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COVID-19 Vaccination Rollout and COVID-19 Containment Measures

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Summary

This issue analyzes rollout of national COVID-19 vaccination campaigns and COVID-19 containment measures in Bahrain, Chile, France, Germany, India, Israel, the United Kingdom, and the United States. Weekly COVID-19 incidence per 100,000 population has been increasing in Germany and strongly increasing in India since late March 2021. In Bahrain, Chile, France, Israel, the United Kingdom, and the United States it has been decreasing. Weekly new COVID-19 tests per 100,000 population have been increasing in Israel, India, and the United Kingdom since late March 2021. Weekly COVID-19 tests have been decreasing in Bahrain, Chile, France, Germany, and the United States. Weekly test positivity has been decreasing in Israel and the United Kingdom, and only recently in Chile. It has been increasing in the remaining five countries, most notably in Germany and India.

Vaccination campaigns are currently ongoing in all eight countries. As of 28 April 2021, Bahrain, Chile, the United States, the United Kingdom and Israel have achieved higher vaccination coverage (one dose), having vaccinated at least 35% of their populations. France, Germany and India have achieved lower vaccination coverage (one dose), with vaccination coverage in India as low as 7.78%. While Israel has already implemented privileges for vaccinated individuals, such plans are currently under consideration in three other countries, including Germany. Seven out of eight countries have expanded their vaccination campaigns over time to increasingly younger population groups and those with less risk of developing severe disease or dying of COVID-19. Bahrain, Israel and the United States currently universally offer vaccinations to their population. Germany and France are most restrictive in terms of age groups, offering vaccinations to anyone aged 70 and older and 55 and older, respectively. Between November 2020 and April 2021, vaccine acceptance has increased in Germany and France and decreased in Israel, the United Kingdom, and the United States. Vaccine acceptance is currently low in France (39%), Israel (26%) and the United States (39%). Five out of seven countries have developed or are currently developing COVID-19 vaccination certificates. COVID-19 containment measures have been systematically lifted in Israel, the United Kingdom and the United States since February, March, and April 2021, respectively. In the remaining countries, COVID-19 measures continue to oscillate between temporary lifting and tightening.

Countries with high and low vaccination coverage should maintain COVID-19 containment measures to limit SARS-CoV-2 circulation and prevent across-country transmission. Heavy virus circulation, lifting of measures and limited compliance all increase the risk of virus variant emergence and a surge in COVID-19 cases, as currently evident in India. Countries with higher vaccination coverage, such as the United States, should also maintain high levels of COVID-19 testing to ensure that COVID-19 surveillance will provide early warning signs of a worsening pandemic situation. Trends in vaccination coverage can be affected by vaccine access (available doses, infrastructure for administering) and vaccine acceptance. Therefore, countries with currently lower levels of vaccination coverage should expand vaccine access and lift access prioritizations as soon as nationally available amounts of vaccine doses allow.

Zusammenfassung

Die vorhandene Ausgabe behandelt die Durchführung nationaler COVID-19-Impfkampagnen und COVID-19-Eindämmungsmaßnahmen in Bahrain, Chile, Frankreich, Deutschland, Indien, Israel, dem Vereinigten Königreich (UK) und den Vereinigten Staaten von Amerika (USA). Seit Ende März steigt die wöchentliche COVID-19-Inzidenz pro 100.000 Einwohner in Deutschland an und steigt in Indien stark an. In Bahrain, Chile, Frankreich, Israel, dem Vereinigten Königreich und den USA ist sie rückläufig. Die wöchentliche COVID-19-Testrate pro 100.000 Einwohner ist in Israel, Indien und dem Vereinigten Königreich seit Ende März 2021 angestiegen. Die wöchentliche Testrate ist in Bahrain, Chile, Frankreich, Deutschland und den USA rückläufig. In Israel und UK ist die wöchentliche Testpositivität zurückgegangen. Seit kurzem ist diese ebenfalls in Chile rückläufig. In den verbliebenen fünf Ländern, vor allem in Deutschland und Indien, hat sie zugenommen. Die besorgniserregende Variante (VOC) B.1.1.7 ist in Frankreich, Deutschland, Israel, dem Vereinigten Königreich und den USA dominant. In Indien schwankt die Virusvariante B.1.617 zwischen 60-80 % der zirkulierenden Varianten im Bundesstaat Maharashtra und 10-20 % in anderen Bundesstaaten. B.1.617 wurde in reiseassoziierten Fällen in UK dokumentiert. Obwohl diese Variante in UK noch selten auftritt, haben die mit der Variante assoziierten Fälle zwischen Mitte und Ende April stark zugenommen und sollten weiter beobachtet werden.

