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International Horizon Scanning and Learning to Inform Wales' COVID-19 Public Health Response and Recovery

Report 27, 22/04/2021

Canolfan Gydwethredol Sefydliad
Iechyd y Byd ar Fuddsoddi
ar gyfer Iechyd a Llesiant



World Health Organization
Collaborating Centre on Investment
for Health and Well-being



Overview




The International Horizon Scanning and Learning work stream was initiated following and informing the evolving coronavirus (COVID-19) public health response and recovery plans in Wales. It focuses on COVID-19 international evidence, experience, measures, transition and recovery approaches, to understand and explore solutions for addressing the on-going and emerging health, wellbeing, social and economic impacts (potential harms and benefits).

The learning and intelligence is summarised in weekly reports to inform decision-making. These may vary in focus and scope, depending on the evolving COVID-19 situation and public health / policy needs.

This work is aligned with and feeding into the Welsh Government Office for Science and into Public Health Wales Gold Command. It is part of a wider Public Health Wales' systematic approach to intelligence gathering to inform comprehensive, coherent, inclusive and evidence-informed policy action, which supports the Wellbeing of Future Generations (Wales) Act and the Prosperity for All national strategy towards a healthier, more equal, resilient, prosperous and globally responsible Wales.

Disclaimer: The reports provide high-level summary of emerging evidence from country experience and epidemiology; research papers (peer-reviewed/not); and key organisations' guidance / reports, including sources of information to allow further exploration. The reports do not provide detailed or in-depth data/evidence analysis. Due to the novelty of COVID-19 virus/disease, and dynamic change in situation, studies and evidence can be conflicting, inconclusive or depending on country/other context.

In focus this week

-  **Global COVID-19 vaccination rollout**
-  **International travel measures**
-  **COVID-19 epidemiological update**

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At a glance: summary of international learning on COVID-19

“With a fast-moving pandemic, no one is safe, unless everyone is safe.”
World Health Organization

Global COVID-19 vaccination rollout

- ✚ COVID-19 vaccination rollout is gaining speed globally, especially in wealthy nations
- ✚ COVID-19 ‘vaccine nationalism’ has emerged with potentially high human and financial cost to countries, posing a threat to global health security and global economic recovery
- ✚ An equal access to COVID-19 vaccines globally, including through the COVAX fund, is the best way to end the acute phase of the pandemic
- ✚ The higher the proportion of the population is vaccinated, the fewer opportunities COVID-19 has to spread and mutate, i.e. of Variant of Concern (VOC) to emerge
- ✚ Vaccine developers have started to modify existing vaccines to address the VOC
- ✚ Vaccine trials among children are expanding and the vaccination age is lowering
- ✚ Vaccines alone are not the solution – infection prevention and control measures, test and trace, social distancing and mask wearing, are still essential to control the virus

More information is summarised **on pp.4-7**

International travel measures

- ✚ **Uncertainty remains** whether vaccinated individuals are capable of transmitting COVID-19; and whether a prior infection with one variant protects against other variants
- ✚ Individuals who have recovered from COVID-19 or have been vaccinated should **continue to adhere to preventive/social distancing measures**
- ✚ Decisions to implement travel restrictions require **balancing the expected public health benefit and the social and economic effects they may cause**
- ✚ Resumption of international travel should be **gradual based on a thorough, systematic and regular (every two weeks) risk assessment**, considering:
 - ✓ Local epidemiology and measures implemented in departure and destination countries
 - ✓ Travel volumes between countries
 - ✓ The public health and health services capacity and performance
 - ✓ Evidence on adherence and effectiveness of measures in reducing transmission
 - ✓ Economic impact, human rights and feasibility of applying measures, among others
- ✚ **Travel measures** to reduce the likelihood of COVID-19 transmission include:
 - ✓ Individual and community level non-pharmaceutical interventions
 - ✓ Monitoring of symptoms before, during and after travel
 - ✓ Testing of travellers when leaving or entering a country/area
 - ✓ Quarantine of travellers
 - ✓ Management of travellers and their contacts when a positive case is identified
- ✚ Current evidence supports a **combined approach to quarantine and testing** of travellers
- ✚ There are **concerns about introducing/requiring a COVID-19 vaccination proof as a condition for international travel** due to:
 - ✓ **Critical unknowns regarding the efficacy of vaccination** in reducing COVID-19 transmission, especially in the light of continuous emergence of new VOC
 - ✓ **Limited availability of / access to vaccines**, creating national and global inequities
 - ✓ Vaccinated individuals should continue to **comply with all risk-reduction measures**

More information is summarised **on pp.8-12**



Global COVID-19 vaccination rollout

Overview¹²³⁴⁵⁶⁷

- Vaccines alone are not the solution to the COVID-19 pandemic - infection prevention and control measures, test and trace, social distancing, wearing masks and personal protective equipment (PPE) is still essential to control the virus
- The United States (US) has administered the highest number of COVID-19 vaccines, both in terms of first dose only (more than 35% of the population), and both doses
- The United Kingdom (UK) vaccination coverage is one of the highest in the world with more than 45% of the population received their first dose
- In Israel, over half of the population (56.9%) have been fully vaccinated and more than 60% have received their first vaccination dose, leading to daily COVID-19 cases reduced by 96%, number of critically ill reduced by 90%, and number of deaths reduced by 85%⁸
- Vaccine rollout has been considered relatively slow in the European Union (EU)
- The slower uptake of COVID-19 vaccination in the EU is related to delay in supplies, as well as vaccine hesitancy, associated with mixed messages
- South America is lagging behind in terms of COVID-19 vaccination in comparison to North America and Europe, especially in poorer countries, such as Bolivia, Venezuela, Peru and Paraguay
- Countries in South America are dependent on deliveries mostly from China (Sinopharm) and/or Russia (Sputnik V), but are starting to benefit from the COVAX alliance⁹
- Most countries in Africa report vaccination rates of less than 1%
- Australia, New Zealand, Japan and Taiwan have only recently started their vaccine rollout
- COVID-19 vaccination roll-out in selected countries and the EU is presented in *Table 1* and *Figure 1*; and related country observations are summarised in *Table 2*

