Force Health Protection Branch
NATO MilMed COE
Munich

Update 96
COVID-19
Coronavirus Disease
15 December 2021

info.dhsc@coemed.org

Branch Chief
Phone: +49 89 1249 4003
Branch Admin
Phone: +49 89 1249 4001

GLOBAL
↗
271 810 614
Confirmed cases
256 700 000 recovered
5 327 218 deaths

USA
(7-days incidence 259,7)
↗
50 015 103
confirmed cases
47 410 000 recovered
796 831 death

India
(7-days incidence 4,1)
↘
34 710 628
confirmed cases
34 090 000 recovered
476 135 deaths

Brazil
(7-days incidence 21,0)
↘
22 195 775
confirmed cases
21 460 000 recovered
616 970 deaths

News:

- **WHO:** again noticed a vast gap in rates of vaccination between countries. 41 countries have still Only if inequity ends, the pandemic will end.
- **WHO**: updated their interim recommendations for the use of the Janssen Ad26.COV2.S (COVID-19) vaccine to reflect latest evidence .
- **WHO**: The virtual working environment created by the COVID-19 pandemic has prompted WHO to adapt its capacity-building strategy for the health workforce by offering several online courses. Currently, the OpenWHO platform hosts a channel dedicated to neglected tropical diseases (NTDs), with six multilingual courses dedicated to a wide range of health topics: NTDs and COVID-19; mycetoma; rabies and One Health; podoconiosis; scabies; and tungiasis.
- **CDC**: expanded their COVID-19 booster recommendation to 16- and 17- year olds. At this time, only the Pfizer-BioNTech COVID-19 vaccine is authorized and recommended for adolescents aged 16 and 17.
- **EMA**: has concluded that a booster dose of COVID-19 Vaccine Janssen may be considered at least two months after the first dose in people aged 18 years and above. It is also also concluded that a booster dose with COVID-19 Vaccine Janssen may be given after two doses of one of the mRNA vaccines authorised in the EU, Comirnaty (from Pfizer/BioNTech) or Spikevax (from Moderna).
- **ECDC**: Published a generic protocol for COVID-19 vaccine effectiveness studies during outbreaks in semi-closed settings in the EU and encourages the use of this protocol as a basis as this can facilitate results comparability from different outbreak investigations.

- **Topics:**
- Global situation
- European situation
- Vaccination news
- SARS-CoV-2 VOIs and VOCs
- Subject in Focus: Notable Update: Pros and Cons of rolling out third doses?
- Poster “Can NATO win back its collective memory of epidemics?”
- Flu Awareness Campaign 2021
- Other Infectious Disease Outbreaks

IF YOU RECEIVED **Pfizer-BioNTech**	**Who can get a booster:** • Teens 16-17 years old **Who should get a booster:** • Adults 18 years and older	**When to get a booster:** At least 6 months after completing your primary COVID-19 vaccination series	**Which booster can you get:** • Teens 16–17 years old can get a Pfizer-BioNTech COVID-19 vaccine booster • Adults 18 years and older can get any of the COVID-19 vaccines authorized in the United States
IF YOU RECEIVED **Moderna**	**Who should get a booster:** Adults 18 years and older	**When to get a booster:** At least 6 months after completing your primary COVID-19 vaccination series	**Which booster can you get:** Any of the COVID-19 vaccines authorized in the United States
IF YOU RECEIVED **Johnson & Johnson's Janssen**	**Who should get a booster:** Adults 18 years and older	**When to get a booster:** At least 2 months after completing your primary COVID-19 vaccination	**Which booster can you get:** Any of the COVID-19 vaccines authorized in the United States

EUROPE
↗
88 791 764
confirmed cases
81 080 000 recovered
1 554 255 deaths

GBR
(7-days incidence 560,2)
↗
10 932 549
confirmed cases
10 010 000 recovered
146 627 deaths

Russia
(7-days incidence 140,9)
↘
9 927 150
confirmed cases
9 119 000 recovered
287 135 deaths

Turkey
(7-days incidence 164,3)
↘
9 082 422
confirmed cases
8 673 000 recovered
79 503 deaths

Situation by WHO Region, as of 12 December

Global epidemiological situation overview; WHO as of 12 December 2021

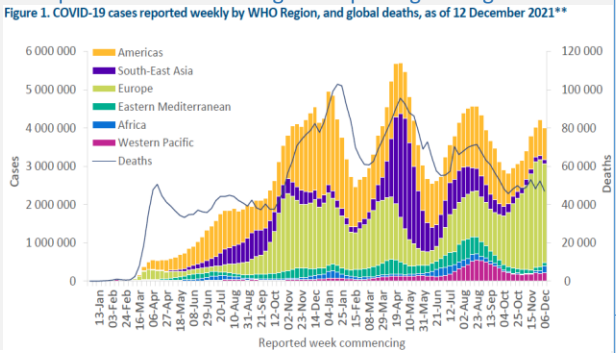
Globally, the weekly incidence of both cases and deaths declined during the past week (6-12 December 2021), with decreases of 5% and 10% respectively, as compared to the previous week. Nonetheless, this still corresponded to over 4 million new confirmed cases and just under 47 000 new deaths. As of 12 December, nearly 269 million confirmed cases and nearly 5.3 million deaths have been reported globally.

The African Region reported the largest increase in new cases last week (111%) followed by and the Western Pacific Region which reported an increase of 7%. The Region of the Americas and South-East Asia Region both reported decreases of 10% and the European Region reported a 7% decrease. The number of new weekly cases reported by the Eastern Mediterranean Region was similar to the numbers reported in the previous week. New weekly deaths decreased by 50% in the South-East Asia Region (due to an artificial increase in deaths from batch reporting in the previous week) and 14% in the Region of the Americas, while the number of weekly deaths in all other regions remained similar to those reported in the previous week. The regions reporting the highest weekly case incidence per 100 000 population continue to be the European Region (277.9 new cases per 100 000 population) and the Region of the Americas (81.9 new cases per 100 000 population). Both regions also reported the highest weekly incidence in deaths of 3.0 and 1.0 per 100 000 population, respectively while <1 new death per 100 000 was reported in all other regions.

The **highest numbers of new cases** were reported from:

- United States of America (674 019 new cases; 9% decrease),
- Germany (351 738 new cases; 11% decrease),
- United Kingdom (350 340 new cases; 13% increase),
- France (335 972 new cases; 19% increase) and,
- Russian Federation (215 283 new cases; lik7% decrease)

Figure 1. COVID-19 cases reported weekly by WHO Region, and global deaths, as of 12 December 2021**

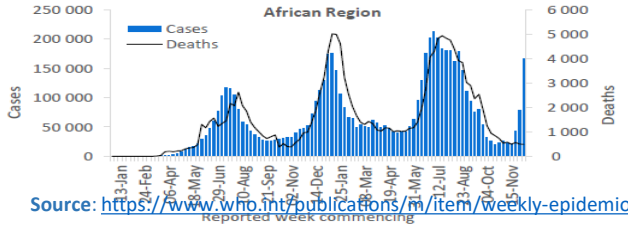


WHO regional overviews Epidemiological week 6 – 12 December 2021

African Region

The African Region reported over 167 000 new cases, an increase of 111% as compared to the previous week and the highest number of new weekly cases since early August 2021. Marked increases were observed in over two thirds (33/49; 67%) of countries in the Region with the majority (30/33; 91%) reporting increases of 25% or greater, as compared to the previous week. The highest numbers of new cases were reported from South Africa (109 053 new cases; 183.9 new cases per 100 000 population; a 76% increase), Zimbabwe (26 479 new cases; 178.2 new cases per 100 000; a 479% increase), and Mauritius (6415 new cases; 504.4 new cases per 100 000; a 775% increase).

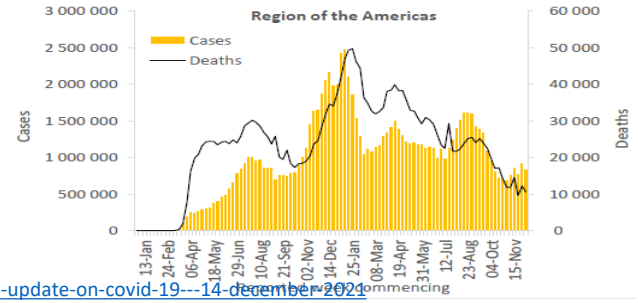
The Region reported just under 500 new deaths, a number similar to the number reported in the previous week. The highest numbers of new deaths were reported from South Africa (151 new deaths; <1 new death per 100 000 population; a 13% decrease), Mauritius (92 new deaths; 7.2 new deaths per 100 000; a 27% decrease), and Algeria (41 new deaths; <1 new death per 100 000; a 7% decrease).



Region of the Americas

The Region of the Americas reported over 837 000 new cases and over 10 000 new deaths, decreases of 10% and 14% respectively as compared to the previous week. Nevertheless, 28% (15/56) of countries in the Region reported over 10% increases in cases, with the greatest observed in the Caribbean islands of Saint Barthélemy (350%; from 2 cases to 9 cases), Turks and Caicos Islands (285%) and Saint Martin (111%). The highest numbers of new cases were reported from the United States of America (674 019 new cases; 203.6 new cases per 100 000; a 9% decrease), Brazil (38 372 new cases; 18.1 new cases per 100 000; a 38% decrease), and Canada (25 332 new cases; 67.1 new cases per 100 000; a 25% increase).