Bis zum 28. April 2021 hatten Bahrain, Chile, die USA, UK und Israel mindestens 35 % ihrer Bevölkerung mit einer Dosis gegen COVID-19 geimpft. Frankreich, Deutschland und Indien hatten zum selben Zeitpunkt 20,71, 23,3 und 7,78% mit einer Dosis geimpft. Sieben von acht Ländern haben ihre Impfkampagnen im Laufe der Zeit auf zunehmend jüngere Bevölkerungsgruppen und solche mit einem geringeren Risiko, schwer zu erkranken oder an COVID-19 zu sterben, ausgeweitet. Bahrain, Israel und die USA bieten derzeit ihrer gesamten Bevölkerung Impfungen an. Deutschland und Frankreich sind in Bezug auf die Altersgruppen am restriktivsten und bieten die Impfung allen Personen ab 70 bzw. ab 55 Jahren an. Zwischen November 2020 und April 2021 hat die Impfakzeptanz in Deutschland und Frankreich zugenommen und in Israel, Großbritannien und den USA abgenommen. Derzeit ist die Impfakzeptanz in Frankreich (39 %), Israel (26 %) und den USA (39 %) relativ zu den anderen Ländern niedrig. Fünf von sieben Ländern haben spezielle Coronaimpfpässe entwickelt oder sind dabei, diese zu entwickeln. Während Israel bereits Privilegien für geimpfte Personen eingeführt hat, werden solche Pläne z.B. in Deutschland derzeit erwogen. Die COVID-19-Eindämmungsmaßnahmen werden in Israel, UK und den USA seit Februar, März bzw. April 2021 schrittweise aufgehoben. In den übrigen Ländern wechseln die COVID-19-Maßnahmen weiterhin zwischen vorübergehender Lockerung und Verschärfung.

Sowohl Länder mit hoher als auch mit niedriger Durchimpfungsrate sollten weiterhin effektive COVID-19-Eindämmungsmaßnahmen aufrechterhalten, um die SARS-CoV-2-Zirkulation zu begrenzen und eine grenzüberschreitende Übertragung zu verhindern. Hohe Viruszirkulation, eine verfrühte Aufhebung der Maßnahmen und eine eingeschränkte Einhaltung von Maßnahmen erhöhen das Risiko des Auftretens von Virusvarianten und eines Anstiegs der COVID-19-Fälle, wie er derzeit in Indien zu beobachten ist. Länder mit einer höheren Durchimpfungsrate, wie z. B. die USA, sollten ebenfalls ein hohes Niveau an COVID-19-Tests beibehalten, um sicherzustellen, dass Frühwarnzeichen einer sich verschlechternden Pandemielage erkannt werden. Die Durchimpfungsrate kann durch den Impfstoffzugang (verfügbare Dosen, Infrastruktur für die Verabreichung, Impfakzeptanz) beeinflusst werden. Länder mit derzeit geringerer Durchimpfungsrate sollten den Impfstoffzugang ausweiten und Impfpriorisierungen aufheben, sobald die verfügbaren Mengen an Impfdosen dies erlauben.

1. Problem Statement

Weekly COVID-19 incidence per 100,000 population has been increasing in Germany and strongly increasing in India since late March 2021. In Bahrain, Chile, France, Israel, the United Kingdom and the United States it has been decreasing. While Bahrain, Chile, the United States, the United Kingdom, and Israel have achieved higher vaccination coverage (one dose), having vaccinated at least 35% of their populations, France, Germany and India have achieved lower vaccination coverage (one dose). In India, vaccination coverage is as low as 7.78%. Vaccination coverage in countries is affected *inter alia* by vaccine acceptance, ease of access to outlets providing vaccinations and breadth of population groups that vaccinations are offered to. Accordingly, it is important to compare vaccination rollout between countries with higher and lower vaccination coverage to understand which factors may increase vaccination coverage. In a context of continued heavy SARS-CoV-2 virus circulation, it is likewise important to consider the changes in the epidemiological context and containment measures in place within countries.

2. Epidemiological Comparison

2.1 Weekly new COVID-19 cases per 100,000 population in Bahrain, Chile, France, Germany, India, Israel, the United Kingdom and the United States, January -April 2021: Weekly COVID-19 incidence per 100,000 population has been increasing in Germany and strongly increasing in India since late March 2021. Weekly COVID-19 incidence has been decreasing in Israel and the United Kingdom and decreasing slightly in Bahrain, Chile, France, and the United States since late March 2021. As of 26 April 2021, COVID-19 incidence currently stands at 11.29 in Israel, 25.61 in the United Kingdom, 123 in the United States, 180.43 in Germany, 163.14 in India, 234.45 in Chile, 306.1 in France and 426.44 per 100,000 population in Bahrain (Figure 1).¹

2.2 Weekly new COVID-19 tests per 100,000 population in Bahrain, Chile, France, Germany, India, Israel, the United Kingdom and the United States, January-April 2021: Weekly new COVID-19 tests per 100,000 population have been increasing in Israel, India and the United Kingdom since late March 2021. Weekly COVID-19 tests have been decreasing in Bahrain, Chile, France, Germany and the United States since late March 2021. As of 28 April 2021, the COVID-19 testing rate stands at 824.66 in India, 1546.40 in Germany, 1550.58 in the United States, 2215.06 in Chile, 2683.71 in France, 3074.12 in Israel, 5553.24 in Bahrain and 10249.85 per 100,000 population in the United Kingdom (Figure 1).