COVID-19 vaccine nationalism and equity of vaccine rollout¹⁰¹¹¹²

- COVID-19 ‘vaccine nationalism’ has emerged where countries push to get first access to supplies of vaccines and potentially stockpile them or their key components for production
- The richest nations have secured billions of doses of COVID-19 vaccines, while developing economies struggle to access supplies
- It is estimated that more than 85 poor countries could remain without widespread access to COVID-19 vaccines before 2023
- The economic cost of ‘vaccine nationalism’ is potentially high, which could slow down the global economic recovery and cost potentially:
 - ✓ \$1.2 trillion per year of the world’s economy
 - ✓ \$119 billion per year to high-income countries
- An equal access to COVID-19 vaccines globally, including through the COVAX fund, is the best way to end the acute phase of the pandemic

¹ [WHO/Europe | Media centre - Slow vaccine roll-out prolonging pandemic](#)

² <https://www.statista.com/statistics/1194813/latin-america-covid-19-vaccination-rate-country/>

³ [Covid-19 data - Tracking covid-19 across the world | Graphic detail | The Economist](#)

⁴ [EIU report warns of significant delays in global coronavirus vaccine rollout - The Economist Intelligence Unit \(EIU\)](#)

⁵ https://www.rand.org/pubs/research_reports/RRAT769-1.html

⁶ <https://www.bmi.com/content/372/bmi.n292>

⁷ <https://www.bbc.co.uk/news/world-europe-56665150>

⁸ <https://www.theguardian.com/world/2021/apr/06/israel-and-chile-both-led-on-covid-jabs-so-why-is-one-back-in-lockdown>

⁹ <https://www.who.int/initiatives/act-accelerator/covax>

¹⁰ <https://www.gavi.org/vaccineswork/covid-19-and-cost-vaccine-nationalism>

¹¹ <https://www.weforum.org/agenda/2021/01/what-is-vaccine-nationalism-coronavirus-its-affects-covid-19-pandemic/>

¹² <https://www.globalcitizen.org/en/content/what-is-vaccine-nationalism/>



COVAX working towards global equitable access to COVID-19 vaccines¹³¹⁴¹⁵¹⁶¹⁷

- COVAX (COVID-19 Vaccines Global Access) aims to accelerate the development and manufacture of COVID-19 vaccines, and to guarantee fair and equitable access for every country in the world
- COVAX has agreements in place to access nearly two billion doses of several promising vaccine candidates
- The UK is the largest donor to COVAX and has committed £548 million to help achieving the goal of COVAX to distribute 1.3 billion doses of COVID-19 vaccines to 92 developing countries
- Despite all efforts by the COVAX initiative, some low-income countries may need to wait until at least 2022 before even the most vulnerable of their populations are vaccinated

Table 1. Number and type of vaccines administered in selected countries and the EU, April 2021¹⁸¹⁹

Country	Total number of vaccines administered	First dose administered	Second dose administered	What vaccine (% of total vaccines administered where available) ²⁰
US 10/04/2021	183,467,709	117,142,879	70,692,645	Moderna (44.9%) / Pfizer (51.7%) / Johnson (3.4%)
UK 09/04/2021	39,001,554	32,010,244	6,991,310	AstraZeneca / Pfizer
Wales 10/04/2021	2,097,929	1,572,752	525,177	AstraZeneca / Pfizer
France 09/04/2021	14,149,194	10,544,541	3,604,653	Moderna / AstraZeneca / Pfizer
Germany 09/04/2021	17,580,596	12,670,288	4,910,308	Moderna (5.3%) / AstraZeneca (20.7%) / Pfizer (74.0%)
Spain 09/04/2021	10,231,825	7,159,716	3,072,109	Moderna / AstraZeneca / Pfizer
EU 10/04/2021	93,710,851	67,009,893	26,700,956	Moderna / AstraZeneca / Pfizer / Sinopharm / Sputnik V
Israel 10/04/2021	10,231,864	5,310,216	4,921,648	Moderna / Pfizer
Norway 08/04/2021	1,131,328	835,970	295,358	Moderna / AstraZeneca / Pfizer
Brazil 10/04/2021	26,548,845	20,513,828	6,035,017	AstraZeneca / Sinovac
New Zealand 24/03/2021	90,286	71,013	19,273	Pfizer

¹³ [COVAX \(who.int\)](https://www.who.int/)

¹⁴ <https://www.who.int/news/item/18-12-2020-covax-announces-additional-deals-to-access-promising-covid-19-vaccine-candidates-plans-global-rollout-starting-q1-2021>

¹⁵ <https://commonslibrary.parliament.uk/research-briefings/cdp-2021-0050/>

¹⁶ <https://www.gavi.org/covax-vaccine-roll-out/argentina>

¹⁷ <https://www.nature.com/articles/d41586-021-00044-9>

¹⁸ https://ourworldindata.org/explorers/coronavirus-data-explorer?tab=table&zoomToSelection=true&time=40..latest&pickerSort=desc&pickerMetric=total_vaccinations_per_hundred&Metric=Vaccinations&Interval=Cumulative&Relative+to+Population=true&Align+outbreaks=false&country=-GBR

¹⁹ <https://public.tableau.com/profile/public.health.wales.health.protection#!/vizhome/RapidCOVID-19virology-Public/Headlinesummary>

²⁰ <https://ourworldindata.org/covid-vaccinations>



Figure 1. Percentage of population vaccinated, selected countries and the EU, April 2021^{21,22}