The highest numbers of new deaths were reported from the United States of America (6909 new deaths; 2.1 new deaths per 100 000; a 16% decrease), Mexico (1122 new deaths; <1 new death per 100 000; an 85% increase), and Brazil (851 new deaths; <1 new death per 100 000; a 41% decrease).

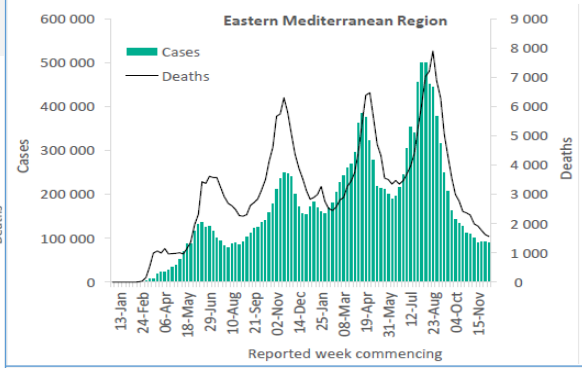


Updates from the Region of the Americas

Eastern Mediterranean Region

The weekly incidence of cases and deaths in the Eastern Mediterranean Region remained stable this week, with over 90 000 new cases and over 1500 new deaths reported. However, three countries (3/22, 13%) in the Region reported an increase of over 10% in weekly incidence of cases. The highest numbers of new cases were reported from Jordan (34 735 new cases; 340.4 new cases per 100 000; an 8% increase), the Islamic Republic of Iran (21 168 new cases; 25.2 new cases per 100 000; a 19% decrease), and Lebanon (11 341 new cases; 166.2 new cases per 100 000; a 9% increase).

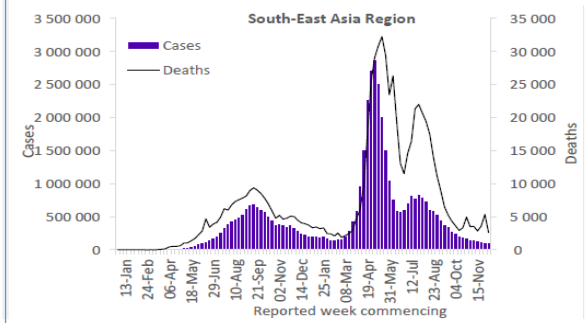
The highest numbers of new deaths continued to be reported from the Islamic Republic of Iran (537 new deaths; <1 new death per 100 000; a 7% decrease), Egypt (333 new deaths; <1 new death per 100 000; a 12% decrease), and Jordan (226 new deaths; 2.2 new deaths per 100 000; a 13% increase).



South-East Asia Region

The declining trend in reported new weekly cases and deaths continued this week in the South-East Asia Region. Over 98 000 new cases and over 2600 new deaths were reported, amounting to a 10% and 50% decrease respectively as compared to the previous week. Only two countries reported an increase in weekly cases, Bangladesh (from 1659 to 1882, a 13% increase) and Bhutan (from 1 to 8; a 700% increase). The highest numbers of new cases were reported from India (57 255 new cases; 4.1 new cases per 100 000; a 6% decrease), Thailand (27 405 new cases; 39.3 new cases per 100 000; a 20% decrease), and Sri Lanka (5220 new cases; 24.4 new cases per 100 000; similar to the number reported in the previous week).

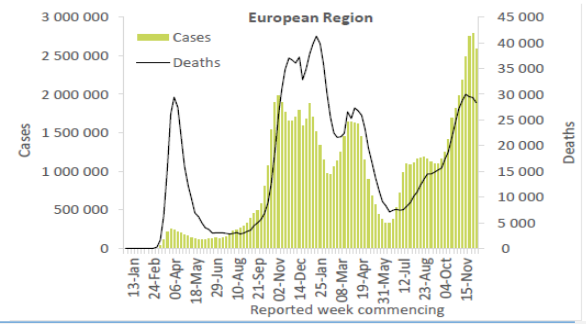
The highest numbers of new deaths were reported from India (2108 new deaths; <1 new death per 100 000; a 56% decrease), Thailand (227 new deaths; <1 new death per 100 000; similar to the number reported in the previous week), and Sri Lanka (153 new deaths; <1 new death per 100 000; similar to the number reported in the previous week).



European Region

The European Region reported just under 2.6 million new cases, a 7% decrease as compared to the previous week and a decline since early September. The number of new deaths reported this week was just over 28 000, remaining similar to the number reported in the previous week. Despite the declining trend, a small proportion (10/61; 6%) of countries still reported over a 10% increase in cases as compared to the previous week. The highest numbers of new cases were reported from Germany (351 738 new cases; 422.9 new cases per 100 000; an 11% decrease), the United Kingdom (350 340 new cases; 516.1 new cases per 100 000; a 13% increase), and France (335 972 new cases; 516.6 new cases per 100 000; a 19% increase).

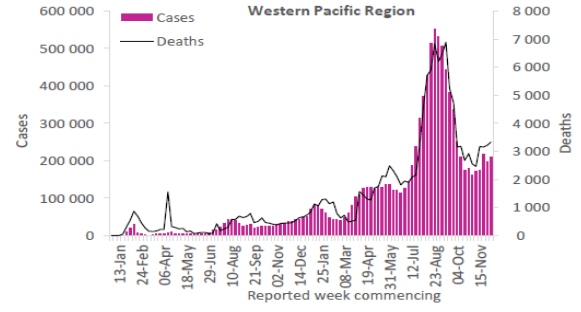
The highest numbers of new deaths were reported from the Russian Federation (8205 new deaths; 5.6 new deaths per 100 000; a similar number to that of the previous week), Poland (2804 new deaths; 7.4 new deaths per 100 000; a 6% increase), and Ukraine (2747 new deaths; 6.3 new deaths per 100 000; a 13% decrease).



Western Pacific Region

The Western Pacific Region reported 214 000 new cases, a 7% increase as compared to the previous week. Four of the 27 countries in the region, reported an increase in case incidence of over 10%, Northern Mariana Islands (62%), Republic of Korea (37%), Lao People's Democratic Republic (17%) and Japan (12%). The highest numbers of new cases were reported from Viet Nam (103 635 new cases; 106.5 new cases per 100 000; a 6% increase), Republic of Korea (44 238 new cases; 86.3 new cases per 100 000; a 38% increase), and Malaysia (33 675 new cases; 104.0 new cases per 100 000; similar to the number reported in the previous week).

The Region reported over 3300 new deaths, a number similar to that of the previous week. The highest numbers of new deaths were reported from Viet Nam (1550 new deaths; 1.6 new deaths per 100 000; a 13% increase), the Philippines (866 new deaths; <1 new death per 100 000; a 16% decrease), and Republic of Korea (401 new deaths; <1 new death per 100 000; a 32% increase).



Source: https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---14-december-2021

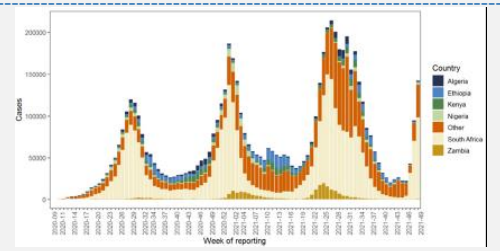
Global Situation

Source: https://www.tagesschau.de/thema/liveblog/
https://www.thenewhumanitarian.org

bluedot

Notable Update:
As of December 9, **Europe** was the continent with the largest proportion of countries (39%, or 20 out of 51) with a **high incidence rate** (>350 per 100,000 over the past 14 days) and a stable or increasing trend in daily new cases over the last seven days. **Africa** has the highest proportion of countries (**34%,** or 19 out of 56) with a **low** (<=140) to **moderate** (140.1 - 350) incidence rate and an increasing trend in new cases over the last seven days. **South America** has the highest proportion of countries (**79%,** or 11 out of 14) reporting a **low incidence rate** (<= 140) with a stable or decreasing trend in new cases.

Africa: COVID-19 cases in the African region have shown a sharp increase in the past week when compared to the week prior, primarily because of a rise in cases in South Africa, Zimbabwe, and Eswatini. Most of the new cases during the last four weeks have been reported from Gauteng province, which includes Johannesburg, Pretoria and other major cities. Other provinces in South Africa and neighbouring countries have also started seeing increases in the number of new cases. Even with this increase, there remains a variation in the pandemic trends across different sub regions. While investigations continue into the epidemiology of the Omicron variant, WHO recommends countries to take a risk-based and scientific approach and put in place measures which can limit its possible spread.



GBR: plans to carry out the production of its mRNA vaccines at the Australia site in addition to the USA and Europe. The plant in the state of Victoria is expected to produce up to 100 million mRNA vaccination units per year from 2024.

DEU: It is planning that in the future, arrivals from virus variant areas will also have to take a PCR test after arrival in Germany in addition to a corona test before departure. The affected immigrants must then immediately go into quarantine until the result is available.