2.3 Weekly test positivity percentage in Bahrain, Chile, France, Germany, India, Israel, the United Kingdom and the United States, January-April 2021: Weekly test positivity has been decreasing in Israel and the United Kingdom, and only recently in Chile. It has been increasing in the remaining five countries, with notably higher speed in Germany, and even more in India. Weekly test positivity stands at 0.25% in the United Kingdom, 0.37% in Israel, 5.52% in Bahrain, 7.93% in the United States, 10.58% in Chile, 11.07% in Germany, 11.4% in France and 19.78% in India (Figure 1).

¹ In early April 2021, public holidays due to Easter celebrations were observed in a number of the seven countries and this has likely affected reported incidence and testing data.

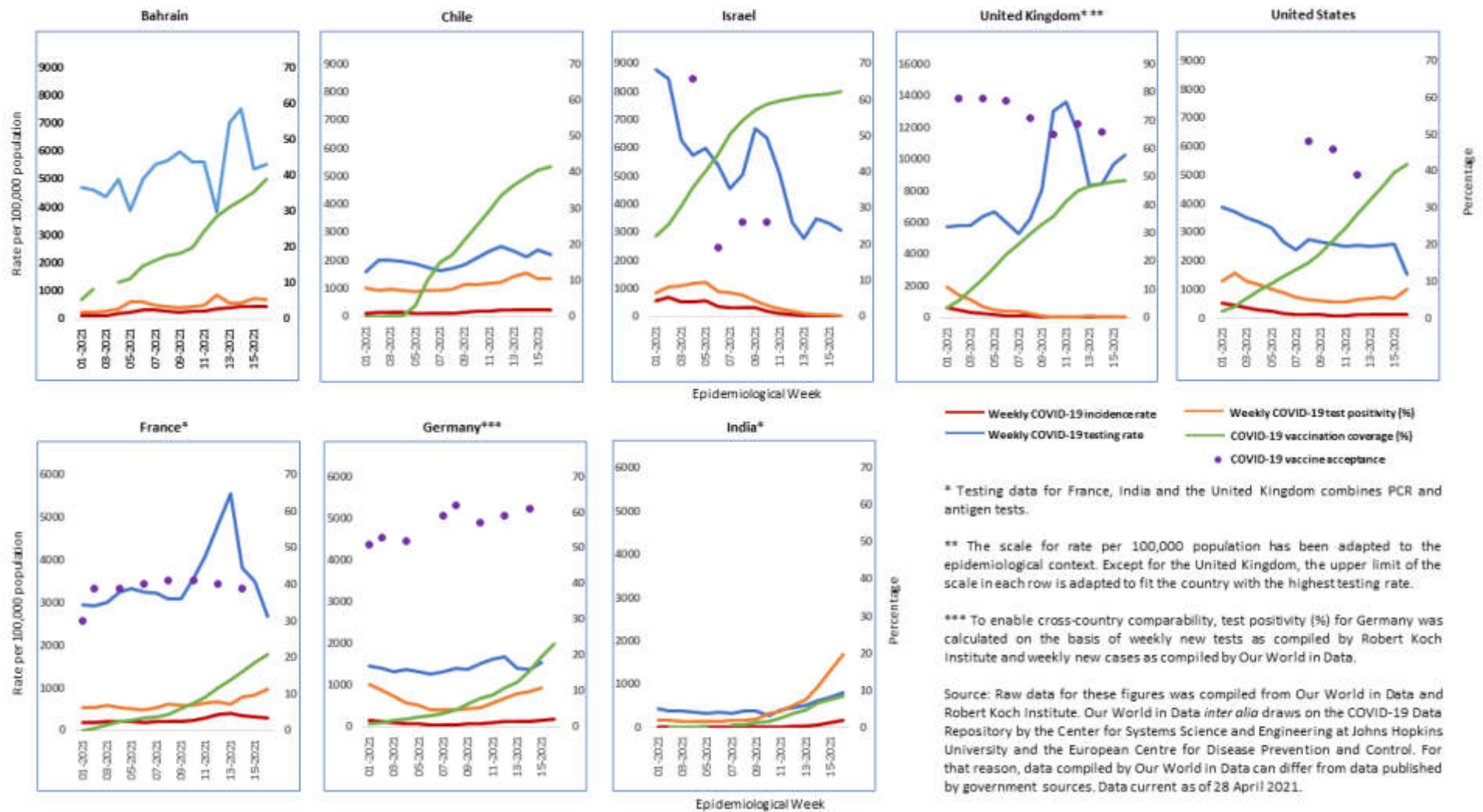


Figure 1: Weekly COVID-19 incidence and weekly COVID-19 tests per 100,000 population, test positivity percentage and vaccination coverage in Bahrain, Chile, France, Germany, India, Israel, the United Kingdom and the United States, weeks 1-2021 – 15-2021¹

