

Feb | 11

COVID-19

Situation Report 502

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 11 February 2022, 1300H SGT)

Environmental Risk	Transmissibility	Severity of Disease	Availability of Treatment/Vaccination [#]	Overall Risk [%]
Global (n=198 countries)				
<p>High</p> <p>Globally, 192 (97.0%) 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 (26 countries), EURO (51 countries), EMRO (17 countries), Americas (33 countries), and Africa (11 countries).</p> <p>Only 5 (3%) 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. 41 (22%) 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 173 countries ranged from 0.096 to 6.0.⁵</p>	<p>Case fatality rate is currently at 1.43% 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</p>	<p>High</p>

<p>On January 19, the World Health Organization said that international travel bans "do not provide added value and continue to contribute to the economic and social stress" of countries [43].</p>			<p>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> <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> <p>On 13 January, WHO recommended two new drugs to treat patients with COVID-19. Baricitinib in combination with corticosteroids for severe or critical covid-19 patients and a conditional recommendation for the use of the monoclonal antibody sotrovimab for non-severe covid-19 patients who are at high risk for hospitalization [42]</p>	
<p>Western Pacific Region and South-East Asia Region (n=41 countries)</p>				
<p>High</p> <p>36 (87.8%) countries have reported outbreaks; but only 26 (63.4%) countries are reporting a surge in cases.</p> <p>9 (21.9%) 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, Kiribati, Maldives, and Singapore and highest case</p>	<p>As of Feb 8, the estimated effective reproduction no. of 26 countries ranged from 0.25-2.8.[§]</p>	<p>Case fatality rate is 1.28%.</p>	<p>Low Coverage</p> <p>33 countries have commenced vaccination as of 11 February 2022. Coverage was available for the following: i) at least 1 dose was at 51-80% for 19 countries; >80% for 11 countries ii) full vaccination was at 51-80% for 20 countries; >80% for 6 countries.^{&}</p> <p>Indonesia has approved Russian drug Avifavir for emergency use. [22]</p>	<p>High</p>

<p>numbers were reported from Australia, India, Indonesia, Japan, and South Korea.</p> <p>At least 17 countries have closed their borders, 23 countries have opened their borders partially conditionally, and none is allowing free travel.</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>	
European Region (n=53 countries)				
<p>High</p> <p>52 (98.1%) countries have reported with outbreaks; 51 (96.2%) countries are reporting a surge in cases.</p> <p>1 (1.9%) 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 Denmark, Georgia, Israel, Netherlands and Slovenia, and highest case numbers were reported from France, Germany, Russia, Turkey and United Kingdom.</p> <p>At least 4 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 Feb 8, the estimated effective reproduction no. of 50 countries ranged from 0.098-1.7.[§]</p>	<p>Case fatality rate is 1.12%.</p>	<p>Low Coverage</p> <p>53 countries have commenced vaccination as of 11 February 2022. Coverage was available for the following i) at least 1 dose was at 51-80% for 30 countries; >80% for 10 countries; ii) full vaccination was at 51-80% for 29 countries; >80% for 5 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</p>	High

			<p>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>	
Eastern Mediterranean Region (n=22 countries)				
<p>High</p> <p>22 (100%) countries have reported with outbreak; 17 (77.3%) 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, Kuwait, Lebanon, and Palestine, and highest case numbers were reported from Bahrain, Iran, Iraq, Jordan and Lebanon.</p> <p>At least 3 countries have closed their borders, 18 countries have opened their borders partially conditionally, and only 1 country is allowing free travel.</p>	<p>As of Feb 8, the estimated effective reproduction no. of 19 countries ranged from 0.54-1.6.[§]</p>	<p>Case fatality rate is 1.62%.</p>	<p>Low Coverage</p> <p>21 countries have commenced vaccination as of 11 February 2022. Coverage was available for the following: i) at least 1 dose was at 51-80% for 7 countries; >80% for 3 countries; ii) full vaccination was at 51-80% for 6 countries; >80% for 3 countries. &</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; 33 (94.3%) 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 Barbados, Chile, Costa Rica, Dominica and Uruguay, and highest case numbers were reported from Argentina, Brazil, 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 Feb 8, the estimated effective reproduction no. of 35 countries ranged from 0.0099-6.0.⁵</p>	<p>Case fatality rate is 1.80%.</p>	<p>Low Coverage</p> <p>35 countries have commenced vaccination as of 11 February 2022. Coverage was available for the following: i) at least 1 dose was at 51-80% for 16 countries; >80% for 9 countries ii) full vaccination was at 51-80% for 17 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>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>High</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 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>Moderate</p> <p>47 (100%) countries have reported with outbreak; 11 (23.9%) 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, Eswatini</p>	<p>As of Feb 8, the estimated effective reproduction no. of 43 countries ranged from 0.28-3.0.⁵</p>	<p>Case fatality rate is 2.11%.</p>	<p>Low Coverage</p> <p>46 countries have commenced vaccination as of 4 February 2022. Coverage was available for the following: i) at least 1 dose was at 51-80% for 4 countries; >80% for 1 country; ii) full vaccination was at 50-80% for 3 countries; >80% for 1 country. ^{&}</p> <p>Ethiopia has approved the use of Dexamethasone treatment for seriously ill COVID-19 patients. [13]</p>	<p>High</p>

<p>Mauritius, Seychelles and South Africa, and highest case numbers were reported from Algeria, Botswana, Madagascar, South Africa and Zambia.</p> <p>At least 8 countries have closed their borders, 39 countries have opened their borders partially conditionally, and no country is allowing free travel.</p>				
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*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 11 February 2022, 1300H 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
223	406,562,400	406,455,636	5,809,100	1.43%	1.43%	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

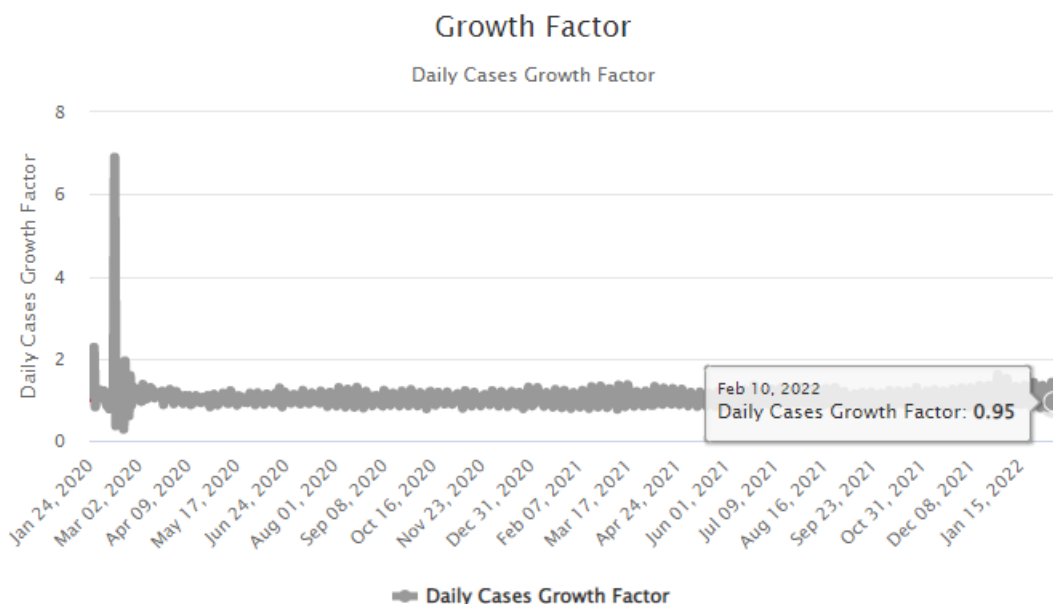
Virus	Incubation Period (Days)	Case Fatality Rate (%)	R ₀
SARS-CoV-2	Median = 5.1 [§] (2-14) or up to 24*	1.43	5.8 (95% CI 4.4–7.7) [^]
SARS-CoV	2-7	9.6	2.0
MERS-CoV	5 (2-14)	34	<1 (higher in health care setting)
Swine Flu	1-4	0.02	1.2-1.6