IND: As of December 9, 2021, 624 new deaths were reported in India. According to media reports, this large increase is secondary to a backlog of deaths after the reconciliation of data from the Ministry of Health across the states of Chandigarh, Kerala, and Goa. Notably, since the beginning of the pandemic, governments have often revised officially reported case counts. As a result, single-day large increases/decreases in cases or deaths due to these revisions have occurred, causing irregular patterns in the daily reported numbers.

CHN: In Zhejiang province, half a million people have been quarantined due to a corona outbreak. From the eastern part of the country, 44 out of 51 corona cases had previously been reported. This brings the total number of registered cases since last week to just under 200. In addition, companies were closed in some districts, including Ningbo, the province's main port. In Zhenhai District in Ningbo, the authorities declared the temporary closure of most businesses. In the meantime, the new Corona variant Omikron has reached the southern Chinese metropolis of Guangzhou. The virus was detected in a 67-year-old who came to China in November, reports the state broadcaster CCTV. On Monday, health authorities in the northern port city of Tianjin reported the first Omikron case in mainland China.

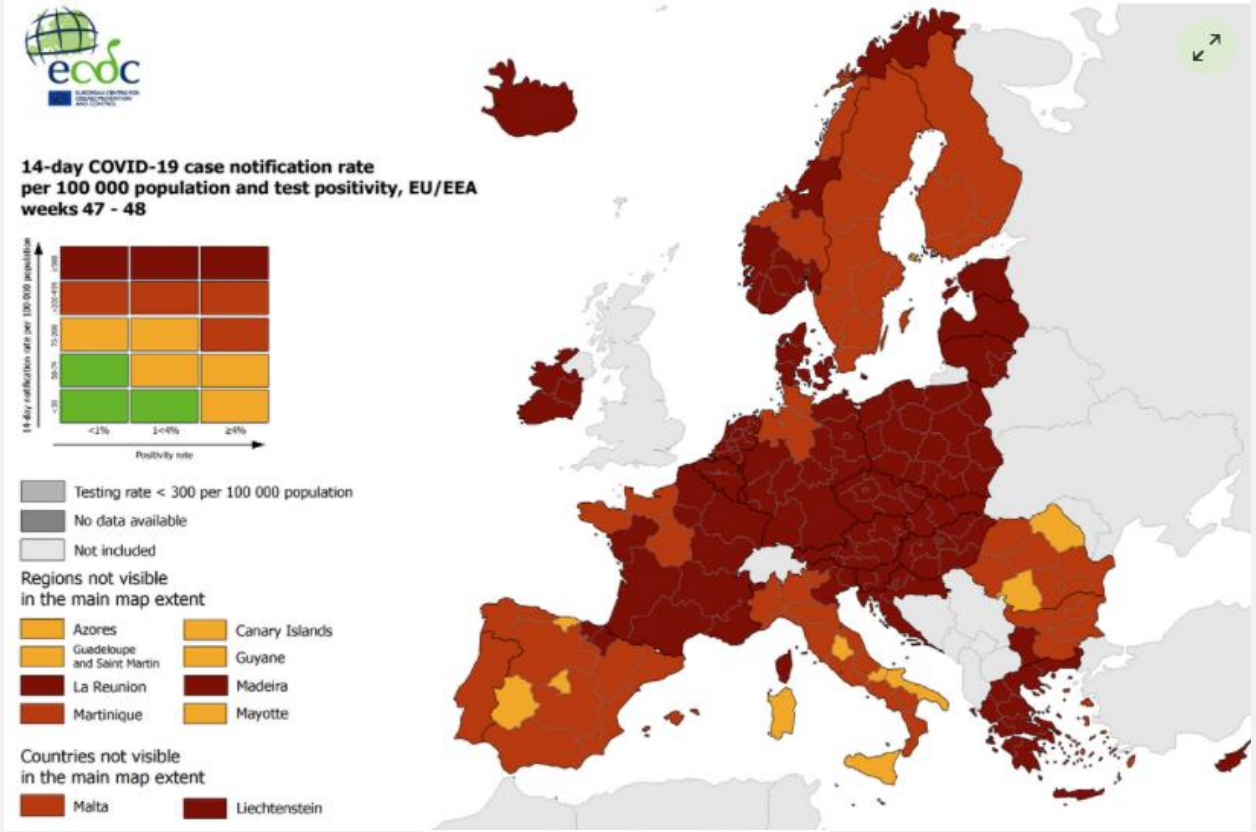
KOR: recorded a record number of coronavirus-related deaths on Tuesday. 94 people had died, 906 were in serious or critical condition, said the disease control authority of the country. In addition, 5567 new infections had been reported. The Ministry of Health said medical resources were running out in the capital Seoul and other metropolitan areas. 86 percent of the intensive care beds intended for corona patients are occupied. More than 1480 were waiting for a hospital bed or inpatient treatment. Last week, at least 17 patients died at home or in facilities where they were waiting for a hospital bed.
Of the 51 million inhabitants in South Korea, more than 81 percent are fully vaccinated against Corona. However, only 13 percent have ought a refresher of the vaccination protection. Last week, the government shortened the required time interval between the second vaccination peak and the refresher to three months.

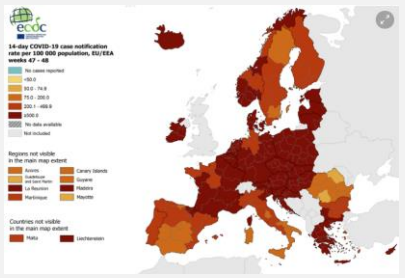
AUS: is sticking to planned relaxation of restrictions on public life despite an increase in the number of coronavirus infections. Today, in most parts of the country, the requirements for wearing protective masks in many public areas will be eliminated. The ban on access for unvaccinated people to restaurants and major events is also expiring. In addition, the long-closed borders will be reopened to qualified migrants and students if they are vaccinated.
Most recently, the country's most populous state, New South Wales with the metropolis of Sydney, recorded the highest number of infections in ten weeks. On Tuesday, 800 new cases were detected. Nationwide, 85 infections with the new Omikron variant of the coronavirus have also been detected so far.

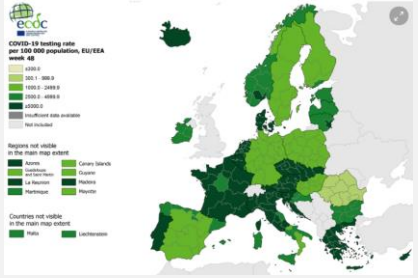
USA: California is reintroating a mask requirement in many places due to a significant increase in corona infections. As the health authority announced, must be worn from Wednesday in all publicly accessible interiors a mouth-nose protection. This also applies to people who are fully vaccinated against the coronavirus. The edition will initially apply until 15 January. Since the Thanksgiving holiday at the end of November, the number of coronavirus infections and hospital admissions has risen significantly, the authority said. At the beginning of December, the first infection in the USA with the new Omikron variant was discovered in a person in California who had entered from South Africa.

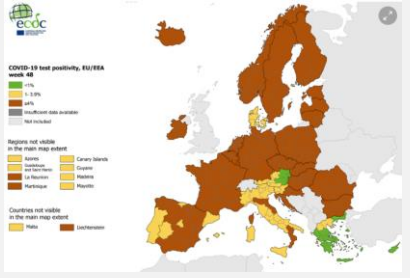
European Situation

Maps in support of the Council Recommendation on a coordinated approach to the restriction of free movement in response to the COVID-19 pandemic in the EU, as of 09 December 2021









14-day case notification rate per 100 000 inhabitants | Testing rates per 100 000 inhabitants | Positivity rates

ECDC COVID-19 country overviews report Week 47, as of 10 December 2021

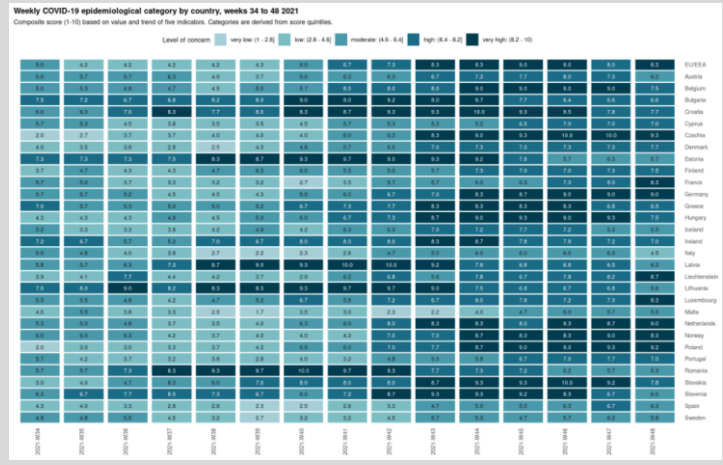
At the end of week 48 (week ending Sunday 5 December 2021), the overall epidemiological situation in the EU/EEA is characterised by a high and rapidly increasing overall case notification rate and a slowly increasing death rate. Increasing case notification rates and an epidemiological situation of high or very high concern are now observed, particularly in western and northern parts of the EU/EEA. This situation is largely driven by the high transmissibility of the Delta variant, which has limited the reduction in transmission achieved by the COVID-19 vaccination roll-out in the EU/EEA. The overall COVID-19 case notification rate for the EU/EEA was 797.0 per 100 000 population (748.6 the previous week). This rate has been increasing for nine weeks. The 14-day COVID-19 death rate (55.9 deaths per million population, compared with 53.2 deaths the previous week) has been stable for two weeks. Of 30 countries with data on hospital or ICU admissions or occupancy up to week 48, 17 reported an increasing trend in at least one of these indicators compared to the previous week.

