs**
Available at: <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/child-care-guidance.html>
- **Interim Considerations: Preparing for the Potential Management of Anaphylaxis after COVID-19 Vaccination**
Available at: <https://www.cdc.gov/vaccines/covid-19/clinical-considerations/managing-anaphylaxis.html>
- **Interim Laboratory Biosafety Guidelines for Handling and Processing Specimens Associated with Coronavirus Disease 2019 (COVID-19)**
Available at: <https://www.cdc.gov/coronavirus/2019-ncov/lab/lab-biosafety-guidelines.html>
- **Operational Considerations for Personal Protective Equipment in the Context of Global Supply Shortages for Coronavirus Disease 2019 (COVID-19) Pandemic: non-US Healthcare Settings**
Available at: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/non-us-settings/emergency-considerations-ppe.html>

EU CDC

No updates were published by the EU CDC from 30 October – 5 November 2021.

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] **Australia** - Bharat Biotech's Covaxin vaccine has been recognized as a valid vaccine to establish the vaccination status of travellers coming inside the country.
- [2] **Bahrain** – On 2 November, Pfizer COVID-19 vaccine was approved for emergency use in children aged between 5 and 11 years.
- [3] **Indonesia** – On 1 November, the Sinovac Biotech COVID-19 vaccine was approved for children aged 6-11.
- [4] **Indonesia** - World's first emergency use authorization has been given for the two-dose Novavax COVID-19 vaccine.
- [5] **Israel** – On 29 October, Oravax Medical Inc. received clearance from the South African Health Products Regulatory Authority to commence patient enrollment in a first in human, Phase 1 clinical trial, for its oral COVID-19 vaccine. The vaccine targets three SARS CoV-2 virus surface proteins including proteins less susceptible to mutation, thus making the vaccine potentially more effective against current and future variants of the COVID-19 virus.
- [6] **USA** – 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.
- [7] **USA** – Novavax filed for authorization of its COVID-19 vaccine, NVX-CoV2373, in the United Kingdom and Australia on Oct. 27, 2021, and Oct. 29, 2021, respectively.
- [8] **USA** – On 3 November, the World Health Organization (WHO) issued an emergency use listing (EUL) for COVAXIN® (developed by Bharat Biotech), India.
- [9] **Zimbabwe** – On 1 November, Sinovac Biotech (SVA.O) COVID-19 vaccine was approved for 16-17-year-olds.

Therapeutics

- [10] **China** - DXP-604 has been approved at Beijing Ditan Hospital for expanded access, also called compassionate use. It is a new neutralizing antibody treatment which has been used on 14 COVID-19 patients in Beijing.
- [11] **Japan** – On 4 November, Chugai Pharmaceutical Co's COVID-19 antibody treatment Ronapreve, was approved for expanded use to allow for preventative care, as prophylaxis for COVID-19 and as treatment of asymptomatic cases.
- [12] **UK** - On 4 November, COVID-19 antiviral pill molnupiravir, jointly developed by Merck and Ridgeback Biotherapeutics was approved and recommended for use in people with mild to

moderate COVID-19 and at least one risk factor for developing severe illness, such as obesity, older age diabetes and heart disease.

[13]**UK** - The researchers from the University of Kent in the UK and Goethe-University in Germany have identified that the drug benfooxythiamine (BOT) suppressed the reproduction of SARS-CoV-2, and infected cells did not produce coronaviruses. The drug is an inhibitor of the Pentose Phosphate Pathway which aids in the reproduction of the SARS-CoV-2 virus.

[14]**USA** – On 1 November, Novatek announced their results from a Phase 2 randomized, controlled multicenter trial of the BOSS-Covid-19 study which evaluated the efficacy and safety of oral TQ Formula in COVID-19 patients in the outpatient setting. Based on the outcome the FDA has granted a Type B meeting to consider Emergency Use Authorization (EUA) of oral TQ Formula to treat non-hospitalized COVID-19 patients.