*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)



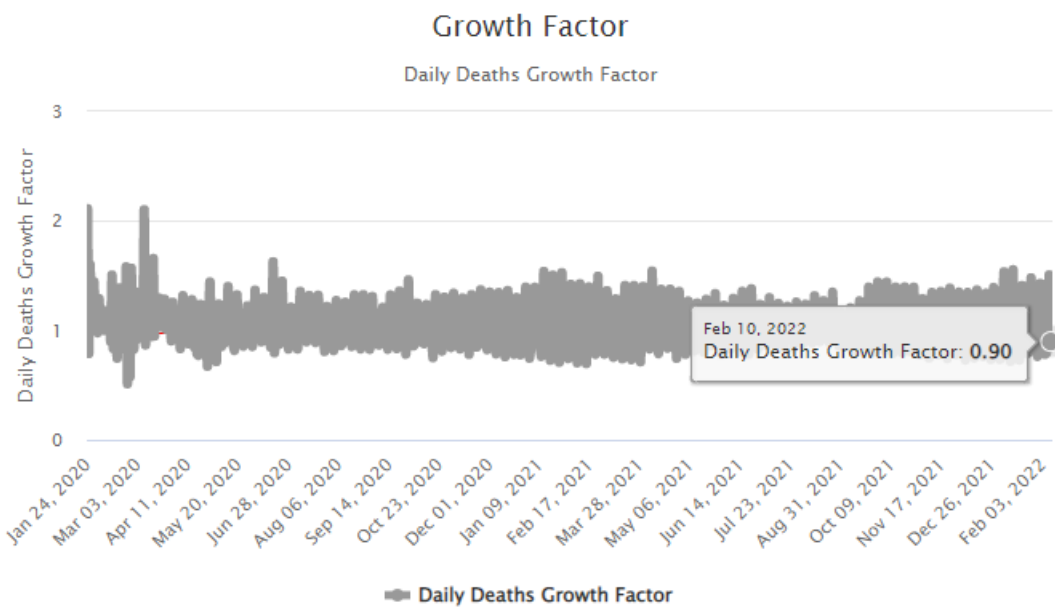
Growth Factor = every day's cases/cases on previous day. A growth factor above 1 indicates an increase, whereas one between 0 and 1 is a sign of decline, with the quantity eventually becoming zero. A growth factor below 1 (or above 1 but trending downward) is a positive sign, whereas a growth factor 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 5 – 11 February 2022
(Updated as of 11 February 2022, 1300H SGT)

No.	Country	Total Cases	Change in Cases	Total Deaths	Change in Deaths	Total Recovered	Region
1	USA	79,052,681	+1,902,269	939,427	+18,598	49,435,538	Americas
2	Germany	11,897,002	+1,353,684	120,196	+1,127	8,487,100	EURO
3	Russia	13,527,845	+1,243,281	338,091	+4,734	10,909,397	EURO
4	France	21,372,278	+1,224,937	134,207	+2,355	15,867,291	EURO
5	Brazil	27,125,512	+1,025,777	636,111	+6,110	23,446,849	Americas
6	Netherlands	5,523,354	+835,235	21,358	+48	3,378,718	EURO
7	Japan	3,666,285	+761,847	19,917	+968	2,752,551	WPRO
8	Turkey	12,653,276	+712,581	89,741	+1,677	11,755,917	EURO
9	India	42,536,137	+585,636	507,208	+7,121	41,331,158	SEARO
10	Italy	11,923,631	+574,930	150,221	+2,487	9,960,136	EURO
11	UK	18,162,199	+554,367	159,158	+1,428	15,681,335	EURO
12	Spain	10,555,196	+355,480	95,606	+1,566	7,264,623	EURO
13	S. Korea	1,239,287	+304,631	7,012	+176	754,694	WPRO
14	Israel	3,347,657	+298,652	9,399	+386	3,011,502	EURO
15	Denmark	2,096,530	+292,190	3,977	+166	1,512,901	EURO
16	Poland	5,313,111	+277,315	107,466	+1,406	4,451,403	EURO
17	Indonesia	4,667,554	+253,071	144,858	+447	4,234,510	SEARO
18	Ukraine	4,421,741	+251,844	102,167	+1,358	3,729,976	EURO
19	Iran	6,730,608	+246,809	133,294	+670	6,238,083	EMRO
20	Chile	2,504,168	+246,163	40,273	+449	1,797,117	Americas
21	Portugal	3,025,421	+229,591	20,401	+324	2,388,235	EURO
22	Austria	2,184,873	+225,856	14,315	+148	1,828,444	EURO
23	Czechia	3,340,318	+196,406	37,660	+335	2,986,523	EURO
24	Argentina	8,700,437	+185,152	123,707	+1,555	8,327,294	Americas
25	Romania	2,508,860	+183,844	61,231	+878	2,060,839	EURO
26	Switzerland	2,505,007	+183,443	13,039	+158	1,575,405	EURO
27	Belgium	3,405,839	+176,210	29,563	+431	2,257,035	EURO
28	Australia	2,850,969	+174,030	4,479	+406	2,568,696	WPRO
29	Mexico	5,226,269	+157,284	311,554	+3,413	4,438,581	Americas
30	Georgia	1,398,059	+147,951	15,404	+302	1,154,476	EURO
31	Jordan	1,417,890	+137,784	13,431	+160	1,217,112	EMRO
32	Norway	986,855	+137,466	1,513	+46	88,952	EURO
33	Sweden	2,389,605	+129,949	16,360	+297	1,494,707	EURO
34	Greece	2,129,153	+126,947	24,507	+674	1,885,470	EURO
35	Vietnam	2,430,683	+126,588	38,688	+625	2,206,594	WPRO