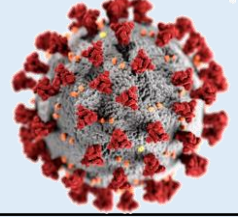
ECDC's assessment of each country's epidemiological situation is based on a composite score based on the absolute value and trend of five weekly COVID-19 epidemiological indicators. As shown below, for week 48, eight countries (Czechia, France, Germany, Liechtenstein, Luxembourg, the Netherlands, Norway and Poland) were categorised as of very high concern, 11 countries (Belgium, Bulgaria, Croatia, Cyprus, Denmark, Finland, Greece, Hungary, Ireland, Portugal and Slovakia) as of high concern, 10 countries (Austria, Estonia, Iceland, Latvia, Lithuania, Malta, Romania, Slovenia, Spain and Sweden) as of moderate concern and one country (Italy) as of low concern. Compared with the previous week, three countries (France, Liechtenstein and Luxembourg) moved to a higher category, nine countries (Austria, Belgium, Hungary, Italy, Latvia, Lithuania, Slovakia, Slovenia and Spain) moved to a lower category and 18 countries stayed in the same category.

Forecasts of cases and deaths from the European COVID-19 Forecast Hub and of hospital and ICU admissions produced by ECDC provide predictions for weeks 49 and 50. Compared with the current week, increasing trends in cases, stable trends in hospital admissions, stable trends in ICU admissions and increasing trends in deaths are forecast in the EU/EEA by the end of week 50. By the end of week 48, the cumulative uptake of at least one vaccine dose in the EU/EEA was 82.7% (range: 32.7–99.7%; pooled data from 30 countries) among adults aged 18 years and older and 71.1% (range: 27.4–88.7%; pooled data from 30 countries) in the total population. Cumulative uptake of full vaccination was 78.0% (country range: 31.0–95.4%) among adults aged 18 years and older and 66.7% (country range: 25.9–81.8%) in the total population.

The estimated distribution (median and range of values from 20 countries for weeks 46 to 47, 15 November to 28 November 2021) of variants of concern (VOC) was 98.6% (82.3–100.0%) for B.1.617.2 (Delta), 0.0% (0.0–0.0%) for B.1.351 (Beta) and 0.0% (0.0–0.0%) for P.1 (Gamma). The distribution was 0.0% (0.0–3.4%) for B.1.1.7 (Alpha), which was downgraded from the list of VOCs on 3 September 2021.

B.1.1.529 (Omicron) is being detected in increasing numbers in multiple EU/EEA countries, some of which now report community transmission. Sequencing remains targeted in most countries. A description of trends in aggregate detections and of the epidemiology of 174 reported cases is available in the virus variants summary and variants section.





Vaccination News

bluedot

A total of 10 countries accounted for **66.1%** of all vaccinations administered globally as of December 9. The top five countries/territories with the **highest number** of cumulative people fully vaccinated per 100,000 population are **Gibraltar (118,340), Portugal (88,630), United Arab Emirates (88,400), Singapore (87,000), and Chile (84,640)**. Conversely, the top five countries with the **lowest number** of cumulative people fully vaccinated per 100,000 population are **Burundi (10), Congo (Kinshasa) (70), Chad (450), Haiti (580), and Guinea-Bissau (1,000).**

Preliminary Research of Vaccination Immune Response to Omicron Variant

Pfizer/BioNTech published a study in which they tested the serum of vaccinated individuals for neutralizing antibody titer against the wild-type SARS-CoV-2 spike protein and the Omicron spike variant. Of note, at the time of writing, there is limited information available about the number of participants. The study examined serum three weeks after receiving a second dose and four weeks after receiving a third dose of vaccine. It was found that in those who received **two doses, there was a 25-fold reduction in neutralization against the Omicron variant compared to wild-type, while in those who received three doses there was a 25-fold increase in neutralization against the Omicron variant.** A third dose also strongly increases T cell (CD8+) levels against multiple spike protein epitopes (the part of the virus recognized by the immune system) which are have been correlated with protection against severe disease. The vast majority of these epitopes remain unchanged in the Omicron spike protein. **https://www.pfizer.com/news/press-release/press-release-detail/pfizer-and-biontech-provide-update-omicron-variant**

Another pre-print study **from the Africa Health Research Institute** evaluated whether Omicron escapes antibody neutralization in **6** individuals without previous COVID-19 infection and **two doses** of Pfizer/BioNTech vaccine and **6** individuals who had previous infection (of a non-Omicron lineage) and were vaccinated with two doses of the Pfizer/BioNTech vaccine. The results indicate a **decrease in neutralization against the Omicron variant by the Pfizer/BioNTech Comirnaty vaccine relative to ancestral virus in both study groups**. Importantly, there are very few participants in this study, and the results should be interpreted with caution. **https://www.ahri.org/wp-content/uploads/2021/12/MEDRXIV-2021-267417v1-Sigal.pdf**

The results of a vaccine effectiveness study conducted in the UK have been published as a pre-print (not yet peer-reviewed). The study shows **a reduction of vaccine effectiveness against Omicron VOC** infection as compared to Delta VOC infection in individuals that received **two vaccine doses**. However, vaccine effectiveness against Omicron infection was similar to that against Delta infection in individuals who had received an additional dose. The study did not assess vaccine effectiveness against severe outcomes. **https://khub.net/documents/135939561/430986542/Effectiveness+of+COVID-19+vaccines+against+Omicron**

What does this mean?

While these studies are very small, the results may suggest that **individuals with a previous infection and two doses, or three doses of Comirnaty in individuals who have not been infected previously, likely have more protection against infection with the Omicron variant.** These results still need to be considered with epidemiological findings to evaluate real-world effectiveness of vaccines against infection, as well as protection against severe disease and death. **The duration of protection as a result of a third dose remains unknown and will require monitoring over time**. While it is still early to determine the effectiveness of various vaccines, their combinations, and factors such as age and co-morbidities, these preliminary findings support the use of third doses of the Pfizer/BioNTech vaccine. However, the broad use of third doses must also be balanced with access to first and second doses in other populations. In comparison with Delta variant, Omicron's ability to evade immunity further emphasizes the need to maintain or improve upon existing strategies, including the use of high-quality masks indoors, increased testing capacity and monitoring, and improved ventilation in enclosed areas.

The short shelf life of donated doses

More than two thirds of donated COVID-19 vaccines are weeks away from expiry, making it harder for countries with stretched health systems to roll them out in time, according to the World Health Organization. Wealthy nations scooped up early vaccine stocks as lower-income countries waited on the sidelines through much of the year. Global supplies are on the rise, partly due to wealthy countries donating excess doses, but most donated jabs have a shelf life of less than three months, the WHO's Tedros Adhanom Ghebreyesus said last week. Supplies are often shipped with little advance warning, or even an indication of which vaccine – or how many doses – are on the way. Donated doses that quickly expire could damage public confidence in vaccines, organisations including the African Union and the Africa Centres for Disease Control and Prevention warn. Recent media stories have zeroed in on vaccine hesitancy, stumbling rollouts, and expired doses in the Global South – one recent Daily Mail headline reads: "So much for vaccine inequity". But as usual, there's much nuance behind the problem. For more, read our recent coverage of South Africa's vaccination campaign, where racial and class disparities may partly explain a mismatch in vaccine access.

https://www.thenewhumanitarian.org/maps-and-graphics/2021/
https://www.who.int/director-general/speeches/
https://www.who.int/news/item/
https://www.thenewhumanitarian.org/news-feature/2021/11/29/

Moderna: plans to carry out the production of its mRNA vaccines at the Australia site in addition to the USA and Europe. The plant in the state of Victoria is expected to produce up to 100 million mRNA vaccination units per year from 2024.