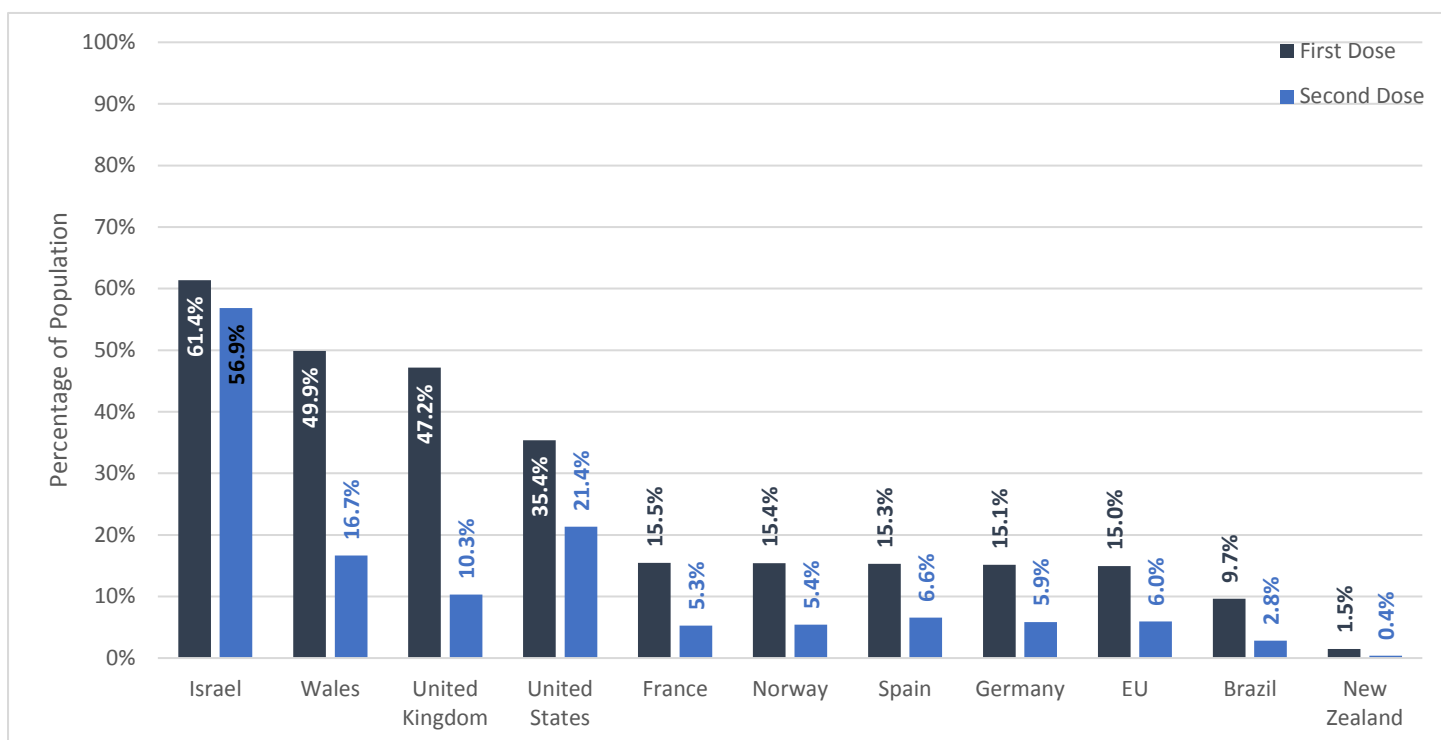


Table 2. Vaccine rollout observations

Belgium²³	– Created a website ('Qvax') where people can register on a reserve list for unused COVID-19 vaccine appointments
Italy²⁴	– Under guidelines from December 2020, teachers were prioritised for vaccination together with the most vulnerable
Norway²⁵	– The Government has started donating vaccines to developing nations
Serbia²⁶	– The country has one of the highest immunisation rates in Europe, mainly thanks to large purchases of Chinese Sinopharm and Russian Sputnik V vaccines
US²⁷	– The US is averaging 3 million vaccine shots administered per day, and more than a third of the population has received at least one dose
Chile²	– The Latin American country with the highest COVID-19 vaccination rate – As of 22 nd March 2021, Chile reported having administered 44.31 doses per 100 inhabitants
Australia²⁸	– Critical and high risk workers are prioritised and will receive the vaccine before adults aged 60-69 years old
New Zealand²⁹	– If you need to travel outside of New Zealand, you can apply for an early COVID-19 vaccine on compassionate grounds or for reasons of national significance

²¹ https://ourworldindata.org/explorers/coronavirus-data-explorer?tab=table&zoomToSelection=true&time=40...latest&pickerSort=desc&pickerMetric=total_vaccinations_per_hundred&Metric=Vaccinations&Interval=Cumulative&Relative+to+Population=true&Align+outbreaks=false&country=-GBR

²² <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/analysisofpopulationestimatestool>

²³ <https://www.qvax.be/region>

²⁴ [Italian judges, denied priority in vaccine queue, threaten a go-slow – POLITICO](https://www.telegraph.co.uk/global-health/science-and-disease/norway-share-covid-19-vaccine-poorer-countries-time-protecting/)

²⁵ <https://www.telegraph.co.uk/global-health/science-and-disease/norway-share-covid-19-vaccine-poorer-countries-time-protecting/>

²⁶ [Serbia inoculates neighbours as other Balkan countries receive doses of China's vaccine | Euronews](https://www.telegraph.co.uk/global-health/science-and-disease/norway-share-covid-19-vaccine-poorer-countries-time-protecting/)

²⁷ [Covid-19 cases, deaths, and vaccinations: Daily U.S. data on April 7 \(cnbc.com\)](https://www.health.gov.au/initiatives-and-programs/covid-19-vaccines/getting-vaccinated-for-covid-19/when-will-i-get-a-covid-19-vaccine)