36	Slovakia	1,187,002	+124,962	18,040	+144	939,593	EURO
37	Peru	3,397,637	+88,944	207,536	+1,130	N/A	Americas
38	Malaysia	2,975,422	+87,642	32,075	+75	2,835,464	WPRO
39	Serbia	1,817,207	+86,721	14,234	+427	1,530,729	EURO
40	Thailand	2,561,115	+85,483	22,390	+137	2,427,335	SEARO
41	Hungary	1,684,432	+84,021	42,269	+633	1,410,550	EURO
42	Canada	3,170,550	+76,413	35,231	+865	2,988,622	Americas
43	Lithuania	787,552	+73,344	8,046	+110	673,860	EURO
44	Singapore	439,640	+73,167	882	+22	397,699	WPRO
45	Colombia	6,002,570	+72,177	136,583	+1,540	5,804,357	Americas
46	Latvia	488,329	+66,096	4,987	+64	358,975	EURO
47	Slovenia	828,508	+65,668	6,044	+133	650,724	EURO
48	Bangladesh	1,894,535	+58,759	28,744	+250	1,644,628	SEARO
49	Uruguay	758,366	+57,855	6,710	+131	693,813	Americas
50	Belarus	805,651	+52,156	6,204	+105	792,007	EURO
51	Finland	559,587	+51,647	2,141	+100	46,000	EURO
52	Lebanon	999,155	+50,427	9,789	+132	682,977	EMRO
53	Bahrain	448,166	+49,501	1,419	+9	386,666	EMRO
54	Azerbaijan	725,777	+49,351	8,972	+175	665,909	EURO
55	Estonia	405,101	+47,014	2,095	+48	293,167	EURO
56	Bulgaria	1,025,129	+44,727	34,228	+640	728,992	EURO
57	Ecuador	781,470	+42,173	34,854	+282	N/A	Americas
58	Philippines	3,627,575	+42,114	54,783	+615	3,479,485	WPRO
59	Croatia	1,004,804	+41,434	14,329	+340	944,129	EURO
60	Ireland	1,236,188	+36,971	6,291	+63	1,015,012	EURO
61	Costa Rica	751,605	+35,856	7,752	+131	589,231	Americas
62	Pakistan	1,477,573	+35,310	29,687	+315	1,365,518	EMRO
63	Palestine	549,572	+34,073	4,966	+101	491,918	EMRO
64	Iraq	2,267,745	+34,020	24,626	+171	2,172,866	EMRO
65	Kazakhstan	1,285,669	+31,910	13,433	+138	1,205,671	EURO
66	Réunion	256,787	+30,782	565	+34	216,172	Non
67	Kuwait	593,889	+29,154	2,517	+14	538,421	EMRO
68	Tunisia	958,549	+28,459	26,941	+445	867,338	EMRO
69	Panama	737,659	+25,968	7,909	+136	698,027	Americas
70	Guatemala	725,701	+23,391	16,577	+131	661,027	Americas
71	Saudi Arabia	722,002	+22,933	8,965	+18	681,711	EMRO
72	Moldova	477,419	+22,324	10,866	+148	423,937	EURO
73	Libya	463,321	+21,362	6,107	+63	409,716	EMRO
74	Paraguay	618,815	+20,645	17,801	+325	555,799	Americas
75	Armenia	399,727	+20,461	8,123	+58	362,004	EURO
76	South Africa	3,634,811	+18,736	96,705	+1,160	3,494,016	Africa
77	Cyprus	283,458	+17,513	762	+26	124,370	EURO
78	Egypt	448,497	+15,736	23,172	+392	382,037	EMRO
79	Oman	360,999	+14,958	4,195	+37	333,906	EMRO

80	UAE	864,102	+12,565	2,278	+25	793,619	EMRO
81	Venezuela	501,586	+12,281	5,521	+59	481,565	Americas
82	Bolivia	878,922	+11,851	21,219	+146	740,050	Americas
83	Iceland	83,942	+11,806	52	+5	74,157	EURO
84	Maldives	155,917	+10,881	287	+7	139,409	SEARO
85	Morocco	1,152,414	+10,706	15,727	+212	1,115,118	EMRO
86	Honduras	402,329	+10,455	10,559	+55	127,289	Americas
87	Sri Lanka	624,545	+9,886	15,723	+208	593,975	SEARO
88	New Caledonia	33,996	+9,505	284	0	19,471	Non
89	North Macedonia	283,547	+9,403	8,686	+192	263,196	EURO
90	Nepal	971,475	+8,958	11,864	+86	930,607	SEARO
91	Luxembourg	172,502	+8,522	968	+12	146,801	EURO
92	Martinique	101,298	+8,502	854	+13	104	Non
93	Cuba	1,057,797	+8,391	8,454	+34	1,043,768	Americas
94	Dominican Republic	567,085	+8,149	4,339	+24	557,208	Americas
95	Bosnia and Herzegovina	361,189	+8,052	14,938	+335	192,218	EURO
96	Mongolia	454,350	+7,580	2,139	+23	313,256	WPRO
97	Qatar	348,924	+6,113	655	+4	338,138	EMRO
98	Uzbekistan	231,871	+5,835	1,595	+20	214,468	EURO
99	Guadeloupe	119,534	+5,568	808	+13	2,250	Non
100	Myanmar	541,904	+5,000	19,310	0	514,833	SEARO
101	Trinidad and Tobago	118,263	+4,946	3,501	+68	93,717	Americas
102	Faeroe Islands	26,288	+4,831	22	+3	7,693	Non
103	Albania	267,020	+4,749	3,402	+33	252,982	EURO
104	Afghanistan	169,448	+4,721	7,477	+57	148,090	EMRO
105	Algeria	260,191	+4,355	6,690	+72	173,476	Africa
106	Hong Kong	18,794	+4,210	216	+3	13,232	WPRO
107	Barbados	50,477	+3,971	291	+8	38,194	Americas
108	Botswana	259,655	+3,614	2,597	+12	253,846	Africa
109	Montenegro	225,253	+3,351	2,624	+33	218,971	EURO
110	French Polynesia	51,723	+2,992	636	0	N/A	Non
111	Brunei	19,473	+2,782	98	0	16,414	WPRO
112	Laos	138,007	+2,706	584	+26	7,660	WPRO
113	Channel Islands	46,018	+2,566	137	+2	42,678	Non
114	Zambia	308,556	+2,209	3,935	+10	301,709	Africa
115	Madagascar	61,434	+2,115	1,307	+33	54,687	Africa
116	New Zealand	19,313	+2,036	53	0	15,600	WPRO
117	Solomon Islands	4,203	+1,846	50	+29	1,054	WPRO
118	Suriname	76,703	+1,845	1,294	+20	49,305	Americas
119	Belize	54,973	+1,775	631	+2	49,625	Americas
120	Cayman Islands	17,687	+1,753	16	+1	8,553	Non
121	Guyana	62,061	+1,385	1,188	+12	57,729	Americas
122	Jamaica	126,589	+1,339	2,708	+31	72,219	Americas
123	Kiribati	2,235	+1,322	0	0	0	WPRO

124	Sudan	59,455	+1,247	3,764	+322	40,329	EMRO
125	Bhutan	6,779	+1,247	5	+1	4,562	SEARO
126	Malta	69,651	+1,218	576	+17	66,722	EURO
127	Ethiopia	467,153	+1,027	7,407	+54	408,613	Africa
128	Timor-Leste	21,158	+1,022	122	0	19,828	SEARO
129	Mauritius	27,435	+1,009	762	0	25,684	Africa
130	Cambodia	122,468	+984	3,015	0	118,420	WPRO
131	Cameroon	117,676	+958	1,907	+27	106,050	Africa
132	Palau	3,045	+930	0	0	1,609	WPRO
133	Kyrgyzstan	199,890	+928	2,920	+27	192,232	EURO
134	Liechtenstein	10,238	+910	74	0	9,658	Non
135	Zimbabwe	231,040	+870	5,373	+16	222,489	Africa
136	Papua New Guinea	38,222	+832	610	+13	36,311	WPRO
137	Somalia	26,203	+815	1,340	+5	13,182	EMRO
138	Gibraltar	14,168	+774	101	0	12,850	Non
139	Syria	52,378	+722	3,020	+22	41,927	EMRO
140	French Guiana	77,088	+689	384	+3	11,254	Non
141	Dominica	10,190	+688	53	+2	9,206	Americas
142	San Marino	13,571	+687	109	0	12,258	EURO
143	Curaçao	38,172	+646	249	+7	36,729	Non
144	Andorra	37,074	+604	148	+1	35,753	EURO
145	Antigua and Barbuda	7,321	+589	134	+7	6,616	Americas
146	Haiti	29,907	+584	807	+15	24,997	Americas
147	Kenya	322,334	+570	5,626	+22	300,305	Africa
148	Ghana	157,751	+531	1,419	+15	155,322	Africa
149	Greenland	11,333	+512	7	+1	2,761	Non
150	China	106,764	+494	4,636	0	100,704	WPRO
151	Saint Lucia	21,873	+474	346	+13	19,889	Americas
152	Nigeria	253,875	+470	3,139	+3	230,221	Africa
153	Namibia	156,563	+461	3,988	+15	151,129	Africa
154	Uganda	162,492	+443	3,567	+24	99,501	Africa
155	Taiwan	19,376	+418	851	0	17,257	WPRO
156	Mozambique	224,559	+416	2,188	+8	217,951	Africa
157	Grenada	13,102	+404	212	+1	12,341	Americas
158	Seychelles	38,120	+349	157	+3	36,737	Africa
159	Saint Martin	9,774	+335	63	+2	1,399	Non
160	Monaco	8,956	+319	49	+3	8,630	EURO
161	Burundi	37,756	+287	38	0	773	Africa
162	Ivory Coast	81,040	+257	789	+4	78,844	Africa
163	St. Barth	3,687	+252	6	0	N/A	Non
164	Gabon	47,399	+251	302	+1	43,508	Africa
165	Fiji	63,398	+251	816	+7	61,470	WPRO
166	Malawi	84,936	+243	2,586	+21	71,537	Africa
167	Isle of Man	22,052	+242	77	+4	21,704	Non