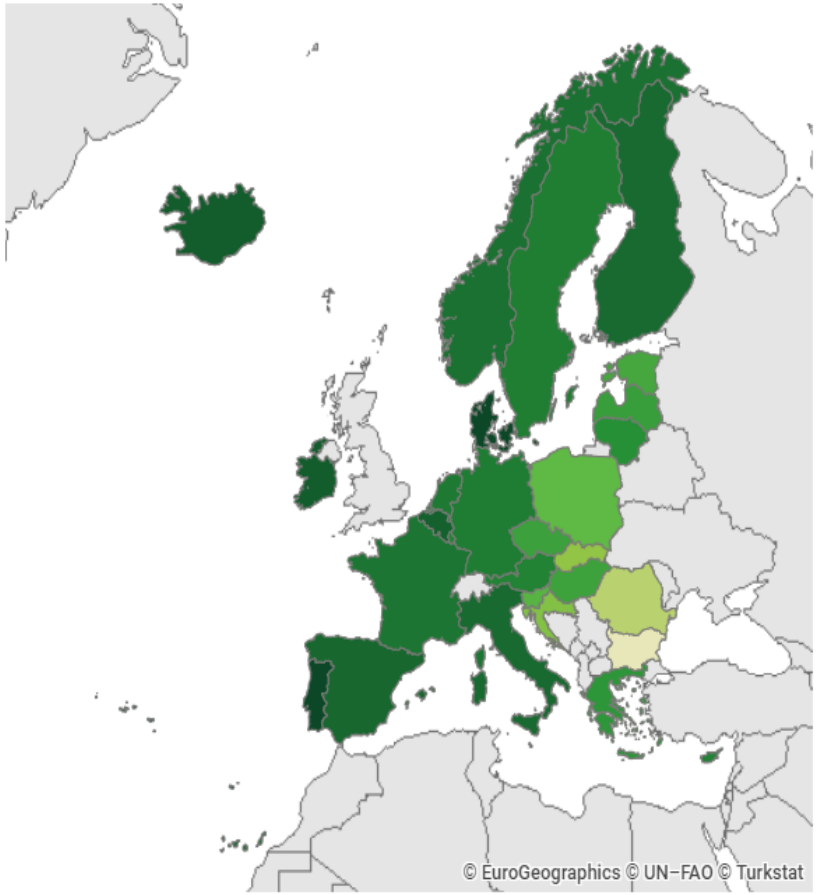
European Situation on Vaccination

Source: https://qap.ecdc.europa.eu/public/extensions/COVID-19/vaccine-tracker.html#uptake-tab

Total doses distributed to EU/EEA countries 884,007,639 | 678,345,352

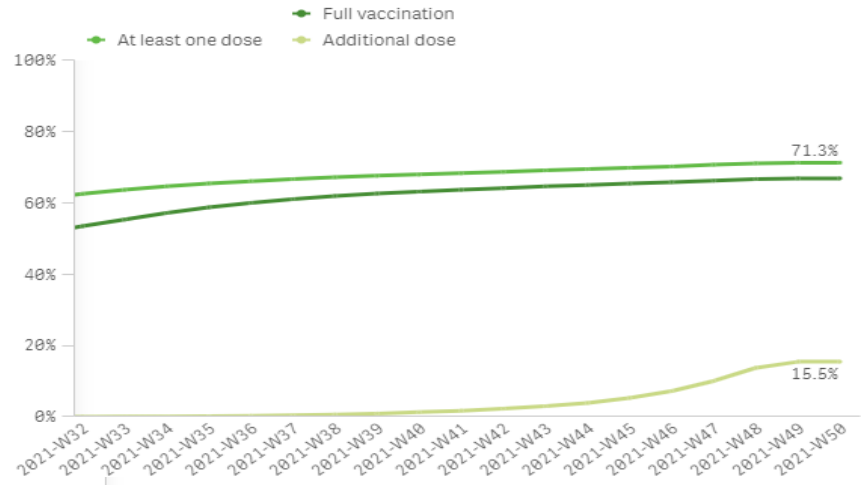
Indicator: Uptake full vaccination

Cumulative uptake (%) of full vaccination in the total population in EU/EEA countries as of 2021-12-14



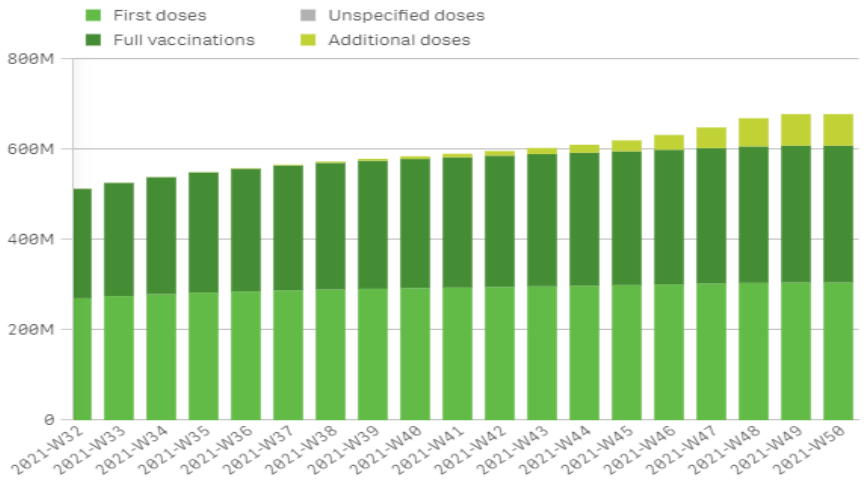
Cumulative vaccine uptake (%) in the total population in EU/EEA countries as of 2021-12-14

by reporting week (data for the current week are preliminary)



Cumulative number of vaccine doses administered to the total population in EU/EEA countries as of 2021-12-14

by reporting week (data for current week are preliminary)



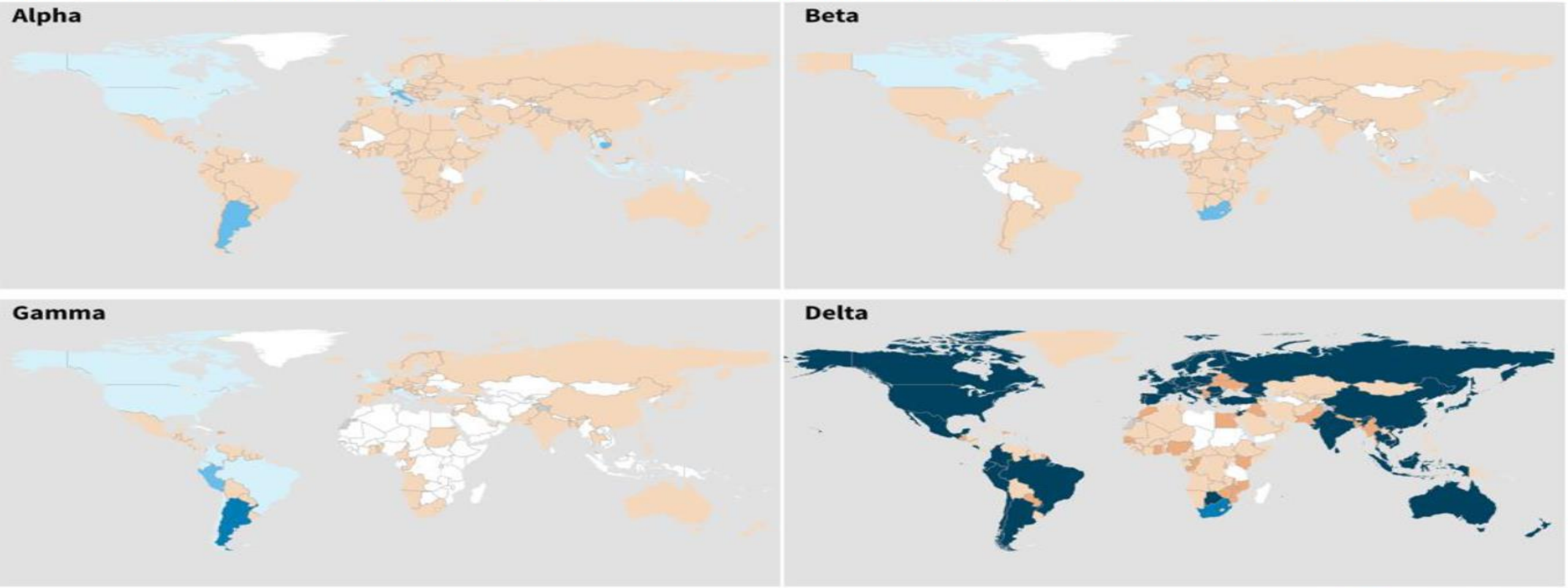
Cumulative uptake (%) of full vaccination by age group in EU/EEA countries as of 2021-12-14