2.3 Variants of Concern: VOC B.1.1.7 is dominant (accounting for at least 50% of circulating variants) in France, Germany, Israel, the United Kingdom, and the United States. B.1.1.7 has been comprising more than 95 % of circulating variants in England since mid-February 2021.ⁱⁱ P.1 has been prevalent in 0.027% of cases between October 2020 and late April 2021. B.1.617 was prevalent in 0.064% of cases in the country between October 2020 and late April 2021, but variant-associated cases have been increasing by 71% between mid- and late April 2021.ⁱⁱⁱ As of late April, B.1.17 occurs in 88 % of all sequenced positive samples in Germany and has slightly declined since the last Measures Analysis report issue.^{iv} VOC P.1 comprises 0.1% of all sequenced positive samples in Germany as of late April.^v Variant B.1.1.7 comprises 82.3 % of circulating variants in France as of late April 2021. P.1 comprises 0.3% of circulating variants in the country as of late April.^{vi} B.1.1.7 comprises 22% of circulating variants in Chile as of April 2021. P.1 comprises 27% of circulating variants in Chile as of April 2021. B.1.1.7 comprises more than 90% of circulating variants in Israel.^{vii} B.1.1.7 comprises 8.1% of circulating variants in India. In the country, B.1.617 ranges from 60-80% of circulating variants in the state of Maharashtra to 10-20% in other states.^{viii} As of 10 April 2021, B.1.1.7 comprises 59.2% of circulating variants in the United States. P.1 comprises 3.5% of circulating variants in the country.^{ix} B.1.617 has been reported in the United States, but at the time of writing no data on prevalence was available.^x No data on circulating virus variants was available for Bahrain.²

3. Vaccination Coverage

3.1 Vaccination coverage in Bahrain, Chile, France, Germany, India, Israel, the United Kingdom and the United States, January-April 2021: As of 26 April 2021, 35.42, 40.48, 41.89, 48.51 and 61.81 % of the population had received at least one dose of a COVID-19 vaccine in Bahrain, Chile, the United States, the United Kingdom and Israel respectively. By the same date, 7.78, 18.43 and 19.35 % of the population in India, France and Germany had received at least one dose (Figure 1).^{xi} As of 26 April 2021, full vaccination was at 1.64, 7.21, 8.37, 19.45, 28.67, 30.86, 33.11 and 58.55% in India, Germany, France, the United Kingdom, the United States, Bahrain, Chile and Israel, respectively. ^{xii} Bahrain administers vaccines by Oxford/AstraZeneca, Pfizer/BioNTech, Sinopharm/Beijing and Sputnik V. Chile administers vaccines by Pfizer/BioNTech and Sinovac. France and Germany administer Oxford/AstraZeneca, Moderna, Pfizer/BioNTech and Johnson&Johnson vaccines. India administers Covaxin and Oxford/AstraZeneca vaccines. Israel administers vaccines by Moderna and Pfizer/BioNTech. The United Kingdom administers Oxford/AstraZeneca, Moderna and Pfizer/BioNTech vaccines. The United States administer vaccines by Johnson&Johnson, Moderna and Pfizer/BioNTech.^{xiii} Chile predominantly administers the Sinovac vaccine and a small share of Pfizer/BioNTech vaccines. France and Germany predominantly administer the Pfizer/BioNTech vaccine, followed by the Oxford/AstraZeneca vaccine and a smaller proportion of the Moderna vaccine. The United States predominantly administer the Pfizer/BioNTech vaccine and the Moderna vaccine, as well as a small proportion of Johnson&Johnson vaccines (Table 1).^{xiv} Information on administered vaccine types for the remaining countries was not readily available at time of report writing.