168	Aruba	33,436	+236	196	+2	33,092	Non
169	DRC	85,743	+233	1,316	+38	50,930	Africa
170	Bermuda	11,146	+225	120	+2	10,754	Non
171	Caribbean Netherlands	7,347	+224	31	+2	7,088	Non
172	Eswatini	68,727	+222	1,381	+5	67,085	Africa
173	Tanzania	33,436	+206	792	+3	N/A	Africa
174	Rwanda	129,234	+195	1,449	+5	45,522	Africa
175	Senegal	85,308	+191	1,956	+6	82,886	Africa
176	Bahamas	32,871	+191	756	+8	25,300	Americas
177	Mauritania	58,542	+161	971	+9	57,099	Africa
178	Angola	98,474	+155	1,897	+1	96,162	Africa
179	Congo	23,860	+155	375	+4	20,178	Africa
180	Comoros	7,989	+145	160	0	7,672	Africa
181	Mayotte	36,556	+120	187	0	2,964	Non
182	Lesotho	32,372	+114	696	+2	22,812	Africa
183	Guinea	36,314	+108	434	+8	32,662	Africa
184	Mali	30,251	+103	715	0	27,110	Africa
185	Sint Maarten	9,469	+96	83	+4	9,106	Non
186	Guinea-Bissau	7,820	+94	158	+2	6,873	Africa
187	British Virgin Islands	5,928	+89	58	+9	N/A	Non
188	CAR	14,110	+87	110	0	6,859	Africa
189	Liberia	7,358	+86	290	0	5,747	Africa
190	Nicaragua	17,791	+82	218	+1	4,225	Americas
191	Yemen	11,166	+79	2,028	+8	7,183	EMRO
192	Anguilla	2,458	+74	9	+1	2,435	Non
193	Cabo Verde	55,827	+73	398	+2	55,319	Africa
194	Togo	36,620	+70	270	+2	34,223	Africa
195	South Sudan	16,880	+60	137	0	13,077	Africa
196	Tonga	66	+60	0	0	2	WPRO
197	Chad	7,214	+59	190	0	4,874	Africa
198	Eritrea	9,660	+59	102	+3	9,434	Africa
199	Saint Pierre Miquelon	1,009	+56	1	0	951	Non
200	Gambia	11,911	+48	365	+1	11,461	Africa
201	Niger	8,703	+47	303	+2	8,229	Africa
202	Djibouti	15,529	+37	189	0	15,317	EMRO
203	Turks and Caicos	5,806	+36	35	+1	5,649	Non
204	Tajikistan	17,367	+32	124	0	17,218	EURO
205	Burkina Faso	20,696	+32	375	+3	20,269	Africa
206	Saint Kitts and Nevis	5,495	+28	39	+2	5,334	Americas
207	St. Vincent Grenadines	6,721	+26	101	+6	6,495	Americas
208	Equatorial Guinea	15,853	+25	182	0	15,546	Africa
209	Sierra Leone	7,648	+23	125	0	N/A	Africa
210	Sao Tome and Principe	5,916	+9	71	+1	5,824	Africa
211	El Salvador	135,109	0	3,975	+54	120,327	Americas

212	Marshall Islands	7	0	0	0	7	WPRO
213	Falkland Islands	89	0	0	0	N/A	Non
214	Montserrat	163	0	2	+1	161	Non
215	Benin	26,498	0	163	0	25,506	Africa
216	Wallis and Futuna	454	0	7	0	438	Non
217	Samoa	33	0	0	0	3	WPRO
218	Diamond Princess	712	0	13	0	699	NA
219	Macao	79	0	0	0	79	WPRO
220	Vatican City	29	0	0	0	28	Non
221	Western Sahara	10	0	1	0	8	Non
222	MS Zaandam	9	0	2	0	7	NA
223	Vanuatu	7	0	1	0	6	WPRO
224	Saint Helena	2	0	0	0	2	Non
225	Micronesia	1	0	0	0	1	WPRO
	Total	406,562,400	+18,201,396	5,809,100	+77,854	324,019,974	

Figure 4. Areas with reported confirmed cases of COVID-19 (31 January – 6 February 2022)