²⁸ <https://www.health.gov.au/initiatives-and-programs/covid-19-vaccines/getting-vaccinated-for-covid-19/when-will-i-get-a-covid-19-vaccine>

²⁹ <https://covid19.govt.nz/health-and-wellbeing/covid-19-vaccines/getting-a-covid-19-vaccine/apply-for-an-early-vaccine/>



Vaccine efficacy for COVID-19 variants of concern (VOC)³⁰³¹³²³³³⁴³⁵³⁶³⁷³⁸³⁹

- Increased transmission of COVID-19 provides increased opportunity for VOC to emerge
- The higher the proportion of the population that is vaccinated, the fewer opportunities COVID-19 will have to spread and mutate
- There are concerns that a growing number of VOC may be able to partially or fully escape the body's immune response, for example:
 - ✓ The Oxford/AstraZeneca vaccine has shown reduced neutralisation activity against the B.1.1.7 (UK) variant compared with a non-B.1.1.7 variant in vitro, however the vaccine has shown efficacy against the B.1.1.7 variant in trials
 - ✓ The Pfizer-BioNTech vaccine has shown efficacy against the B.1.1.7 (UK) variant, but it may be less effective against the B.1.351 (South African) variant
 - ✓ The Janssen COVID-19 vaccine has shown efficacy against the B.1.1.7 (UK) variant. As of late February, there has been 64% overall efficacy and 82% efficacy against severe disease in South Africa where the B.1.351 variant is circulating
 - ✓ The Novavax vaccine is reported to be 86.3% efficient in the UK where the B.1.1.7 variant is circulating
- It is possible to modify existing vaccines to address the VOC and vaccine developers have announced plans to do this:
 - ✓ Pfizer and AstraZeneca are discussing updating their vaccines to target new variants
 - ✓ Moderna is waiting for approval from regulators to start trialling a modified version of its vaccine that will target the B.1.351 variant

COVID-19 vaccine trials among children⁴⁰⁴¹

- There are continuing trial phases with small groups of children and pregnant women
- AstraZeneca and the University of Oxford are planning vaccine trials among children (6-17 years of age) in the UK

Country insight: US⁴⁰⁴²⁴³⁴⁴⁴⁵

- Pharmacies have been authorised to administer vaccines to children 3-18 years of age as an emergency measure from August 2020
- Pfizer-BioNTech vaccine has been tested on 2,260 adolescents (12-15 years of age) in a Phase 3 trial, demonstrating 100% efficacy and robust antibody response, exceeding those reported in trial of 16-25 year old
- Pfizer has requested to expand the emergency use of the vaccine to include children of ages 12-15 years old, currently evaluated by the Food and Drug Administration (FDA)
- Pfizer expects to run a second trial in children aged 5-11 years and in under 5 year olds later this year

³⁰ <https://jamanetwork.com/journals/jama/fullarticle/2777785>

³¹ [https://www.thelancet.com/journals/lanres/article/PIIS2213-2600\(21\)00075-8/fulltext](https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(21)00075-8/fulltext)

³² <https://www.biorxiv.org/content/10.1101/2020.12.17.423313v1>

³³ <https://www.bmj.com/content/372/bmj.n771>

³⁴ [https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667\(21\)00036-0/fulltext](https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(21)00036-0/fulltext)

³⁵ <https://www.who.int/news-room/feature-stories/detail/the-effects-of-virus-variants-on-covid-19-vaccines>

³⁶ <https://www.bmj.com/content/372/bmj.n597>

³⁷ <https://www.statnews.com/2021/02/24/moderna-ready-to-test-version-of-covid-19-vaccine-aimed-at-worrisome-variant/>

³⁸ <https://www.valemedicine.org/news/covid-19-vaccine-comparison>

³⁹ <https://www.sciencedirect.com/science/article/pii/S0140673621007303?via%3Dihub>

⁴⁰ <https://pubmed.ncbi.nlm.nih.gov/33632828/>

⁴¹ <https://www.euronews.com/2021/04/06/oxford-university-suspends-astrazeneca-vaccine-trial-on-children>

⁴² <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7732219/pdf/main.pdf>

⁴³ <https://www.pfizer.com/science/find-a-trial/nct04713553>

⁴⁴ <https://www.pfizer.com/news/press-release/press-release-detail/pfizer-biontech-announce-positive-topline-results-pivotal>