3.2 Vaccine acceptance in Chile, France, Germany, Israel, the United Kingdom and the United States, January 2020-April 2021: In France and Germany vaccine acceptance has increased overall between January and April 2021, from 30 to 39% and 51 to 61%, respectively. In Israel, vaccine acceptance decreased from 66 to 26% between January and March 2021. In the United Kingdom and the United States, vaccine acceptance decreased from 78 to 66% between January and April 2021 (United Kingdom) and 48 to 39% between February and March 2021 (United States). Several European countries temporarily paused vaccinations with the Oxford/AstraZeneca vaccine in mid-March 2021, including France and Germany, due to the occurrence of rare blood clots in people vaccinated with the Oxford/AstraZeneca vaccine (Figure 1).^{xv} In late April 2021, the United States paused

² Data quality on COVID-19 variants varies greatly across countries. See “Evidence Rating” in this report.

vaccination with the Janssen vaccine to investigate rare blood clots in people vaccinated with that vaccine.³ A journal article published in *Vaccine* in late 2020 reports 87% vaccine acceptance in Chile for a nationally representative sample.^{xvi}

3.3 National vaccination campaigns in Bahrain, Chile, France, Germany, India, Israel, the United Kingdom and the United States, December 2020-April 2021: All countries began their vaccination campaigns among a selection prioritized groups, including one or several of the following: vulnerable groups at the highest risk of developing severe disease or dying, health care workers (HCW) and essential workers (EW) or frontline workers (FLW). In France, Germany, Israel and the United Kingdom, this included population groups living in institutionalized collective housing, especially nursing homes. Chile, France, Israel and the United Kingdom also prioritized healthcare workers from the early stages on.^{xvii} India offered vaccinations only to healthcare and frontline workers in the first phase of the national vaccination campaign.^{xviii} All countries have expanded their vaccination campaigns over time to include more population groups. Bahrain currently offers a vaccination to anyone aged 18 and older.^{xix} Chile has been offering vaccinations by age groups since early April and is currently vaccinating anyone aged 45 years and older.^{xx} France and Germany have progressively expanded their vaccination campaigns to include key workers, younger population groups and those with specific co-morbidities.^{xxi} Since 12 April 2021, France has been offering a vaccination to anyone aged 55 and over. The government estimates that it can universally offer a vaccination to the adult population from 15 June 2021 onwards^{xxii}. Since early April, Germany has begun providing COVID-19 vaccines through general practices. This step aims at increasing the speed and reach of the German vaccination campaign.^{xxiii} The country currently vaccinates anyone aged 70 and older.^{xxiv} Germany estimates that it can universally offer a vaccination by the summer of 2021.^{xxv} India plans to offer a vaccination to anyone over the age of 18 by the beginning of May 2021.^{xxvi} By mid-February 2021, Israel completed vaccination of priority groups and has moved to universally offer a COVID-19 vaccination to its entire population of 16 years and older. To counter declining vaccine acceptance, Israel is now offering vaccinations in popular places like cafés and is offering incentives to those who get vaccinated, such as free food and drinks.^{xxvii} The United Kingdom is currently offering a vaccination to anyone aged 44 and over, as well as specific priority groups.^{xxviii} By mid-February 2021, the United Kingdom offered all care home residents and staff, all adults 70 and older, all those considered extremely vulnerable and all frontline healthcare and social care workers a first vaccine dose.^{xxix} In the United States, vaccination rollout is devolved to state- and local-levels of government. Since 19 April 2021, anyone aged 16 and over can be vaccinated against COVID-19.^{xxx} The US National Advisory Committee on Immunization Practices recommended in December 2020 that health care workers and long-term care facility residents be vaccinated first, followed by anyone aged 75 and over and frontline essential workers. Following that, vaccinations were to be offered to anyone aged 65 and over as well as individuals with a higher risk of developing severe disease or dying aged 16 to 64 and any essential workers not included in the previous round.^{xxxi} Vaccinations are offered free of charge to recipients in all countries. In India, vaccinations are offered free of charge in public clinics, while private clinics may charge recipients for vaccinations (Table 1).^{xxxii}

³ Survey data reported for France, Germany, Israel, the United Kingdom and the United States builds on nationally representative samples.

Table 1: COVID-19 Vaccination Campaigns in Bahrain, France, Germany, India, Israel, the United Kingdom and the United States, December 2020 – April 2021