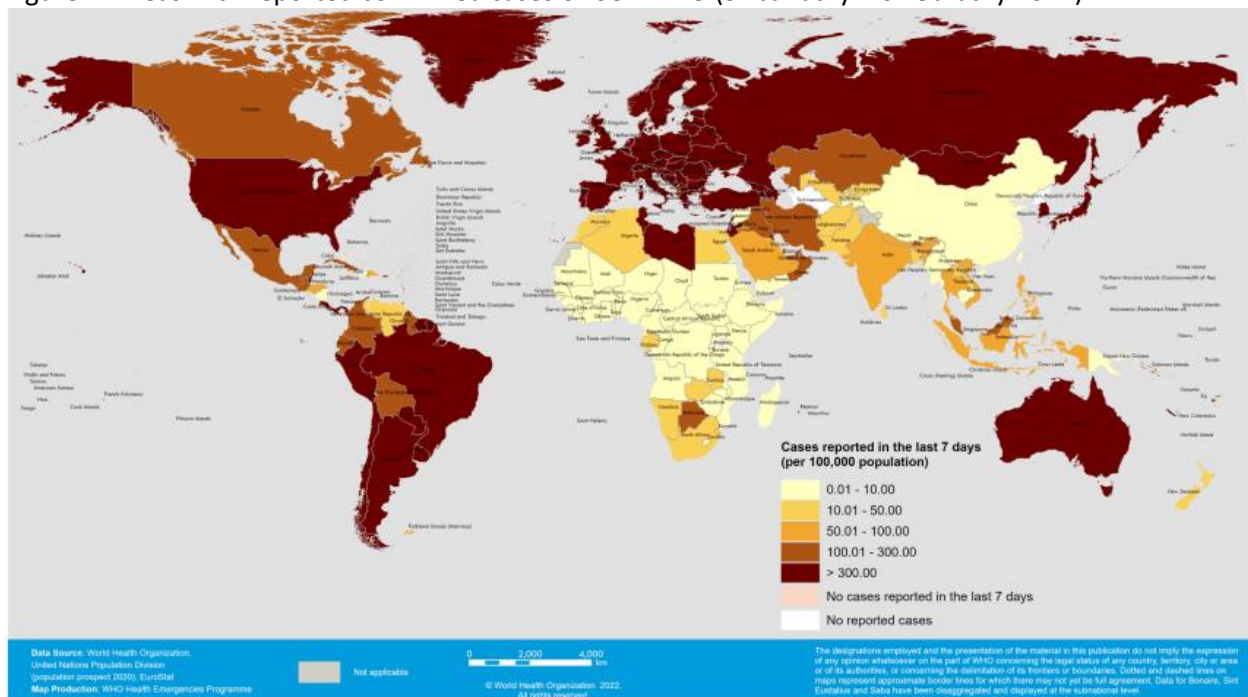
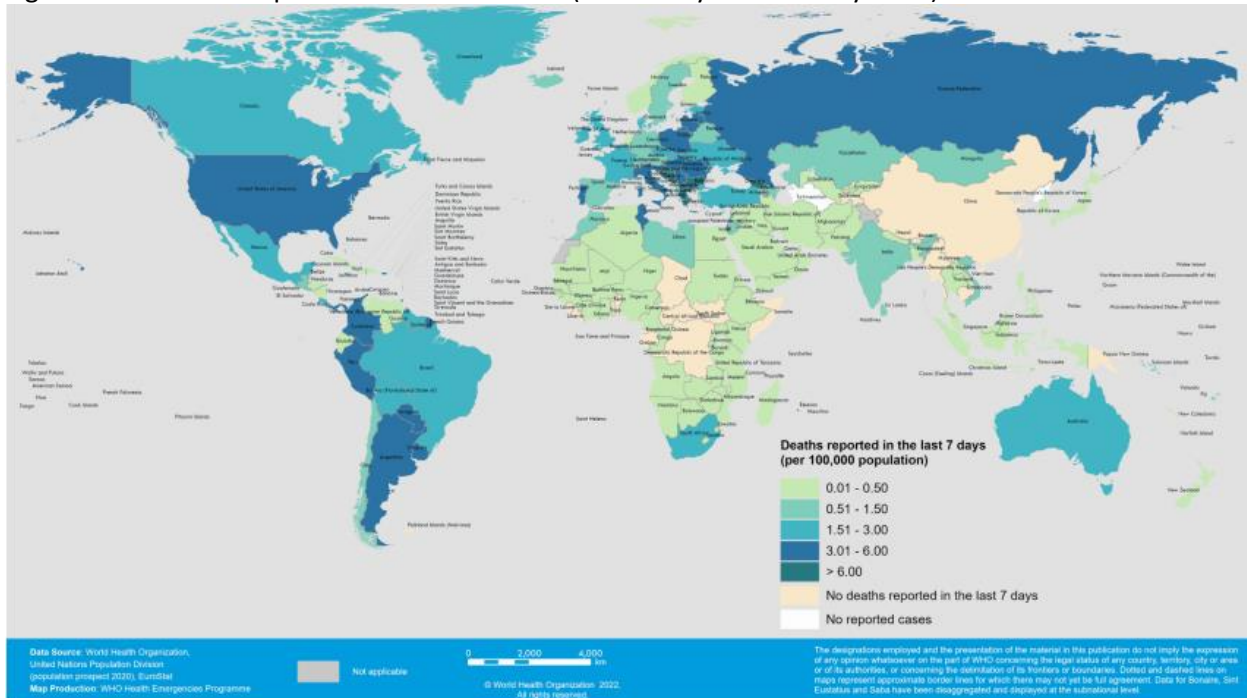


Figure 5. Areas with reported COVID-19 deaths (31 January – 6 February 2022)



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

Table 6. COVID-19 cases and deaths reported by states/UT in India between 5 – 11 February 2022
(Updated as of 11 February 2022, 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	9958	+114	152	-138	9677	+252	129	0
Andhra Pradesh	2309967	+21401	40884	-59738	2254400	+81087	14683	+52
Arunachal Pradesh	63890	+997	978	-1397	62619	+2391	293	+3
Assam	722977	+4057	5768	-10757	710619	+14723	6590	+91
Bihar	828348	+2924	1660	-2093	814443	+4998	12245	+19
Chandigarh	91114	+1106	816	-1774	89152	+2863	1146	+17
Chhattisgarh	1143994	+12126	9897	-11578	1120119	+23609	13978	+95
Dadra and Nagar Haveli and Daman and Diu	11413	+54	35	-68	11374	+122	4	0
Delhi	1848619	+12640	5438	-9432	1817146	+21956	26035	+116
Goa	243683	+3212	3202	-3849	236717	+7005	3764	+56
Gujarat	1210487	+32556	21437	-47750	1178289	+80090	10761	+216
Haryana	970326	+14633	7889	-12993	951975	+27501	10462	+125
Himachal Pradesh	279198	+5955	4344	-5078	270787	+10973	4067	+60
Jammu and Kashmir	449333	+8853	8512	-21317	436082	+30123	4739	+47
Jharkhand	432748	+2975	2088	-1693	425346	+4660	5314	+8
Karnataka	3917119	+72781	52047	-125229	3825538	+197613	39534	+397
Kerala***	6365051	+235296	233747	-144817	6070170	+375079	61134	+5034
Ladakh	27279	+879	670	-470	26383	+1349	226	0
Lakshadweep	11272	+122	98	-127	11122	+249	52	0
Madhya Pradesh	1018749	+37646	29565	-24386	978505	+61983	10679	+49
Maharashtra	7829633	+76085	74108	-103023	7612233	+178600	143292	+508
Manipur	135530	+1625	2397	-1546	131058	+3149	2075	+22
Meghalaya	92766	+1145	1020	-1055	90188	+2175	1558	+25
Mizoram	193367	+13627	12686	-2877	180048	+16488	633	+16
Nagaland	35082	+472	549	-291	33784	+750	749	+13
Odisha	1273003	+17227	12754	-18994	1251431	+36051	8818	+170
Puducherry	164922	+2289	2506	-4346	160460	+6620	1956	+15
Punjab	754367	+7530	5771	-11979	731042	+19275	17554	+234
Rajasthan	1258110	+37049	29530	-29073	1219141	+65993	9439	+129
Sikkim	38868	+515	541	-186	37890	+696	437	+5

Tamil Nadu	3428068	+52739	66992	-111007	3323214	+163520	37862	+226
Telangana	781603	+12196	17754	-16911	759744	+29096	4105	+11
Tripura	100761	+239	307	-2061	99535	+2295	919	+5
Uttarakhand	432364	+7055	8839	-17232	415890	+24226	7635	+61
Uttar Pradesh	2053218	+24002	18016	-23779	2011830	+47663	23372	+118
West Bengal	2008950	+8697	14805	-7075	1973207	+15521	20938	+251
Total	42536137	+732819	697802	-836119	41331158	+1560744	507177	+8194

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

iv. Travel Bans/Advisories & Quarantine Orders

- [1] **Australia** – From 21 February, all foreign travellers who are double-vaccinated will be allowed to enter the country, subject to the travel and testing rules varying by state. For double-vaccinated travellers with valid test results before departure, arrivals in South Australia, Victoria and Queensland are to isolate until a test is taken within 24 hours of arrival; arrivals in New South Wales are to isolate and test within 24 hours of arrival and on or after day six; arrivals in Western Australia are to undergo 7 days of mandatory quarantine and then 7 days of compulsory mask wearing from 9 February; arrivals in Tasmania are not required to quarantine.
- [2] **Estonia** – From 7 February, Estonia has refreshed regulations for non-vaccinated travellers: arrivals from green list countries will be required to present a negative test result upon arriving and undergo a testing process when entering Estonia, and follow the quarantine requirements until they get a negative result of the test; arrivals from red-list will require a mandatory 7-day quarantine without the need for testing. Fully vaccinated arrivals from green-list countries in the EU/Schengen area will be exempted from testing or quarantine requirements when entering the country.
- [3] **France** – From 6 February 2022, Uruguay will be moved from France’s green to orange list. Fully vaccinated travellers from Uruguay will be able to enter France for non-essential reasons but need to present a valid vaccination certificate and a negative test result taken within 48 hours before arrival to enter the country.
- [4] **India** – From 14 February 2022, international arrivals will be not need be required to undergo a 7-day home quarantine. Arrivals will only need to self-monitor for symptoms for 14 days upon arrival, and present a negative test result taken 72 hours before boarding or proof of primary vaccination completion. Random post-arrival tests for 2% passengers will still be conducted at the airports, and symptomatic arrivals will be isolated.
- [5] **Indonesia** – A temporary ban on all arrivals, including returning citizens, at the Jakarta airport was imposed on 9 February 2022, with an unspecified end date for the ban.
- [6] **Kazakhstan** – On 9 February 2022, temporary travel restrictions for two-way travel for Kazakh citizens and foreign travellers have been removed. Kazakh citizens are allowed to travel abroad by land once every 15 days, while foreign arrivals will need to present a negative test result taken 72 hours prior to arrival, except for children under 5 years so long the accompanying person has a negative test result.
- [7] **Malta** – From 14 February 2022, fully vaccinated arrivals from countries listed in the dark red list will only need to undergo a 10-day quarantine, and fully vaccinated children aged between 5 and 11 years-old do not require a negative PCR test result prior to travel.
- [8] **Sweden** – From 9 February 2022, all travellers within the EU/Schengen Area will be allowed to enter the country without restrictions, regardless on vaccination or recovery status.