⁴⁵ <https://edition.cnn.com/2021/04/09/health/us-coronavirus-friday/index.html>



International travel measures

International travel measures and risk assessment⁴⁶⁴⁷⁴⁸

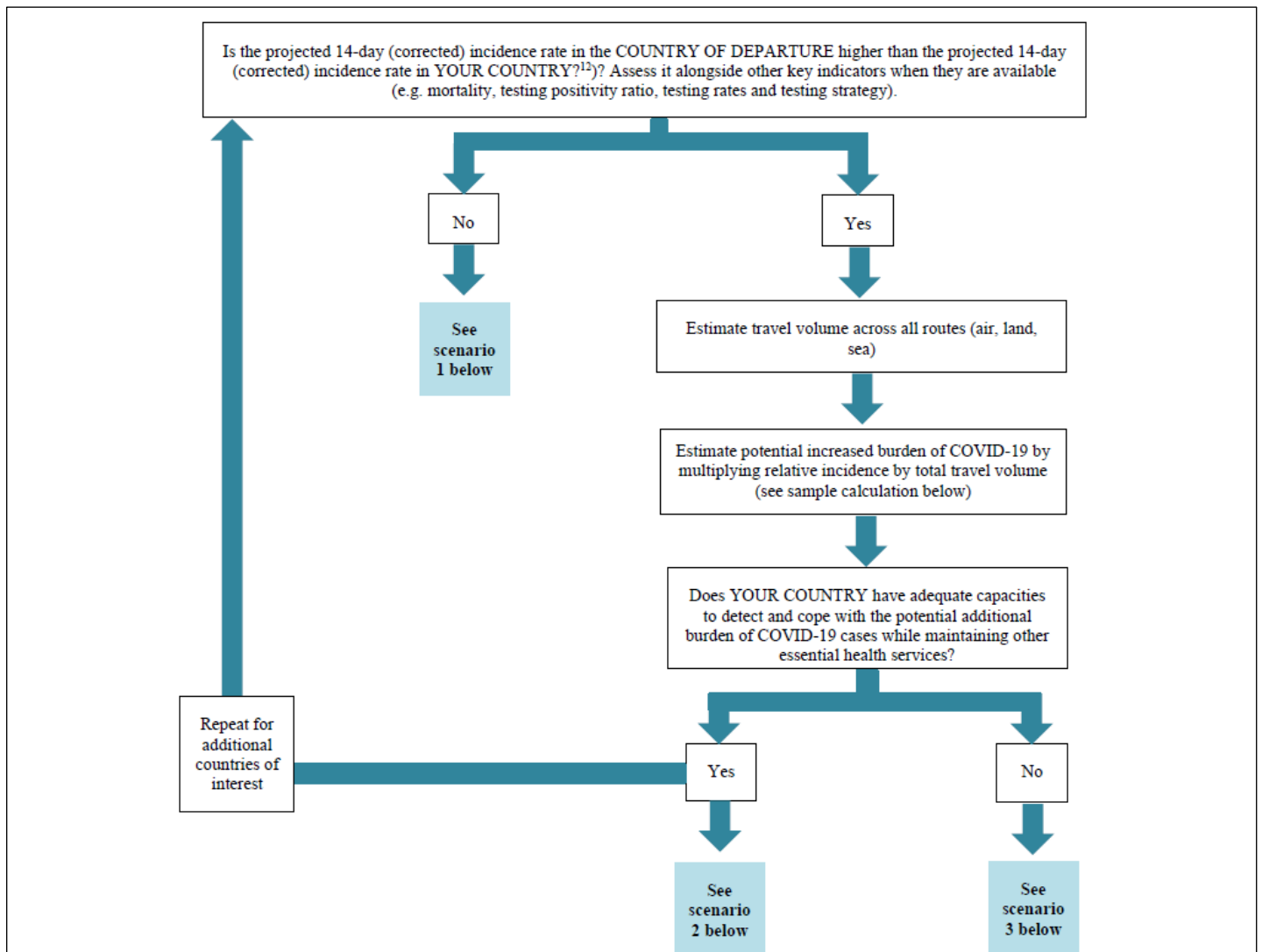
- **Uncertainty remains** whether vaccinated individuals are capable of transmitting COVID-19; and whether a prior infection with one variant protects against other variants
- The emergence of **new VOC requires strengthening of all public health measures**
- Individuals who have **recovered from COVID-19 or have been vaccinated should continue to adhere to preventive/social distancing measures**
- **Decisions to implement travel measures require countries to carefully weigh** the expected public health benefit against the resources required to implement them and the socially and economically disruptive effects they may cause
- **Risk assessment tool** to inform mitigation measures for international travel in the context of COVID-19 was published by the World Health Organization (WHO) (*Figure 2*):
 - ✓ The tool provides detailed guidance on how to use a mixed-methods approach, including both quantitative and qualitative data, for the **gradual resumption of international travel**
 - ✓ This methodology is most useful for destination countries experiencing community transmission, for which the **primary concern is to not overwhelm health system capacity**, not to eliminate transmission
 - ✓ Adjustments and discontinuation of risk mitigation measures should be based on a **thorough risk assessment that is conducted systematically and regularly**, ideally every two weeks
- The following **factors should be considered for all countries**:
 - ✓ The local epidemiology in departure and destination countries
 - ✓ Travel volumes between countries
 - ✓ The public health and health services capacity and performance
 - ✓ Public health and social measures implemented to control the spread of COVID-19 in departure and destination countries
 - ✓ Available evidence on adherence and effectiveness of such measures in reducing transmission
 - ✓ Contextual factors, including economic impact, human rights and feasibility of applying measures, among others
- **Travel measures to reduce the likelihood of COVID-19 transmission include**:
 - ✓ Individual and community level non-pharmaceutical interventions (NPIs), such as use of face masks, environmental cleaning and ventilation
 - ✓ Monitoring of symptoms before, during and after travel
 - ✓ Quarantine of travellers
 - ✓ Testing of travellers when leaving or entering a country or an area
 - ✓ Management of travellers and their contacts when a positive case is identified
- Current evidence supports a **combined approach to quarantine and testing of travellers**: a pre-departure test (or test directly upon arrival) combined with quarantine and a further test five to seven days after arrival to confirm the possibility of being released from quarantine if the test is negative

⁴⁶ https://www.who.int/publications/i/item/WHO-2019-nCoV-Risk-based_international_travel-Assessment_tool-2020.1

⁴⁷ <https://www.who.int/publications/i/item/WHO-2019-nCoV-Risk-based-international-travel-2020.1>

⁴⁸ <https://www.ecdc.europa.eu/en/publications-data/guidance-covid-19-quarantine-and-testing-travellers>

Figure 2. Algorithm to implement a risk-based approach to the gradual resumption of international in-bound travel in the context of COVID-19⁴⁶



Scenario 1: In this scenario, the COUNTRY OF DEPARTURE (or sum of multiple countries assessed) has a projected case incidence lower than or equal to that of YOUR COUNTRY.