	Priority Groups – Start Campaign	Priority Groups – Current	Vaccine Administration Infrastructure - Current	Vaccines ^{xxiii, 4}	Vaccination Certificate
Bahrain	Universal (18+)	Universal (18+) ^{xxxiv}	Vaccination centers, mobile vaccination teams ^{xxxv, xxxvi}	Oxford/AstraZeneca, Pfizer/BioNTech, Sinopharm/Beijing, Sputnik V	Planned: Extension of BeAware COVID-19 government app ^{xxxvii}
Chile	85+, HCW, FLW, medical students, care home residents	45+, pregnant women with comorbidities ^{xxxviii}	Vaccination centers ^{xxxix}	Pfizer/BioNTech, Sinovac	No data
France	Care home residents, HCW and EW 50+ and with comorbidities, individuals with comorbidities	55+ (AstraZeneca), 60+ (Pfizer/BioNTech, Moderna) ^{xl}	Vaccination centers, general practitioners' practices, workplaces, pharmacies ^{xli}	Moderna, Oxford/AstraZeneca, Pfizer/BioNTech , Johnson & Johnson	Planned: EU Digital Green Certificate ^{xlii}
Germany	80+, care home residents, HCW	70+, individuals with comorbidities, close contact persons of individuals requiring care and pregnant women, HCW, FLW ^{xliii}	Vaccination centers, mobile vaccination teams, general practitioners' practices	Moderna, Oxford/AstraZeneca, Pfizer/BioNTech , Johnson & Johnson	Planned: EU Digital Green Certificate ^{xliiv}
Israel	60+, care home residents, individuals with comorbidities, HCW	Universal (16+) ^{xlv}	Vaccination centers, workplaces, mobile vaccination teams in public places ^{xlvi}	Moderna, Pfizer/BioNTech	"Green Pass", digital or hard-copy ^{xlvii}
India	HCW, FLW	45+ ^{xlviii}	Vaccination centers, health centers, clinics, doctor's practices, workplaces ^{xlix}	Covaxin, Oxford/AstraZeneca	No data
United Kingdom	HCW, FLW, care home residents, individuals with comorbidities	45+ ^l	Vaccination centers, general practitioners' practices, hospitals, pharmacies ^{li}	Moderna, Oxford/AstraZeneca, Pfizer/BioNTech	Plans for a vaccination certificate are under consideration ^{lii}
United States	HCW, care home residents	Universal (16+) ^{liii}	Vaccination centers, general practitioners' practices, pharmacies	Johnson&Johnson, Moderna , Pfizer/BioNTech	Currently not planned at federal level ^{liiv}

⁴ Predominantly administered vaccine types are marked in bold.

4. Policy Comparison

4.1 COVID-19 containment measures in Bahrain, Chile, France, Germany, India, Israel, the United Kingdom and the United States, January-April 2021:

Between January and April 2021, the eight countries most frequently tightened measures related to schools, internal movement and international travel. Bahrain tightened school closures between January and February 2021 and relaxed them between March and April. The country relaxed public events cancellations, restrictions on public gatherings and public transport closures between February and March 2021 and tightened these measures between March and April. Bahrain imposed restrictions on internal movement by March 2021. The country tightened international travel controls between March and April 2021. The accessed data source did not record any changes in measures in Chile between January and April 2021.⁵ Israel, the United Kingdom and the United States all progressively loosened COVID-19 containment measures between early January and late April 2021 across the majority of measures categories assessed here. Israel loosened measures across all categories except international travel controls, upholding its total border closure. The United Kingdom loosened measures across all categories except public gatherings, public events and international travel. In these three categories, measures remained unchanged. The United States loosened measures in five out of eight categories, excepting public gatherings, public transport closures and international travel controls. In these categories, measures remained the same.

COVID-19 containment measures in France, Germany and India were both loosened and tightened between January and April 2021. France relaxed school closures between early March and early April 2021 and tightened school closures in late April. The country tightened workplace closures between February and March 2021. The country imposed restrictions on public transport between February and March 2021 and lifted restrictions between March and April 2021. France imposed restrictions on internal movement between February and March 2021. The country loosened international travel controls between February and March 2021 and loosened them between early and late April 2021. Germany relaxed workplace closures between February and March 2021. The country tightened restrictions on internal movement between January and February 2021 and loosened them between early and late April 2021. Germany loosened international travel controls between February and March and tightened these measures between March and April 2021. India relaxed school closures between February and March and tightened them between early and late April 2021. The country tightened stay-at-home requirements between January and February 2021. India relaxed public transport closures between January and February 2021. The country relaxed restrictions on internal movement between January and February, tightened them between February and March, relaxed them between March and April and tightened them again between early and late April 2021.

In late February 2021, Israel introduced a certification system for completed vaccinations and recovery from COVID-19 (“Green Pass”). Proof of vaccination can be provided via an app or as a paper certificate. Green Pass holders are entitled to access leisure venues, such as restaurants and bars, hotels, sports and cultural venues and places of worship.^{lv} In mid-march 2021, the European Commission also introduced a proposal for a “Digital Green Certificate” for EU member states that would serve to reinstate freedom of movement of EU citizens if they have been either vaccinated against COVID-19, can provide a current negative COVID-19 test result or have recovered from COVID-19.^{lvi} Bahrain and the United Kingdom are also discussing plans for vaccination certificates. The US federal government announced that it would not introduce vaccination certificates at the federal level. At the time of writing, it was unclear whether vaccination certificates were under discussion in Chile and India (Table 1).

⁵ Due to the coding scheme applied by Our World in Data, the loosening and tightening of COVID-19 containment measures at the sub-national level does not fully display in Figure 2. In the case of Chile, that means lifting of measures in March 2021 is not displayed in the heatmap. See also endnote lxiii.