Vaccine Approval Status

Table 6: Number of approving countries per vaccine as of 29 October 2021

Developer	Vaccine	Number of countries approving
Anhui Zhifei Longcom	RBD-Dimer	3
Bharat Biotech	Covaxin	9
CanSino	Ad5-nCoV	9
Center for Genetic Engineering and Biotechnology (CIGB)	CIGB-66	4
Chumakov Center	KoviVac	1
FBRI	EpiVacCorona	2
Gamaleya	Sputnik Light	18
Gamaleya	Sputnik V	72
Johnson & Johnson	Ad26.COVS.2.S	75
Kazakhstan RIBSP	QazVac	2
Medigen	MVC-COV1901	1
Minhai Biotechnology Co	SARS-CoV-2 Vaccine (Vero Cells)	1
Moderna	mRNA-1273	76
Oxford/AstraZeneca	AZD1222	124
Pfizer/ BioNTech	BNT162b2	103
Serum Institute of India	Covishield	46
Shifa Pharmed Industrial Co	COVID-19 Inactivated Vaccine	1
Sinopharm	BBIBP-CorV	68
Sinopharm	Inactivated	2
Sinovac	CoronaVac	42
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] **Thailand** - A 12-year-old girl from western province of Ratchaburi, developed cough, fatigue, and chest pain 6 days after receiving the Pfizer vaccine. She was then diagnosed with a pulmonary embolism. She has since recovered and it has been reported that the girl is underdeveloped for her age and has curvature of the spine and an abnormal body structure, which could have affected her lungs.

x. Scientific Publications with Epidemiology and Clinical Focus

Community SARS-CoV-2 seroprevalence before and after the second wave of SARS-CoV-2 infection in Harare, Zimbabwe [1]

Background: By the end of July 2021 Zimbabwe, has reported over 100,000 SARS-CoV-2 infections. The true number of SARS-CoV-2 infections is likely to be much higher. We conducted a seroprevalence survey to estimate the prevalence of past SARS-CoV-2 in three high-density communities in Harare, Zimbabwe before and after the second wave of SARS-CoV-2.

Methods: Between November 2020 and April 2021 we conducted a cross-sectional study of randomly selected households in three high-density communities (Budiriro, Highfield and Mbare) in Harare. Consenting participants answered a questionnaire and a dried blood spot sample was taken. Samples were tested for anti-SARS-CoV-2 nucleocapsid antibodies using the Roche e801 platform.

Findings: A total of 2340 individuals participated in the study. SARS-CoV-2 antibody results were available for 70.1% (620/885) and 73.1% (1530/2093) of eligible participants in 2020 and 2021. The median age was 22 (IQR 10-37) years and 978 (45.5%) were men. SARS-CoV-2 seroprevalence was 19.0% (95% CI 15.1-23.5%) in 2020 and 53.0% (95% CI 49.6-56.4) in 2021. The prevalence ratio was 2.47 (95% CI 1.94-3.15) comparing 2020 with 2021 after adjusting for age, sex, and community. Almost half of all participants who tested positive reported no symptoms in the preceding six months.

Interpretation: Following the second wave, one in two people had been infected with SARS-CoV-2 suggesting high levels of community transmission. Our results suggest that 184,800 (172,900-196,700) SARS-CoV-2 infections occurred in these three communities alone, greatly exceeding the reported number of cases for the whole city. Further seroprevalence surveys are needed to understand transmission during the current third wave despite high prevalence of past infections.

COVID-19-related acute kidney injury; incidence, risk factors and outcomes in a large UK cohort [2]

Background: Acute kidney injury (AKI) is common among patients hospitalised with COVID-19 and associated with worse prognosis. The aim of this study was to investigate the epidemiology, risk factors and outcomes of AKI in patients with COVID-19 in a large UK tertiary centre.

Methods: We analysed data of consecutive adults admitted with a laboratory-confirmed diagnosis of COVID-19 across two sites of a hospital in London, UK, from 1st January to 13th May 2020.