- For inbound travel, the impact of imported cases from the COUNTRY(IES) OF DEPARTURE on the epidemiological situation in YOUR COUNTRY is relatively low.
- Only basic travel-related risk mitigation measures are recommended.
- If YOUR COUNTRY has no (active) cases, imported/sporadic cases or a small number of clusters and a low risk tolerance, the need for supplementary measures may be weighed in line with the considerations outlined in the section on risk mitigation measures for resuming travel.

Scenario 2: In this scenario, the COUNTRY OF DEPARTURE (or sum of multiple countries assessed) has a projected case incidence higher than YOUR COUNTRY, and YOUR COUNTRY has adequate capacities to cope with the increased burden.

- For inbound travel, the impact of imported cases from the COUNTRY(IES) OF DEPARTURE on the epidemiological situation in YOUR COUNTRY may be high in relative terms, depending on the travel volume(s). However, YOUR COUNTRY has adequate capacities to cope with the increased burden.
- In addition to the basic travel-related risk mitigation measures, supplementary measures may be implemented in YOUR COUNTRY to reduce the impact of importation, in line with the considerations outlined in the risk mitigation section of this document. These supplementary measures may be less stringent given the public health and health system response capacity in YOUR COUNTRY and based on your risk tolerance level.

Scenario 3: In this scenario, the COUNTRY OF DEPARTURE (or sum of multiple countries assessed) has a case incidence higher than YOUR COUNTRY, and YOUR COUNTRY does not have adequate capacities to cope with an increased burden.

- For inbound travel, the impact of imported cases from the COUNTRY(IES) OF DEPARTURE on the epidemiological situation in YOUR COUNTRY may be relatively high, depending on travel volume(s).
- In addition, YOUR COUNTRY does not have adequate capacities to cope with the additional burden.
- Basic and supplementary travel-related risk mitigation measures are recommended in YOUR COUNTRY to reduce the impact of importation, in line with the considerations outlined in the risk mitigations section of this document.
- Consideration may be given to allowing international travel from selected countries assessed, as long as the total increased burden does not exceed available capacities (see sample calculations below).

These scenarios are dynamic; national authorities should continuously review and update their risk assessments. The implementation of risk mitigation measures is also highly dependent on countries' level of risk tolerance.



COVID-19 vaccination passports⁴⁹⁵⁰⁵¹⁵²⁵³

- Countries across the world are considering the **possibility of introducing COVID-19 vaccine passports or certificates**, aiming to confirm vaccination status and demonstrate protection / lack of infectiousness to allow individuals to travel or attend large gatherings
- The **EU plans to implement a Digital Green Certificate** which aims to facilitate safe free movement inside the EU (free of charge, in digital or paper format) and can include:
 - 1) Proof/ certificate of vaccination or
 - 2) recovery certificate or
 - 3) results/certificate of a recent COVID-19 test (PCR or a rapid antigen test)
- The Digital Green Certificate should be **accessible and issued to all EU citizens and their family members**, regardless of their nationality; and will be valid in all EU Member States and open for Iceland, Liechtenstein, Norway and Switzerland
- Countries are considering **the use of vaccine certificates for travel, tourism, easing of NPIs and access to places/events** (Table 3) and a position statements from 21 countries has been issues⁵⁴⁵⁵

Table 3. Views on COVID-19 passports/certificates

Country	Current view
Czech Republic	- Currently issues certificate as a proof of vaccination for medical purposes
Estonia	- Digital vaccination certificate is under development
Finland	- The potential expanded use of vaccination certificates is on hold and waiting for more scientific evidence on the effect of the vaccines on preventing infection and transmission
Portugal	- Certificate to be used for travel and tourism
Norway	- Health authorities are in the process of mapping the need and possible solutions for establishing an international vaccine passport and its application
Germany, Spain, Croatia, Latvia, Lithuania, Belgium	- Authorities still discussing the use of vaccination certificates

Evidence and ethical considerations⁴⁹⁵⁶

- There are **critical unknowns regarding the efficacy of vaccination in reducing COVID-19 transmission**, especially in the light of continuous emergence of new VOC
- The **limited availability of vaccines**, particularly in lower and middle-income countries, combined with requiring vaccination for travel, creates **inequity of access and opportunity**, threatening priority/vulnerable populations, considered at high risk of severe COVID-19 disease and death, especially in those countries
- The WHO has expressed a **concern about introducing a COVID-19 vaccination proof** as a condition for international travel; and has recommended that vaccinated individuals should continue to comply with other risk-reduction measures

⁴⁹ <https://www.bmj.com/content/373/bmj.n861>

⁵⁰ <https://royalsocietypublishing.org/doi/10.1098/rsos.200211>

⁵¹ <https://blogs.bmj.com/bmj/2021/03/30/covid-19-vaccine-passports-and-vaccine-hesitancy-freedom-or-control/>

⁵² https://ec.europa.eu/commission/presscorner/detail/en/IP_21_1181

⁵³ https://ec.europa.eu/commission/presscorner/detail/en/FS_21_1208

⁵⁴ <https://www.ecdc.europa.eu/sites/default/files/documents/Overview-implementation-COVID-19-vaccination-strategies-vaccine-deployment-plans.pdf>

⁵⁵ Austria, Belgium, Croatia, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Latvia, Lithuania, Malta, Norway, Poland, Portugal, Romania, Slovakia, Spain, and Sweden

⁵⁶ <https://www.who.int/news-room/articles-detail/interim-position-paper-considerations-regarding-proof-of-covid-19-vaccination-for-international-travellers>



Travel measures in EU/EEA (European Economic Area) countries

Most EU/EEA countries have developed criteria to determine the need for testing and/or voluntary or mandatory quarantine of incoming travellers (Table 4).