Country	60+ years	50-59 years	25-49 years	18-24 years	<18 years
Austria	89.2%	79.0%	71.1%	67.8%	17.9%
Belgium	93.8%	90.7%	83.3%	80.3%	28.5%
Bulgaria	34.8%	35.4%	29.0%	23.7%	1.3%
Croatia	72.6%	63.4%	50.0%	36.2%	2.5%
Cyprus	92.9%	84.7%	78.5%	61.6%	11.7%
Czechia	83.4%	75.4%	61.7%	62.5%	14.4%
Denmark	99.2%	93.2%	82.2%	79.1%	26.4%
Estonia	74.0%	71.8%	64.5%	66.2%	15.9%
Finland	94.0%	86.4%	79.0%	72.5%	25.2%
France	87.3%	82.5%	77.6%	78.3%	23.6%
Germany	-	-	-	-	-
Greece	80.6%	77.1%	68.2%	62.0%	11.5%
Hungary	80.6%	73.1%	62.6%	50.2%	17.4%
Iceland	100.0%	92.2%	86.7%	85.2%	26.0%
Ireland	100.0%	98.8%	87.6%	84.4%	24.8%
Italy	89.8%	83.5%	76.7%	81.6%	23.7%
Latvia	70.0%	73.4%	71.1%	73.2%	15.9%
Liechtenstein	-	-	-	-	-
Lithuania	76.5%	75.8%	75.3%	70.9%	12.9%
Luxembourg	88.6%	83.1%	73.3%	66.9%	23.8%
Malta	98.9%	88.1%	91.5%	83.5%	26.0%
Netherlands	-	-	-	-	20.1%
Norway	98.2%	93.0%	82.7%	81.1%	8.0%
Poland	75.2%	65.9%	56.9%	51.5%	13.2%
Portugal	99.8%	93.5%	87.1%	84.7%	29.4%
Romania	44.1%	53.3%	46.3%	44.9%	5.7%
Slovakia	68.2%	57.9%	48.7%	47.2%	7.5%
Slovenia	81.8%	67.9%	54.5%	55.7%	8.9%
Spain	97.7%	88.7%	76.2%	68.8%	26.0%
Sweden	93.4%	88.9%	77.9%	70.5%	10.9%

SARS-CoV-2 Variants of Interest and Variants of Concern

Source: https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---14-december-2021

Figure 4: Prevalence of Variants of Concern (VOCs) Alpha, Beta, Gamma and Delta in the last 60 days and historic detections, data as of 14 December 2021



*Prevalence calculated as a proportion of VOC sequences among total sequences uploaded to GISAID with sample collection dates within the past 60 days prior to the latest date of collection, excluding low coverage sequences, limited to countries with ≥100 total sequences in the same period. Countries assigned by location of sample collection.
**Includes both official reports to WHO and unofficial reports of VOC detections.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Proportion of VOC among total sequences*
- 0.501 - 1.000
- 0.101 - 0.500
- 0.011 - 0.100
- >0.000 - 0.010

- VOC detected, too few sequences to estimate proportion
- No new VOC sequences, VOC previously reported**
- No presence of VOC reported to WHO
- Not applicable

World Health Organization

Data Source: World Health Organization, GISAID
Map Production: WHO Health Emergencies Programme

Since November 30, 2021, the BlueDot team has been collecting information on Omicron case counts from 100s of sources, including international government sources, news media, and publicly available data. This list is inclusive but not limited to the following sources:
ECDD, The New York Times Omicron tracking, CNN live Omicron, GISAID, The Hong Kong Centre for Health Protection, Outbreak.info, and other media sources and feeds for local transmission events.

SARS-CoV-2 Variant of Concern: Omicron (B.1.1.529)

bluedot

As of December 15 at 3 pm EST, according to media and official sources, a total of **3,890 confirmed cases** of the Omicron variant (B.1.1.529) have been reported in **73 countries**.

Since the last update cases of the Omicron variant have been reported for the first time in **Kuwait, Bermuda, Jordan, Bangladesh, Bahrain, Cyprus, Mauritius, and Taiwan, Gibraltar, Slovakia, and Turkey.** As of December 15, many countries have reasonable or strong evidence of community transmission.

Country	# confirmed cases	Case Change in Value from December 11, 2021	Evidence of Community Acquistion
Australia	42	0	
Austria	17	0	
Belgium	30	0	
Botswana	26	0	
Brazil	6	0	
Canada	108	17	
Croatia	3	0	
Czech Republic	5	0	
Denmark	1280	0	
Finland	20	0	
France	59	0	
Germany	82	5	
Iceland	20	0	
India	38	5	
Israel	21	0	Evidence of community transmission
Italy	13	0	
Namibia	18	0	
Nepal	3	0	
Nigeria	6	0	
Norway	109	0	
Portugal	49	0	
South Africa	633	0	
South Korea	63	0	
Spain	36	18	
Switzerland	16	0	
United Kingdom	820	0	
United States	72	0	
Zambia	3	0	
Zimbabwe	50	0	
Argentina	1	0	
Bahrain	1	0	
Bangadesh	2	0	
Bermuda	4	0	
Chile	2	0	
Cuba	1	0	
Cyprus	3	0	
Estonia	15	0	
Fiji	2	0	
Greece	3	0	
Guernsey	1	0	
Ireland	6	0	Imported cases only
Japan	12	0	
Kuwait	1	0	
Latvia	5	0	
Lebanon	2	0	
Liechtenstein	1	0	
Malaysia	1	0	
Maldives	1	0	
Mauritius	2	0	
Mexico	1	0	
Romania	7	4	
Russia	4	0	
Saudi Arabia	1	0	
Senegal	3	0	
Sierra Leone	1	0	
Singapore	2	0	
Slovakia	3	3	
Sri Lanka	2	0	
Sweden	23	0	
Taiwan	3	0	
Thailand	3	0	
Tunisia	1	0	
Uganda	7	0	
United Arab Emirates	1	0	
Gibraltar	3	3	
Turkey	6	6	
DRC	NA	NA	Insufficient Information
Luxembourg	0	0	
Malawi	3	0	
Ghana	33	0	
Hong Kong*	5	0	
Jordan	2	0	Suspected Community Transmission
Mozambique	NA	NA	
Netherlands	62	0	

Table 1. Overview of Omicron cases worldwide as of 12 Dez.

Notable updates

Omicron Variant Highlights

1. An **exceptionally rapid spread of the Omicron variant has been reported in South Africa**. Recent data suggests that this rapid spread is expected to follow in other geographies, and may overtake the Delta variant.
2. Based on preliminary data, in the U.K, it is estimated that Omicron variant has an **Rt number** (the average number of how many people an infected person will pass the virus on to) that ranges between **3 and 3.5, which is similar to when the virus was spreading prior to the availability of vaccines.**
3. Similarly, estimates of Omicron variant Rt with these data stand at **3.1 for Germany, and 3.0 for the U.S**.
4. These values are high compared to the **initial Rt of Delta in South Africa and the US, which was about 1.5.** Along with the rate of spread, unknowns such as the size of the susceptible population continue to make estimating the size of this wave difficult.
5. **The percentage of Omicron-susceptible population will likely vary across countries and more data is required to understand the impacts of the emerging variant**.

Notable updates

Breakthrough infections with SARS-CoV-2 Omicron variant despite full series and a booster dose of an mRNA vaccine

A recent non-peer-reviewed small study reported a cluster of Omicron variant breakthrough infections among seven individuals in late November/early December 2021 while in Cape Town, South Africa. According to available information, all affected had received full primary vaccination series and a third dose of mRNA vaccine. Third doses were administered between 5 to 10 months after the second vaccine doses, and the breakthrough infections occurred one to two months after the third doses were received. Although all individuals experienced symptomatic COVID-19, clinical presentations were mild to moderate. Recent research supports the likely protection against severe disease among vaccinated individuals, although these case descriptions highlight that three doses of mRNA vaccines are not necessarily sufficient to prevent breakthrough infections and symptomatic disease caused by the Omicron variant. Although all clinical presentations among the seven individuals were mild, the observation period was short and does not exclude subsequent deterioration or long-term sequelae from COVID-19. Larger epidemiological studies are required to better understand the risk of breakthrough infections among those who have received third doses of vaccines, the severity of these infections, and other potential risks related to the Omicron variant of concern.

Rates of COVID-19 in African countries and focus on Lesotho, Eswatini, and Zimbabwe

On December 9, 2021, the WHO reported that **10 African countries** had reported cases of the **COVID-19 Omicron (B.1.1.529) variant** and that overall, **the weekly COVID-19 cases in the continent had increased by 93%.** Furthermore, the WHO reports that a regional genomic sequencing laboratory in South Africa is **supporting 14 southern African countries** and has **scaled up sequencing**, processing 5,500 samples a month. While South Africa has the highest proportion of COVID-19 samples sequenced in Africa, **it has only sequenced about 0.8% of its confirmed case**s. The following are the three African countries that have experienced the **greatest percent change in new COVID-19 cases over the past week** based on 7-day rolling averages; however, there is **limited information** available about the **genomic sequencing capabilities** of these countries. Therefore, **low Omicron prevalence** data may be due to **low availability, access, and resources** for genomic sequencing.

- **In Lesotho**, the seven-day rolling average number of new cases has increased from **12 cases on December 5, to 181 cases on December 12**. The seven-day rolling average number of new deaths per day has not changed and remains under one. There are no available data to indicate the 14-day test positivity rate. As of December 8**, 29% (628,369) of the total population (2,166,788) is fully vaccinated. No cases of Omicron** have been reported in the country, and **no cases of exportation** into other countries have been reported.
- In **Eswatini** the seven-day rolling average number of new cases has increased from **138 cases on December 5, to 734 cases on December 12**. The seven-day rolling average number of new deaths per day has not changed and remains under one. News media report **the test positivity rate to be as high as 97.3%.** Health authorities report that as of December 13, **24.5% (285,466) of the total population (1,177,518) is fully vaccinated**. Although no cases of Omicron have been reported locally in the country, on December 11 Taiwan recorded its first cases of Omicron in a traveller with recent travel to Eswatini, which highlights that Omicron variant cases might be present, but **under-detected**. This is noteworthy as Eswatini relies heavily on neighbouring South Africa for most of its goods, and **underscores the exportation risks of emerging variants**.
- In **Zimbabwe**, the seven-day rolling average number of new cases has increased from **49 new cases on November 28 to 3,708 new cases on December 12**. During the same timeframe, the seven-day rolling average number of new deaths per day has increased from **one new death to four new deaths** and the **14-day test positivity rate has increased from 1.4% to 23.8%.** As of December 12, **19.6% (2,976,972) of the total population (15,175,364) is fully vaccinated**. **Cases of Omicron have been reported in the country as well as cases of importation into other countries**, most recently including Bangladesh on December 11.