v. Lockdowns

- [1] **China** – The city of Baise in Guangdong province entered lockdown on 7 February 2022 for an unspecified duration, with similar measures previously implemented in Xi'an.
- [2] **Estonia** – Relaxed restrictions will remove vaccination certificate requirements for attendees of outdoor events from 14 February 2022. Instead, organisers must avoid close crowds and account for the permitted attendee size, limit the gathering duration to as short as possible, and attendees are advised to wear face masks if the activity permits.
- [3] **Hong Kong** – Tightened restrictions from 10 February 2022 will further limit public gatherings to 2 people, suspend church and salon operation and limit private gatherings to two families. Existing restrictions have also been extended until 24 February 2022, after which residents need to present vaccination certificates to enter shopping malls, supermarkets and other venues.
- [4] **India (Himachal Pradesh)** – On 9 February, the night curfew was lifted and participant limits at social gatherings, including weddings and funerals are increased to 50% venue capacity in both indoor and outdoor venues.
- [5] **India (Gujarat)** – The statewide night curfew from 12 to 5 am in 8 major cities have been relaxed until 18 February 2022.
- [6] **Italy** – Relaxed restrictions nationwide from 11 February will remove mandatory mask use when outdoors, except in crowds, and reopen discos at 50% capacity indoors, and 75% capacity outdoors. A “super” green pass i.e. proof of full vaccination, a booster shot or recovery from disease will be required for patrons to be exempted from mask wearing at outdoor discos, and in most public venues including restaurants, movie theaters and stores.
- [7] **Japan** – Existing restrictions for Tokyo and 12 other areas in Japan have been extended until 6 March 2022.
- [8] **Malta** – Eased restrictions from 7 February will remove the four-household indoor gathering rule, shorten the mandatory requirement for fully vaccinated close contacts of confirmed cases from 14 days to 7 days, and allow partially or non-vaccinated residents to enter restaurants, bars and clubs. Vaccination certificates are still required for entry to mass events, sports events, gaming halls, nightclubs and travelling. From 21 February, the quarantine period for fully vaccinated close contacts will be further reduced to 5 days.
- [9] **Nepal** – From 7 February 2022, eased pandemic restrictions in Kathmandu will lift regulations on road traffic, and reopen schools, theaters, gyms and other public venues from 14 February; sports venues and stadiums will be allowed to operate at 50% capacity.
- [10] **Russia** – Relaxed restrictions from 6 February will end mandated self-isolation for close contacts, and quarantine requirements for students in Moscow.
- [11] **Sweden** – The first stage of relaxing restrictions on 9 February will remove most measures placed, including participant limits for public gatherings and events, and the need for vaccination certificates to enter venues and public transport. The second phase of relaxing restrictions is expected to commence on 1 April 2022.
- [12] **Tonga** – The lockdown in the main island of Tongatapu and Vava'u have been extended until 20 February 2022, while that in the islands of Eua Ha'apai and Niuafoou was lifted on 6 February 2022, 6pm.

[13] **Unite Arab Emirates** – Relaxed restrictions from 9 February will increase capacity limits for social activities and events including weddings and funerals, held in various venues such as tourism, economic, entertainment and retail facilities with the use of a vaccination pass. The nation aims to lift all capacity restrictions in the venues by mid-February 2022.

vi. Military Surveillance

South Korea [1-6]

- Between 5 February to 11 February, 2,057 new infections were reported in the South Korean military. This raises the total caseload in the domestic personnel to 7,908 cases, of which 3,000 are active infections. The new cases were reported from the Army (1,094 cases), the Air Force (581 cases), the Marine corps (141 cases), the Navy (105 cases), units under direct control of the defense ministry (92 cases), the South Korea-U.S. Combined Forces Command (4 cases), the Joint Chiefs of Staff (2 cases), and the ministry (2 cases).
- On 10 February, 2 new cases were reported from the Navy's 304-strong Cheonghae unit operating in waters off Africa, bringing the cluster's cumulative case count to 59 cases.
- As of 10 February, a total of 622 cases were reported from the Education & Training Command in Jinju.

United States Forces Japan [7]

- On 4 February and 7 February, a total of 299 new infections were confirmed across 15 installations. The highest number of cases reported on 7 February was from Yokosuka Naval Base (32 cases) and Kadena Air base (16 cases). As of 4 February 2022, the number of active cases on these bases are 196 and 126 respectively. Remaining cases on 7 February 2022 were reported from Naval Air Facility Atsugi and Yokota Air Base (13 cases each), and Marine corps camps Courtney, Foster, Hansen, Kinser and Lester and Marine Corps Air Station Futenma (28 cases).

United States Forces Korea [8]

- From 1 February to 7 February, the US Forces Korea reported 153 new cases, including 43 imported cases, in its affiliated community. This brings the total number of cases in the USFK-affiliated population to 5,956 cases.

vii. WHO Guidance & Other Protocols

The following update was published by WHO from 5 February – 11 February 2022:

- **COVID-19 clinical care pathway (CARE): confirm SARS-CoV-2 infection, assess symptoms, risk factors and severity, respond with appropriate care and treatment, evaluate clinical response and recovery**
Available at: https://www.who.int/publications/i/item/WHO-2019-nCoV-Clinical-CARE_Pathway-Poster_B-2022.1
- **COVID-19 clinical care pathway (CARE): confirm SARS-CoV-2 infection, assess symptoms, risk factors and severity, respond with appropriate care and treatment, evaluate clinical response and recovery Third round of the global pulse survey on continuity of essential health services during the COVID-19 pandemic: Interim report - November–December 2021**
Available at: https://www.who.int/publications/i/item/WHO-2019-nCoV-EHS_continuity-survey-2022.1

viii. CDC Guidance & Protocols

US CDC

The following updates were published by the US CDC from 5 February – 11 February 2022:

- **Effectiveness of Face Mask or Respirator Use in Indoor Public Settings for Prevention of SARS-CoV-2 Infection — California, February–December 2021**
Available at: https://www.cdc.gov/mmwr/volumes/71/wr/mm7106e1.htm?s_cid=mm7106e1_x
- **Clinical Characteristics and Outcomes Among Adults Hospitalized with Laboratory-Confirmed SARS-CoV-2 Infection During Periods of B.1.617.2 (Delta) and B.1.1.529 (Omicron) Variant Predominance — One Hospital, California, July 15–September 23, 2021, and December 21, 2021–January 27, 2022**
Available at: https://www.cdc.gov/mmwr/volumes/71/wr/mm7106e2.htm?s_cid=mm7106e2_x
- **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**
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- **Guidance for Correctional & Detention Facilities**
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- **Testing in Homeless Shelters & Encampments**
Available at: <https://www.cdc.gov/coronavirus/2019-ncov/community/homeless-shelters/testing.html>