Table 4. Requirements for inbound and outbound travellers in selected EU/EEA countries

Requirements for inbound travellers by selected countries			
Country	Proof of vaccination from UK residents needed?	Negative PCR test required?	Notes
Greece ⁵⁷	Yes	Yes	Either proof of vaccination or negative PCR test required
Turkey ⁵⁸	No	Yes	To review need for negative test result
Spain ⁵⁹	Undecided	Yes	Plans to open for tourists when 30-40% of population is vaccinated
Italy ⁶⁰	Undecided	Yes	UK included in 'List C' of countries where travel is permitted without need for certificate or motivation for travel
Cyprus ^{61,62}	Yes	No	Plans to only accept vaccinated, with vaccination having occurred at least 7 days prior to date of travel
Portugal ⁶³	Yes	Yes	Either proof of vaccination or negative PCR test required
Malta ⁶⁴	Yes	Yes	
Croatia ⁶⁵	Yes	Yes	
Germany ^{66,67}	Undecided	Yes	Travel ban on countries with VOC
Requirements for outbound travellers by selected countries			
Country	Is international travel allowed?	Where	Notes
Germany ^{71,68,69}	Yes	EU + changing list of acceptable destinations provided by Federal Government	Travel ban to areas with VOC, as listed by the Robert Koch Institute
Netherlands ⁷⁰	No	Travel to the Caribbean constituent countries of the Kingdom of the Netherlands is allowed	Rules in place until 15 th May 2021
France ⁷¹	Yes	Schengen + Australia, Israel, Japan, New Zealand, Singapore, South Korea and the United Kingdom	Travel is allowed but discouraged
Ireland ⁷²	Yes	EU	Part of EU traffic light system
Sweden ⁷³	No	N/A	Non-essential travel guidance in place until 31 st May 2021

⁵⁷ http://www.visitgreece.gr/en/home/about_covid_19

⁵⁸ <https://safetourismturkive.com/faqs-about-safelessbrgreateortourism>

⁵⁹ <https://www.mincotur.qob.es/en-us/COVID-19/Paginas/COVID-19.aspx>

⁶⁰ <http://www.italia.it/en/useful-info/covid-19-updates-information-for-tourists.html>

⁶¹ <https://www.pio.gov.cy/coronavirus/eng>

⁶² <https://cypruslightpass.gov.cy/en/home>

⁶³ <https://www.visitportugal.com/en/content/covid-19-measures-implemented-portugal>

⁶⁴ <https://www.visitmalta.com/en/covid-19>

⁶⁵ <https://mint.gov.hr/news-11455/big-interest-in-opening-borders-says-tourism-minister/21180>

⁶⁶ <https://www.auswaertiges-amt.de/en/einreiseundaufenthalt/coronavirus>

⁶⁷ <https://www.bundesgesundheitsministerium.de/coronavirus/current-information-for-travellers.html>

⁶⁸ https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Risikogebiete_neu.html

⁶⁹ <https://www.auswaertiges-amt.de/de/ReiseUndSicherheit/covid-19/2296762>

⁷⁰ <https://www.government.nl/topics/coronavirus-covid-19/tackling-new-coronavirus-in-the-netherlands/travel-and-holidays/travelling-abroad>

⁷¹ <https://www.diplomatie.gouv.fr/en/coming-to-france/coronavirus-advice-for-foreign-nationals-in-france/>

⁷² <https://www.gov.ie/en/publication/e40d7-travelling-outside-of-ireland/?referrer=http://www.gov.ie/en/publication/e4ea6-travelling-abroad-from-ireland/>

⁷³ <https://www.government.se/press-releases/2021/04/ministry-for-foreign-affairs-extends-advice-against-travel-for-countries-outside-the-eueeaschengen-areathe-united-kingdom/>



Country insight: the US⁷⁴

- All air travellers arriving to the US are required to present a negative test result (tested within 3 days of their flight) or proof of having recovered from COVID-19 to the airline before boarding the flight
- Recommendations for inbound and outbound travel and presented in *Table 5*

Table 5. US travel recommendations as of 1st April 2021

	Pre-departure testing recommendations for international and domestic travellers (outbound)	Post-arrival testing and management recommendations (inbound)
Fully vaccinated travellers	<ul style="list-style-type: none"> - No need for testing before departure unless the destination requires it 	<ul style="list-style-type: none"> - No need for testing following domestic travel, unless symptomatic or testing is required by local, state, or territorial health authority - International travellers arriving in the US are recommended to get tested 3-5 days after travel - No need to self-quarantine following domestic or international travel
Travelers recovered from COVID-19 in the past 3 months		<ul style="list-style-type: none"> - Travelers who have tested positive in the past 3 months and have met criteria to discontinue isolation do not need to get a test or self-quarantine after travel unless they are symptomatic -
Travellers who are not fully vaccinated and have not recovered from COVID-19 in the past 3 months	<ul style="list-style-type: none"> - Recommended testing before initiating air travel, rather than testing at the airport immediately prior to flying - Testing offered at many airports, both domestic and international - Many air travellers are choosing to get tested in airports because of convenience and ease of access 	<ul style="list-style-type: none"> - Travellers recommended to have a test 3-5 days after arrival at destination, combined with self-quarantining for 7 days (staying at home or in a comparable location, such as a hotel room) - The 7 day quarantine should be completed even if the test is negative - In the absence of testing, this period should be extended to 10 days - Travelers should avoid contact with people at higher risk for severe illness for 14 days, regardless of testing

⁷⁴ <https://www.cdc.gov/coronavirus/2019-ncov/php/risk-assessment.html>



COVID-19 epidemiological update

COVID-19 cumulative cases, deaths and testing capacity

Comparing selected countries since the start of the pandemic (*Figure 3*), the following is observed:

- Israel has the highest cumulative case rate (9,657.8 per 100,000), compared to New Zealand who has the lowest (53.6 per 100,000)
- The United Kingdom has the highest cumulative death rate (187.6 per 100,000), compared to New Zealand who has the lowest (0.5 per 100,000)
- The United Kingdom has the highest cumulative testing rate (191,201 per 100,000), compared to Brazil who has the lowest (3,021 per 100,000)