		1 January 2021	1 February 2021	1 March 2021	1 April 2021	21 April 2021	
Bahrain	School Closures	Recommended	Required (all levels)		Recommended		
	Workplace Closures	Required for some					
	Cancellation of Public Events	Required cancellations			Recommended cancellations	Required cancellations	
	Restrictions on Public Gatherings	< 10 people			> 1000 people	10-100 people	
	Stay-at-Home Requirements	Recommended					
	Public Transport Closures	No measures			Recommended closing (or reduced volume)	No measures	
	Restrictions on Internal Movement	No measures			Recommend movement restriction		
	International Travel Controls	Screening				Quarantine from high-risk regions	
Chile	School Closures	Required (all levels)					
	Workplace Closures	Required for all but key workers					
	Cancellation of Public Events	Required cancellations					
	Restrictions on Public Gatherings	< 10 people					
	Stay-at-Home Requirements	Required (few exceptions)					
	Public Transport Closures	Recommended closing (or reduced volume)					
	Restrictions on Internal Movement	Restrict movement					
	International Travel Controls	Ban on high-risk regions					
France	School Closures	Required (some levels)			Recommended	Required (some levels)	
	Workplace Closures	Required for some			Required for all but key workers		
	Cancellation of Public Events	Required cancellations					
	Restrictions on Public Gatherings	< 10 people					
	Stay-at-Home Requirements	Required (except essentials)					
	Public Transport Closures	No measures			Required closing (or prohibiting most using it)	No measures	
	Restrictions on Internal Movement	No measures			Restrict movement		
	International Travel Controls	Ban on high-risk regions			Quarantine from high-risk regions		Ban on high-risk regions
Germany	School Closures	Required (all levels)					
	Workplace Closures	Required for all but key workers			Required for some		
	Cancellation of Public Events	Required cancellations					
	Restrictions on Public Gatherings	< 10 people					
	Stay-at-Home Requirements	Required (except essentials)					
	Public Transport Closures	Recommended closing (or reduced volume)					
	Restrictions on Internal Movement	Recommend movement restriction	Restrict movement			Recommend movement restriction	
	International Travel Controls	Ban on high-risk regions			Quarantine from high-risk regions	Ban on high-risk regions	

India	School Closures	Required (all levels)	Required (some levels)		Required (all levels)	
	Workplace Closures	Required for some				
	Cancellation of Public Events	Required cancellations				
	Restrictions on Public Gatherings	< 10 people				
	Stay-at-Home Requirements	Required (except essentials)	Required (few exceptions)			
	Public Transport Closures	Recommended closing (or reduced volume)	No measures			
	Restrictions on Internal Movement	Recommend movement restriction	No measures	Recommend movement restriction	No measures	Restrict movement
	International Travel Controls	Ban on high-risk regions				
Israel	School Closures	Required (some levels)			Recommended	
	Workplace Closures	Required for all but key workers	Required for some	Recommended		
	Cancellation of Public Events	Required cancellations	Recommended cancellations			
	Restrictions on Public Gatherings	< 10 people	10 – 100 people			
	Stay-at-Home Requirements	Required (except essentials)	No measures			
	Public Transport Closures	Recommended closing (or reduced volume)				
	Restrictions on Internal Movement	Restrict movement	No measures			
	International Travel Controls	Total border closure				
United Kingdom	School Closures	Required at all levels		Required at some levels	Recommended	
	Workplace Closures	Required for all but key workers		Required for some		
	Cancellation of Public Events	Required cancellations				
	Restrictions on Public Gatherings	< 10 people				
	Stay-at-Home Requirements	Required (except essentials)			No measures	
	Public Transport Closures	Recommended closing (or reduced volume)				
	Restrictions on Internal Movement	Restrict movement			Recommend movement restriction	
	International Travel Controls	Ban on high-risk regions				
United States	School Closures	Required (all levels)	Required (some levels)			
	Workplace Closures	Required for some		Recommended		
	Cancellation of Public Events	Required cancellations		Recommended cancellations		
	Restrictions on Public Gatherings	< 10 people				
	Stay-at-Home Requirements	Required (except essentials)			Recommended	
	Public Transport Closures	Recommended closing (or reduced volume)				
	Restrictions on Internal Movement	Restrict movement		Recommend movement restriction		
	International Travel Controls	Ban on high-risk regions				

Figure 2: Heatmap COVID-19 Containment Measures in Bahrain, Chile, France, Germany, Israel, India, the United Kingdom and the United States, 1 January – 21 April 2021^{lvii}