EU CDC

The following update was published by the EU CDC from 5 February – 11 February 2022:

- **Considerations for the use of face masks in the community in the context of the SARS-CoV-2 Omicron variant of concern**
Available at: <https://www.ecdc.europa.eu/en/publications-data/using-face-masks-community-reducing-covid-19-transmission>
- **COVID-19 vaccine effectiveness in adolescents aged 12–17 years and interim public health considerations for administration of a booster dose**
Available at: <https://www.ecdc.europa.eu/en/publications-data/covid-19-vaccine-effectiveness-adolescents-and-interim-considerations-for-booster-dose>

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] **Global** – Key findings of the final analysis of multinational Phase 3 trials of the Johnson-Johnson single dose Ad26.COV2.S vaccine, involving a per-protocol population of 39,185 participants are provided below
 - a. The vaccine provided 52.9% protection (95% confidence interval 47.1-58.1%) against moderate to severe–critical COVID-19 at least 28 days after administration.
 - b. Efficacy in the United States against the reference strain (B.1.D614G) and the B.1.1.7 (alpha) variant, was 69.7% (95% CI, 60.7 to 76.9), and 41.7% (95% CI, 36.3 to 46.7) against any severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection.
 - c. Higher protection was observed against severe COVID-19 (74.6% (95% CI, 64.7 to 82.1), medical intervention (75.6% (95% CI, 54.3 to 88.0)), and death (82.8% (95% CI, 40.5 to 96.8)) than against other end points and lasted for 6 months or longer.
 - d. The vaccine was associated with mainly mild-to-moderate adverse events, and no new safety concerns were identified.
- [2] **India** – Emergency approval for use of the single-dose Sputnik Light COVID-19 vaccine was granted on 6 February 2022.
- [3] **Indonesia** – Human trials for locally developed vaccine candidate Merah Putih, by Airlangga University and Biotis Pharmaceutical Indonesia commenced on 9 Feb 2022. The first and second phases of the clinical trials will involve 90 and 405 adult volunteers respectively.

- [4] **Russia** - The Sputnik V vaccine has been granted full permanent approval in Russia on 6 February 2022.
- [5] **South Africa** – Sinopharm vaccine has been approved for use in adults in South Africa on 9 February 2022.
- [6] **United States** – PREVENT-19 Phase 3 results for the Novavax vaccine NVX-CoV2373 indicated an overall efficacy of 79.5% against mild, moderate or severe COVID-19 infection, and 82% efficacy against the Delta variant. Compared young adults aged 18 to 25 years, neutralizing antibody responses using wild-type SARS-CoV-2 were approximately 1.5-fold higher among adolescents, and functional immune responses against variants were 2.4- to 4-fold higher. The trial enrolled 2,247 adolescents between 12 to 17 years old across 73 sites in United States.

Therapeutics

- [7] **India** – Phase 3 trial results for a nitrix oxide nasal spray (NONS) by Glenmark Pharmaceuticals and SaNOTize Research & Development found NONS to be safe and well-tolerated with only mild adverse events reported, and demonstrated a 94% decline in viral load in 24 hours and 99% in 48 hours. The median time to virological cure was 4 days in the NONS group and 8 days in the placebo group ($p < 0.05$). The trial involved 306 non-hospitalised patients across 20 clinical sites in India, and assessed the safety and efficacy of NONS against saline nasal spray. On 9 February, NONS has been approved to be manufactured and marketed as COVID-19 treatment under the brand name FabiSpray for adults in India.

Vaccine Approval Status

Table 7: Number of approving countries per vaccine as of 9 February 2022

Developer	Vaccine	Number of countries approving
Anhui Zhifei Longcom	ZF2001	3
Bharat Biotech	Covaxin	13
Biological E Limited	BECOV2A	1
CanSino	Ad5-nCoV/Convedecia	10
Center for Genetic Engineering and Biotechnology (CIGB)	CIGB-66 (Abdala)	6
Chumakov Center	KoviVac	3
FBRI	EpiVacCorona	4
FBRI	EpiVacCorona-N (Aurora CoV)	1
Gamaleya	Sputnik Light	25
Gamaleya	Sputnik V	74
Health Institutes of Turkey	Turkovac	1
Instituto Finlay de Vacunas Cuba	Soberana Plus	1
Instituto Finlay de Vacunas Cuba	Soberana 02	4
Johnson & Johnson	Ad26.COVS.2.S	106
Kazakhstan RIBSP	QazVac	2
Medigen	MVC-COV1901	2

Minhai Biotechnology Co	SARS-CoV-2 Vaccine (Vero Cells)/ KCONVAC	2
Moderna	mRNA-1273 (Spikevax)	85
National Vaccine and Serum Institute	Recombinant SARS-CoV-2 Vaccine (CHO Cell)	1
Novavax	NVX-CoV2373 (Nuvaxovid)	34
Organization of Defensive Innovation and Research	FAKHRAVAC (MIVAC)	1
Oxford/AstraZeneca	AZD1222/Vaxzevria	137
Pfizer/ BioNTech	BNT162b2	137
Razi Vaccine and Serum Research Institute	Razi Cov Pars	1
Serum Institute of India	Covishield	47
Serum Institute of India	COVOVAX (Novavax formulation)	3
Shifa Pharmed Industrial Co	COVIran Barekat	1
Sinopharm	BBIBP-CorV/Covilo	89
Sinopharm	Inactivated	2
Sinovac	CoronaVac	53
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] **India** – As of 30 January 2022, a total of 70,102 AEFIs and 1,013 fatalities following vaccination were reported nationwide. The AEFIs were attributed to the following vaccines: Covishield (63,315 AEFIs, 921 fatalities), Covaxin (6,757 AEFISs, 92 fatalities), and Sputnik (30 AEFIs).
- [2] **Italy** – Between 27 December 2020 and 26 December 2021, a total of 22 fatalities associated to COVID-19 vaccination was reported in Italy, resulting in a rate of 0.2 fatalities per million doses administered. As of 26 December 2021, a total of 117,920 AEFIs were reported. Of which, 83.7% were mild or moderate cases and a large majority of related deaths were not found to be linked to vaccination.
- [3] **Malaysia** - A total of 24,788 AEFIs were reported from the 63,506,231 vaccine shots administered as of 31 January 2022. Of which, 1,004 AEFIs, including 64 serious AEFIs, resulted from the 11,938,201 booster doses administered. Majority of the booster-related AEFI were mild, including fever (62 cases), headache (38), Immunisation Stress-Related Reaction (ISRR) (35), muscle ache (28), pain at injection site (25), shivering (19), dizziness (18), shortness of breath (16), nauseousness (16) and palpitation (15). The serious AEFI rate for booster shots (5 per million doses) is much lower than that for overall vaccines administered (27 reports per million doses).

x. Scientific Publications with Epidemiology and Clinical Focus

COVID-19 in New York state: Effects of demographics and air quality on infection and fatality [1]

The coronavirus disease 2019 (COVID-19) has had a global impact that has been unevenly distributed among and even within countries. Multiple demographic and environmental factors have been associated with the risk of COVID-19 spread and fatality, including age, gender, ethnicity, poverty, and air quality among others. However, specific contributions of these factors are yet to be understood. Here, we attempted to explain the variability in infection, death, and fatality rates by understanding the contributions of a few selected factors. We compared the incidence of COVID-19 in New York State (NYS) counties during the first wave of infection and analyzed how different demographic and environmental variables associate with the variation observed across the counties. We observed that infection and death rates, two important COVID-19 metrics, to be highly correlated with both being highest in counties located near New York City, considered as one of the epicenters of the infection in the US. In contrast, disease fatality was found to be highest in a different set of counties despite registering a low infection rate. To investigate this apparent discrepancy, we divided the counties into three clusters based on COVID-19 infection, death, or fatality, and compared the differences in the demographic and environmental variables such as ethnicity, age, population density, poverty, temperature, and air quality in each of these clusters. Furthermore, a regression model built on this data reveals PM2.5 and distance from the epicenter are significant risk factors for infection, while disease fatality has a strong association with age and PM2.5. Our results demonstrate that for the NYS, demographic components distinctly associate with specific aspects of COVID-19 burden and also highlight the detrimental impact of poor air quality. These results could help design and direct location-specific control and mitigation strategies.