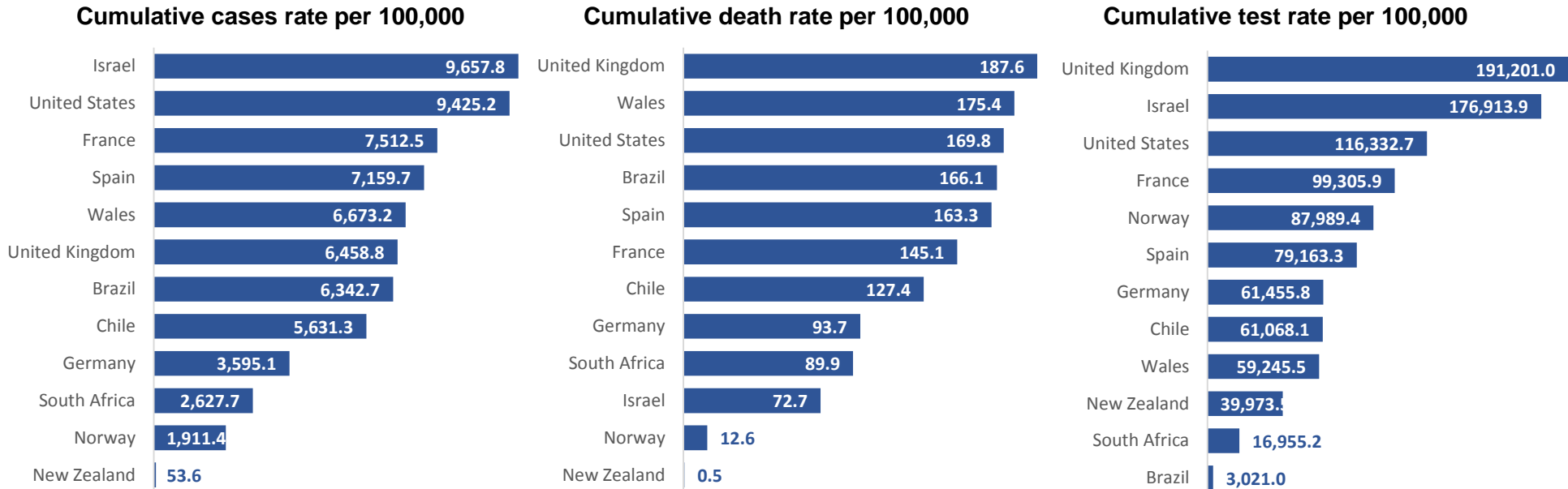
Trends of weekly COVID-19 case and death rates

Comparing selected countries since the start of the pandemic (*Table 6*), the following is observed:

- Four of the twelve countries have an increasing case rate: Chile, Brazil, France and Germany
- COVID-19 weekly case rates are either plateauing or decreasing in the following countries: Israel, New Zealand, Norway, South Africa, Spain, United Kingdom, United States and Wales
- The weekly COVID-19 death rate is on a downward trajectory in ten out of the twelve countries
- The weekly COVID-19 death rate in Brazil and Chile are on an upward trajectory



Figure 3: Comparing cumulative case, death and testing rates, selected countries



Cases/Deaths:

Our World in Data, Data Explorer: <https://ourworldindata.org/coronavirus-data-explorer>

Public Health Wales Rapid COVID-19 Surveillance. (31 January 2020 – 10 April 2021) Available at:

<https://public.tableau.com/profile/public.health.wales.health.protection#!/vizhome/RapidCOVID-19virology-Public/Headlinesummary>

Testing:

Testing data for France and the United States were included in Our World in Data.

Testing data for Wales was included in the Public Health Wales Rapid COVID-19 Surveillance.

WHO Coronavirus Disease (COVID-19) Dashboard. (01 January 2020 – 12 April 2021) Available at: <https://worldhealthorg.shinyapps.io/covid/>

Population Estimates:

Population estimates for each country (except Wales) were included in Our World in Data.

Population Estimates for Wales was extracted from the Office of National Statistics Population estimates for the UK, England and Wales, Scotland and Northern Ireland (Accessed 15 March 2021). Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/annualmidyearpopulationestimates/previousReleases>



Table 6: COVID-19 cases and deaths over time, 24 February 2020 to 11 April 2021

Countries	Weekly Cases per 100,000	Weekly Deaths per 100,000
Brazil		
Chile		
France		
Germany		
Israel		
New Zealand		
Norway		
South Africa		
Spain		
United Kingdom		
United States		
Wales*		

Trend Data:

Our World in Data – Daily COVID-19 Cases and Daily COVID-19 Deaths (24 February 2020 – 11 April 2021). Available at:

[https://ourworldindata.org/explorers/coronavirus-data-](https://ourworldindata.org/explorers/coronavirus-data-explorer?zoomToSelection=true&country=~OWID_WRL&hideControls=true&Metric=Confirmed+cases&Interval=New+per+day&Align+outbreaks=false&Relative+to+Population=false)

[explorer?zoomToSelection=true&country=~OWID_WRL&hideControls=true&Metric=Confirmed+cases&Interval=New+per+day&Align+outbreaks=false&Relative+to+Population=false](https://ourworldindata.org/explorers/coronavirus-data-explorer?zoomToSelection=true&country=~OWID_WRL&hideControls=true&Metric=Confirmed+cases&Interval=New+per+day&Align+outbreaks=false&Relative+to+Population=false)

*Public Health Wales Rapid COVID-19 Surveillance. (31 January 2020 – 10 April 2021) Available at:

<https://public.tableau.com/profile/public.health.wales.health.protection#!/vizhome/RapidCOVID-19virology-Public/Headlinesummary>

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**World Health Organization
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