5. Synthesis

Weekly COVID-19 incidence per 100,000 population has been increasing in Germany and strongly increasing in India since late March 2021. In the remaining six countries, it has been decreasing. Weekly new COVID-19 tests per 100,000 population have been increasing in Israel, India and the United Kingdom since late March 2021. Weekly COVID-19 tests have been decreasing in Bahrain, Chile, France, Germany and the United States. Weekly test positivity has been decreasing in Israel and the United Kingdom, and only recently in Chile. It has been increasing in the remaining five countries, most notably in Germany and India. The increase in COVID-19 cases in India appears to be the result of a number of factors, including lifting of measures, lessened compliance with containment measures due to COVID-19 fatigue, large scale political and religious public events and the spread of variant B.1.617.^{lviii} B.1.1.7 continues to be the dominant variant in Germany, France, the United Kingdom, Israel and the United States. P.1 is only marginally prevalent in those countries, with some regional exceptions. In Chile, data quality of sequencing data is limited and indicates that P.1 is more prevalent than B.1.1.7. Mostly travel-associated B.1.617 cases have strongly increased in the United Kingdom and should be monitored closely.

Seven out of eight countries have expanded their vaccination campaigns over time to increasingly younger population groups and those with less risk of developing severe disease or dying of COVID-19. Bahrain, Israel and the United States currently universally offer vaccinations to their population. Germany and France are most restrictive in terms of age groups, offering vaccinations to anyone aged 70 and 55 and older, respectively. Bahrain, Chile, the United States, the United Kingdom and Israel have vaccinated at least 35% of their populations. France, Germany and India have achieved lower vaccination coverage (one dose), with vaccination coverage in India as low as 7.78%. Between November 2020 and April 2021, vaccine acceptance has increased in Germany and France and decreased in Israel, the United Kingdom and the United States. Vaccine acceptance is currently low in France (39%), Israel (26%) and the United States (39%). Five out of seven countries have developed or are currently developing COVID-19 vaccination certificates. While Israel has already implemented privileges for vaccinated individuals, such plans are currently under consideration, for example, in Germany.^{lix} COVID-19 containment measures have been systematically lifted in Israel, the United Kingdom and the United States since February, March and April 2021, respectively. In the remaining countries, COVID-19 measures continue to oscillate between temporary lifting and tightening.

Countries with high and low vaccination coverage should both maintain COVID-19 containment measures to prevent SARS-CoV-2 circulation and limit across-country transmission. Heavy virus circulation, lifting of measures, and limited compliance increase the risk of virus variant emergence and a surge in COVID-19 cases, as currently evident in India.^{lx} Countries with higher vaccination coverage, such as the United States, should also maintain high levels of COVID-19 testing to ensure that COVID-19 surveillance will provide early warning signs of a worsening pandemic situation. The analysis showed that trends in vaccination coverage can be affected by vaccine access (available doses, infrastructure for administering) and vaccine acceptance. To increase vaccine uptake, countries with currently lower levels of vaccination coverage should expand vaccine access and lift access prioritizations as soon as nationally available amounts of vaccine doses allow.

6. Evidence Rating

The evidence presented in this report analyzes national COVID-19 vaccination rollout and changes in COVID-19 containment measures in countries with high and low vaccination coverage. The evidence presented in this report builds on data in the public domain from Our World in Data and the Robert Koch Institute that was used to calculate weekly COVID-19 incidence, weekly testing rate, weekly test positivity as well as vaccination coverage. Most epidemiological data stems from Our World in Data to ensure comparability of that data across countries. Our World in Data builds on epidemiological data from the Center for Systems Science and Engineering at Johns Hopkins University, the European Centre for Disease Prevention and Control and government sources. Data on prevalence of COVID-19 virus variants stems from analyses conducted by the Public Health Intelligence Unit at Robert Koch Institute and government sources. Data on vaccine acceptance stems from the Imperial College London/YouGov COVID-19 Behaviour Tracker. Data on COVID-19 containment measures stems from the Oxford COVID-19 government response tracker. Data on national COVID-19 vaccination campaign rollout stems from government sources, Our World in Data, academic literature and is occasionally supplemented with media reports.

Data on COVID-19 incidence, testing rate, test positivity and vaccination coverage was available for all countries. The evidence presented in the report does not allow for any conclusions on the relative weight of the influence of COVID-19 containment measures versus vaccination coverage on COVID-19 incidence. Continuous data on vaccine acceptance over time was available for five out of eight countries. Data on COVID-19 containment measures was available for all countries. Data on vaccine types administered was available for four out of eight countries. Due to the coding scheme applied by the Oxford COVID-19 government response tracker, containment policies at the sub-national level may not be fully represented in the tracker's data. Complete data on national vaccination campaign rollout was available for six out of eight countries. Data on VOC circulation was available for seven out of eight countries. The representativeness and validity of data on VOC is limited for Chile, India and Israel, good for France and Germany and very good for the United Kingdom. The representativeness and validity of VOC data for the United States could not be evaluated.

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