Results: Of the 1248 inpatients included, 487 (39%) experienced AKI (51% stage 1, 13% stage 2, and 36% stage 3). The weekly AKI incidence rate gradually increased to peak at week 5 (3.12 cases/100 patient-

days), before reducing to its nadir (0.83 cases/100 patient-days) at the end the study period (week 10). Among AKI survivors, 84.0% had recovered renal function to pre-admission levels before discharge and none required on-going renal replacement therapy (RRT). Pre-existing renal impairment [odds ratio (OR) 3.05, 95%CI 2.24-4.18; $p < 0.0001$], and inpatient diuretic use (OR 1.79, 95%CI 1.27-2.53; $p < 0.005$) were independently associated with a higher risk for AKI. AKI was a strong predictor of 30-day mortality with an increasing risk across AKI stages [adjusted hazard ratio (HR) 1.59 (95%CI 1.19-2.13) for stage 1; $p < 0.005$, 2.71(95%CI 1.82-4.05); $p < 0.001$ for stage 2 and 2.99 (95%CI 2.17-4.11); $p < 0.001$ for stage 3]. One third of AKI3 survivors (30.7%), had newly established renal impairment at 3 to 6 months.

Conclusions: This large UK cohort demonstrated a high AKI incidence and was associated with increased mortality even at stage 1. Inpatient diuretic use was linked to a higher AKI risk. One third of survivors with AKI3 exhibited newly established renal impairment already at 3-6 months.

COVID-19 and Outcomes in Patients With Inflammatory Bowel Disease: Systematic Review and Meta-Analysis [3]

Background: Our understanding of coronavirus disease 2019 (COVID-19) and its implications for patients with inflammatory bowel diseases (IBD) is rapidly evolving. We performed a systematic review and meta-analysis to investigate the epidemiology, clinical characteristics, and outcomes in IBD patients with COVID-19.

Methods: We searched PubMed, EMBASE, Cochrane Central, Clinicaltrials.gov, Web of Science, MedRxiv, and Google Scholar from inception through October 2020. We included studies with IBD patients and confirmed COVID-19. Data were collected on the prevalence, patient characteristics, pre-infection treatments for IBD, comorbidities, hospitalization, intensive care unit (ICU), admission, and death.

Results: Twenty-three studies with 51,643 IBD patients and 1449 with COVID-19 met our inclusion criteria. In 14 studies ($n = 50,706$) that included IBD patients with and without COVID-19, the prevalence of infection was 1.01% (95% confidence interval [CI], 0.92-1.10). Of IBD patients with COVID-19, 52.7% had Crohn's disease, 42.2% had ulcerative colitis, and 5.1% had indeterminate colitis. Nine studies ($n = 687$) reported outcomes according to IBD therapy received. Compared with patients on corticosteroids, those on antitumor necrosis factor (anti-TNF) therapy had a lower risk of hospitalization (risk ratio [RR], 0.24; 95% CI, 0.16-0.35; $P < .01$; $I^2 = 0\%$) and ICU admission (RR, 0.10; 95% CI, 0.03-0.37; $P < .01$) but not death (RR, 0.16; 95% CI, 0.02-1.71; $P = .13$; $I^2 = 39\%$). Compared with patients on mesalamine, those on antitumor necrosis factor therapy had a lower risk of hospitalizations (RR, 0.37; 95% CI, 0.25-0.54), ICU admissions (RR, 0.20; 95% CI, 0.07-0.58), and death (0.21; 95% CI, 0.04-1.00). Comparing patients on immunomodulators vs mesalamine or anti-TNF therapy, there was no difference in these outcomes.

Conclusions: The prevalence of COVID-19 in IBD patients was low. Use of corticosteroids or mesalamine was significantly associated with worse outcomes, whereas use of anti-TNFs was associated with more favorable outcomes. Further investigation clarifying the mechanisms of these disparate observations could help identify risk and adverse outcome-mitigating strategies for patients with IBD.

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