SARS-CoV-2 Variant of Concern: Omicron (B.1.1.529)

bluedot

Source: https://ourworldindata.org/explorers/coronavirus-data-explorer?
https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---14-december-2021

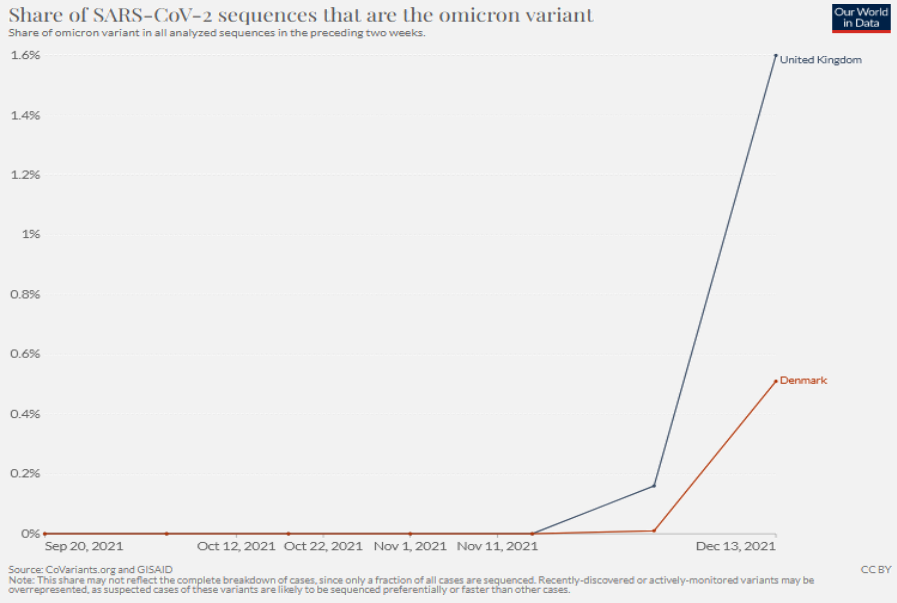
Community Transmission of Omicron Variant (B.1.1.529) in the United Kingdom

The United Kingdom is now facing another COVID-19 surge as the country has reported a new increase in the daily number of reported cases since early November. As of December 8, the **seven-day rolling average of daily new cases reported reached 47,850**, surpassing the previous peak in the seven-day rolling average of 47,209 daily new cases reported on October 23, 2021. Compared to the value from two weeks ago, the percentage of positive tests over the last 14 days has remained at 4.4%. Since October 29, the seven-day rolling average number of currently hospitalized patients in the UK has declined from 1,053 to 759 on November 28, since then, the number has oscillated between a seven-day average of 759 and 800.

The daily count of **new cases** involving the Omicron (B.1.1.529) variant has also **rapidly increased**. As of December 10, there are 1,265 reported Omicron cases, with 443 of those cases (35%) reported in England on December 10, roughly double what they reported on December 9. According to the UK's strategy for routine surveillance, all positive tests from people arriving in the UK are sent for genomic sequencing while roughly 15-20% of all positive P.C.R. tests of people within the country are sent for sequencing as well, which could lead to an underestimation of the true number of this variant cases within the community. Based on early numbers from this data, it is estimated that **Omicron has an R-value** (the average number of how many people an infected person will pass the virus on to) that **ranges between 3 and 3.5**, which is similar to what the world experienced when the virus was spreading when people did not have vaccines available in early 2020. Health officials have stated that the country should not ignore the rate at which the number of Omicron cases are rising although the number of hospitalizations has not increased dramatically, 70% of the population in the UK has been fully vaccinated, and 32% has received a booster dose. **They have estimated that at least 50% of the cases will be caused by the Omicron variant in the next two to four weeks**. Furthermore, health officials have stated that in an effort to re-allocate resources for COVID-19 patients, some hospitals have already cancelled elective care again. There is a need to be mindful of the burden that Omicron may place on the health care system and its ability to cope if cases rise fast given that the country has been seeing an increasingly high incidence of cases for some time.

New Restrictions Implemented

On December 8, the British government announced the implementation of new restrictions in light of the increasing number of Omicron cases, urging people to work from home where possible, introducing new mask mandates and requiring people to show vaccine passports for entry to some venues. In late November, the UK government announced that all adults will be able to get their vaccine booster three months after their second dose in an effort to increase the efforts to expand their immunization campaign due to the rise of Omicron cases.



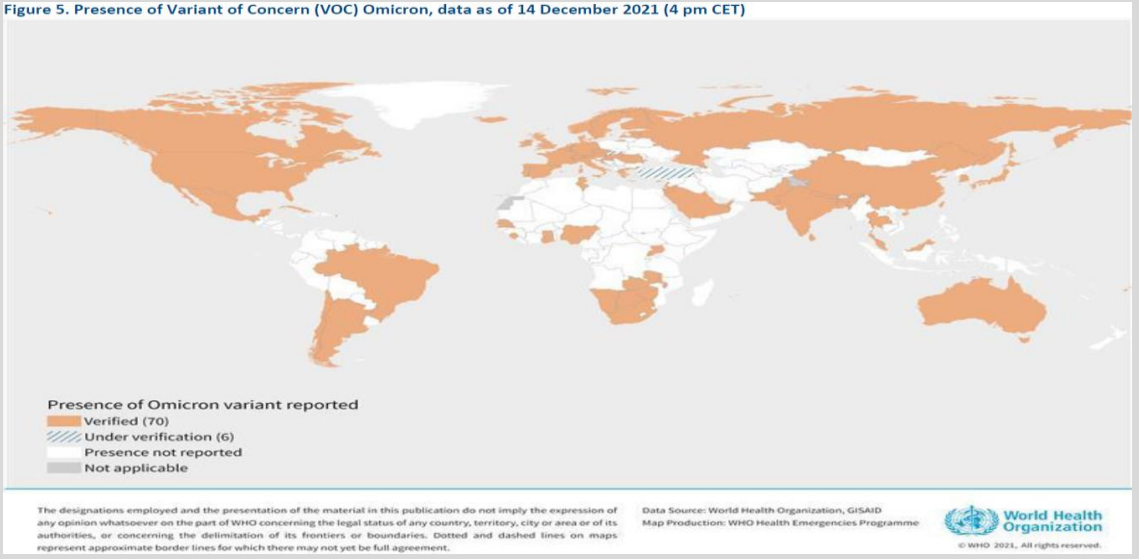
Community transmission of Omicron Variant (B.1.529) in Denmark

Denmark has reported a **steep increase in the daily number of reported COVID-19 cases since mid-September**. As of December 7, the 7-day rolling average of daily reported cases reached an **all-time high of 5,026 cases, surpassing the previous highest 7-day rolling average of 3,537 cases reported on December 18, 2020.** The daily count of cases involving **the Omicron (B.1.1.529) variant has also rapidly increased**, and as of December 7 there were 785 reported Omicron cases, making up approximately **2% of the country's total case count during that period**. According to media sources, 64 individuals tested positive for the Omicron variant after a social gathering attended by 150 people on November 27, with over 1,000 potentially exposed contacts. Denmark has a high sequencing capacity with approximately **46.6%** of all reported SARS-CoV-2 cases sequenced (as of November 29, 2021), **the second-highest proportion of cases sequenced globally**. In comparison, the United States has sequenced approximately 3.5% of all of their reported cases, while South Africa has sequenced 0.8% of their reported cases. In addition, Denmark is screening about **200,000 people a day**, and all positive samples are tested with an Omicron-specific polymerase chain reaction (PCR) test. Scientists are then sequencing all positive Omicron samples, along with 2,000 random positive samples each day. Given the country's high testing rates, high sequencing capacity, as well as high vaccine coverage (approximately **76.8%** as of December 7), it is likely the Omicron variant is under-detected in many countries, globally.

New restrictions implemented

On December 8, the Danish government announced the implementation of new restrictions in light of the increasing number of Omicron cases; however, official data indicate that hospitals are not at a critical capacity. Restrictions include the closure of primary schools on December 15 and the closure of restaurants and bars on December 10. The government is also encouraging individuals to work from home and cancel large social gatherings. Additionally, the validity of Denmark's vaccine passport will be shortened from 12 months to seven months for fully vaccinated individuals or those who have received boosters (third dose). Lastly, Denmark is also promoting boosters and just opened vaccination to children ages 5 to 11.