Risk Factors for COVID-19 in College Students Identified by Physical, Mental, and Social Health Reported During the Fall 2020 Semester: Observational Study Using the Roadmap App and Fitbit Wearable Sensors [2]

Background: The COVID-19 pandemic triggered a seismic shift in education to web-based learning. With nearly 20 million students enrolled in colleges across the United States, the long-simmering mental health crisis in college students was likely further exacerbated by the pandemic.

Objective: This study leveraged mobile health (mHealth) technology and sought to (1) characterize self-reported outcomes of physical, mental, and social health by COVID-19 status; (2) assess physical activity through consumer-grade wearable sensors (Fitbit); and (3) identify risk factors associated with COVID-19 positivity in a population of college students prior to release of the vaccine.

Methods: After completing a baseline assessment (ie, at Time 0 [T0]) of demographics, mental, and social health constructs through the Roadmap 2.0 app, participants were instructed to use the app freely, wear the Fitbit, and complete subsequent assessments at T1, T2, and T3, followed by a COVID-19 assessment of history and timing of COVID-19 testing and diagnosis (T4: ~14 days after T3). Continuous measures were described using mean (SD) values, while categorical measures were summarized as n (%) values. Formal comparisons were made on the basis of COVID-19 status. The multivariate model was determined by entering all statistically significant variables ($P < .05$) in univariable associations at once

and then removing one variable at a time through backward selection until the optimal model was obtained.

Results: During the fall 2020 semester, 1997 participants consented, enrolled, and met criteria for data analyses. There was a high prevalence of anxiety, as assessed by the State Trait Anxiety Index, with moderate and severe levels in 465 (24%) and 970 (49%) students, respectively. Approximately one-third of students reported having a mental health disorder (n=656, 33%). The average daily steps recorded in this student population was approximately 6500 (mean 6474, SD 3371). Neither reported mental health nor step count were significant based on COVID-19 status (P=.52). Our analyses revealed significant associations of COVID-19 positivity with the use of marijuana and alcohol (P=.02 and P=.046, respectively) and with lower belief in public health measures (P=.003). In addition, graduate students were less likely and those with ≥ 20 roommates were more likely to report a COVID-19 diagnosis (P=.009).

Conclusions: Mental health problems were common in this student population. Several factors, including substance use, were associated with the risk of COVID-19. These data highlight important areas for further attention, such as prioritizing innovative strategies that address health and well-being, considering the potential long-term effects of COVID-19 on college students.

Impact of respirator versus surgical masks on SARS-CoV-2 acquisition in healthcare workers: a prospective multicentre cohort [3]

Background: There is insufficient evidence regarding the role of respirators in the prevention of SARS-CoV-2 infection. We analysed the impact of filtering facepiece class 2 (FFP2) versus surgical masks on the risk of SARS-CoV-2 acquisition among Swiss healthcare workers (HCW).

Methods: Our prospective multicentre cohort enrolled HCW from June to August 2020. Participants were asked about COVID-19 risk exposures/behaviours, including preferentially worn mask type when caring for COVID-19 patients outside of aerosol-generating procedures. The impact of FFP2 on (1) self-reported SARS-CoV-2-positive nasopharyngeal PCR/rapid antigen tests captured during weekly surveys, and (2) SARS-CoV-2 seroconversion between baseline and January/February 2021 was assessed.

Results: We enrolled 3259 participants from nine healthcare institutions, whereof 716 (22%) preferentially used FFP2. Among these, 81/716 (11%) reported a SARS-CoV-2-positive swab, compared to 352/2543 (14%) surgical mask users; seroconversion was documented in 85/656 (13%) FFP2 and 426/2255 (19%) surgical mask users. Adjusted for baseline characteristics, COVID-19 exposure, and risk behaviour, FFP2 use was non-significantly associated with decreased risk for SARS-CoV-2-positive swab (adjusted hazard ratio [aHR] 0.8, 95% CI 0.6-1.0) and seroconversion (adjusted odds ratio [aOR] 0.7, 95% CI 0.5-1.0); household exposure was the strongest risk factor (aHR 10.1, 95% CI 7.5-13.5; aOR 5.0, 95% CI 3.9-6.5). In subgroup analysis, FFP2 use was clearly protective among those with frequent (> 20 patients) COVID-19 exposure (aHR 0.7 for positive swab, 95% CI 0.5-0.8; aOR 0.6 for seroconversion, 95% CI 0.4-1.0).

Conclusions: Respirators compared to surgical masks may convey additional protection from SARS-CoV-2 for HCW with frequent exposure to COVID-19 patients.

Estimating the effect of non-pharmaceutical interventions to mitigate COVID-19 spread in Saudi Arabia**[4]**

Background: The Kingdom of Saudi Arabia (KSA) quickly controlled the spread of SARS-CoV-2 by implementing several non-pharmaceutical interventions (NPIs), including suspension of international and national travel, local curfews, closing public spaces (i.e., schools and universities, malls and shops), and limiting religious gatherings. The KSA also mandated all citizens to respect physical distancing and to wear face masks. However, after relaxing some restrictions during June 2020, the KSA is now planning a strategy that could allow resuming in-person education and international travel. The aim of our study was to evaluate the effect of NPIs on the spread of the COVID-19 and test strategies to open schools and resume international travel.

Methods: We built a spatial-explicit individual-based model to represent the whole KSA population (IBM-KSA). The IBM-KSA was parameterized using country demographic, remote sensing, and epidemiological data. A social network was created to represent contact heterogeneity and interaction among age groups of the population. The IBM-KSA also simulated the movement of people across the country based on a gravity model. We used the IBM-KSA to evaluate the effect of different NPIs adopted by the KSA (physical distancing, mask-wearing, and contact tracing) and to forecast the impact of strategies to open schools and resume international travels.

Results: The IBM-KSA results scenarios showed the high effectiveness of mask-wearing, physical distancing, and contact tracing in controlling the spread of the disease. Without NPIs, the KSA could have reported 4,824,065 (95% CI: 3,673,775-6,335,423) cases by June 2021. The IBM-KSA showed that mandatory mask-wearing and physical distancing saved 39,452 lives (95% CI: 26,641-44,494). In-person education without personal protection during teaching would have resulted in a high surge of COVID-19 cases. Compared to scenarios with no personal protection, enforcing mask-wearing and physical distancing in schools reduced cases, hospitalizations, and deaths by 25% and 50%, when adherence to these NPIs was set to 50% and 70%, respectively. The IBM-KSA also showed that a quarantine imposed on international travelers reduced the probability of outbreaks in the country.

Conclusions: This study showed that the interventions adopted by the KSA were able to control the spread of SARS-CoV-2 in the absence of a vaccine. In-person education should be resumed only if NPIs could be applied in schools and universities. International travel can be resumed but with strict quarantine rules. The KSA needs to keep strict NPIs in place until a high fraction of the population is vaccinated in order to reduce hospitalizations and deaths.

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