Figure 5. Presence of Variant of Concern (VOC) Omicron, data as of 14 December 2021 (4 pm CET)



SARS-CoV-2 Variants of Interest and Variants of Concern

European Update

bluedot

European update on SARS-CoV-2 B.1.1.529 variant of concern (Omicron), as of 14 December 2021

As of 14 December and since 13 December 2021, 441 additional SARS-CoV-2 Omicron variant of concern (VOC) cases have been confirmed in the European Union and European Economic Area (EU/EEA), contributing to an overall total of 2 127 confirmed cases so far.

Confirmed cases have been reported by 25 EU/EEA countries: Austria (17), Belgium (73), Croatia (3), Cyprus (3), Czechia (9), Denmark (268), Estonia (26), Finland (20), France (130), Germany (101), Greece (5), Hungary (2), Iceland (20), Ireland (18), Italy (27), Latvia (5), Liechtenstein (1), Luxembourg (1), the Netherlands (62), Norway (1 176), Portugal (49), Romania (8), Slovakia (3) Spain (49) and Sweden (51), according to information from public sources. Two new countries (Luxembourg and Hungary) have reported cases since yesterday and several countries have reported a number of probable cases.

Although cases reported initially were linked to travel, an increasing number of cases are now reported to have been acquired within the EU/EEA, including as parts of clusters and outbreaks, with cases also being detected in representative surveillance systems.

A preliminary analysis of the initial Omicron VOC cases reported to The European Surveillance System (TESSy) shows that imported or travel-related cases account for 22 (13%) cases, while 121 (70%) of the cases reported to TESSy have been acquired locally, including 78 (45%) cases sampled as part of local outbreak investigations.

EU/EEA countries reporting cases without an epidemiological link to travel include Belgium, Denmark, Finland, Hungary, Spain, Sweden and Iceland. This indicates that undetected community transmission could be ongoing in the EU/EEA.

All cases in the EU/EEA for which there is available information on severity were either asymptomatic or mild. So far, there have been no Omicron-related deaths reported in the EU/EEA. These data should be assessed with caution, as the number of confirmed cases is too low to understand if the disease clinical spectrum of Omicron differs from that of previously detected variants.

Case definition:

Probable case of SARS-CoV-2 Omicron VOC infection

A person with a positive nucleic acid amplification test (NAAT) or rapid antigen detection test (RADT) for SARS-CoV-2 AND one of the following: S-gene target failure or another PCR-based single nucleotide polymorphism (SNP) assay indicative of the SARS-CoV-2 Omicron VOC or is a contact of a probable or confirmed case of SARS-CoV-2 Omicron VOC infection.

Confirmed case of SARS-CoV-2 Omicron VOC infection

A person with confirmed sequencing result for the SARS-CoV-2 Omicron VOC.

Source: https://www.ecdc.europa.eu/en/news-events/epidemiological-update-omicron-variant-concern-voc-data-14-december-2021

* Denmark reported 195 cases as confirmed through whole genome sequencing and 2 276 as confirmed nationally through a variant-specific PCR.

** Norway announced that probable cases of Omicron are now considered as confirmed cases and, therefore, the total number of Omicron detections included for Norway in this report consists of both probable and confirmed cases

EU/EEA Total	2 127
Austria	17
Belgium	73
Croatia	3
Cyprus	3
Czechia	9
Denmark	268*
Estonia	26
Finland	20
France	130
Germany	101
Greece	5
Hungary	2
Iceland	20
Ireland	18
Italy	27
Latvia	5
Liechtenstein	1
Luxembourg	1
Netherlands	62
Norway	1 176**
Poland	0
Portugal	49
Romania	8
Slovakia	3
Spain	49
Sweden	51

Table 1. Confirmed SARS-CoV-2 Omicron VOC cases reported by public sources, as of 14 December 2021 (12:00)

Table 2: Summary of phenotypic impacts* of variants of concern

WHO label	Alpha	Beta	Gamma	Delta	Omicron
Transmissibility	Increased transmissibility[11]	Increased transmissibility[12,13]	Increased transmissibility[13,14]	Increased transmissibility[13,15,16]	No direct evidence for increased transmissibility.
Disease severity	Possible increased risk of hospitalization[17,18], possible increased risk of severe disease and death[19,20]	Possible increased risk of hospitalization[18], possible increased in-hospital mortality[21]	Possible increased risk of hospitalization[18], possible increased risk of severe disease[22]	Possible increased risk of hospitalization[23,24]	Not yet known. Clinical outcome data are under review.
Risk of reinfection	Neutralizing activity retained[25], risk of reinfection remains similar[26]	Reduction in neutralizing activity reported; T cell response elicited by D614G virus remains effective[27]	Moderate reduction in neutralizing activity reported[28]	Reduction in neutralizing activity reported[29–31]	Preliminary evidence suggests a possible increased risk of reinfection [32]
Impacts on diagnostics	Limited impact – S gene target failure (SGTF), no impact on overall result from multiple target RT-PCR; No impact on Ag RDTs observed[33]	No impact on RT-PCR or Ag RDTs observed[31]	None reported to date	No impact on RT-PCR or Ag RDTs observed[34]	PCR continues to detect Omicron. Impact on Ag-RDTs is under investigation.

**Generalized findings as compared to previously/co-circulating variants. Based on emerging evidence, including non-peer-reviewed preprint articles and reports, all subject to ongoing investigation and revision.*

Table 3. Summary of primary series vaccine performance against variants of concern (data as of 12 December 2021)

	WHO Emergency Use Listing (EUL) Qualified Vaccines*								Vaccines without WHO EUL*		
	AstraZeneca-Vaxzevria/SII - Covishield	Beijing CNBG- BBIBP-CorV	Bharat-Covaxi	Janssen-Ad26.COV 2.S	Moderna-mRNA-1273	Moderna-mRNA-1273/ Pfizer BioN BioNTech-Comirnaty	Pfizer BioNTech-Comirnaty	Sinovac-CoronaVac	Anhui ZL-Recombinant	Gamaleya-Sputnik V	Novavax-Covavax
Alpha[43,44]											
Summary of VE*	Protection retained against all outcomes										
- Severe disease	↔₁	-	-	-	↔₂	↔₁	↔₄	-	-	-	-
- Symptomatic disease	↔↓₃	-	-	-	↔₁	↔₁	↔₄	-	-	-	↓₁
- Infection	↔↓₄	-	-	-	↔₃	-	↔₃	-	-	-	-
Neutralization	↔↓₃	↔₁	↔₂	↔₄	↔↓₂₃	↔↓₃	↔↓₄₈	↔↓↓₇	↔₂	↔↓₄	↓₁
Beta[45–48]											
Summary of VE*	Protection retained against severe disease; reduced protection against symptomatic disease; limited evidence										
- Severe disease	-	-	-	↔₁	↔₁	-	↔₃	-	-	-	-
- Symptomatic disease	↔to↓↓↓₂	-	-	↔₁	↔₁	-	↔₂	-	-	-	↓↓↓₁
- Infection	-	-	-	-	↔₁	-	↓₁	-	-	-	-
Neutralization	↓↓↓↓₈	↔↓↓₂	↓₂	↓↓↓↓₃	↓↓↓↓₂₇	↓↓₃	↓↓↓↓₄₈	↓↓↓↓↓₆	↔↓↓₃	↓↓↓↓↓↓₃	↓↓↓₁
Gamma											
Summary of VE*	Unclear impact; very limited evidence										
- Severe disease	↔₁	-	-	-	↔₁	-	↔₂	-	-	-	-
- Symptomatic disease	↔₁	-	-	-	↔₁	-	↔₁	-	-	-	-
- Infection	↔₁	-	-	-	↔₁	-	↔₁	↔₁	-	-	-
Neutralization	↔↓₃	-	-	↔↓₄	↓₈	↔₁	↔↓₂₈	↓₃	↔₁	↓↓↓₃	-
Delta[49]											
Summary of VE*	Protection retained against severe disease; possible reduced protection against symptomatic disease and infection; limited evidence										
- Severe disease	↔₃	-	-	-	↔₃	-	↔₆	-	-	-	-
- Symptomatic disease	↓↓↓₃	-	↓₁	-	↔₁	-	↔↓₄	-	-	-	-
- Infection	↔↓₄	-	-	↓↓↓₂	↔₃	-	↔↓₃	-	-	-	-
Neutralization	↓₂₀	-	↔↓₃	↔↓↓₈	↓₃	↓↓↓₃	↔↓₂₈	↓↓↓↓↓₅	↔↓₂	↓↓↓₃	-
Omicron											
Summary of VE*	No evidence										
- Severe disease	-	-	-	-	-	-	-	-	-	-	-
- Symptomatic disease	-	-	-	-	-	-	↓↓↓₁	-	-	-	-
- Infection	-	-	-	-	-	-	-	-	-	-	-
Neutralization	↓↓↓₂	-	-	↓↓↓₂	-	↓↓↓₂	↓↓↓₃	-	-	-	-

VE refers to vaccine effectiveness and vaccine efficacy. *Summary of VE: indicates the general conclusions but only for the vaccines evaluated against the specific variant. Arrows generalize the magnitude of reduction in VE or neutralization: "↔" <10% reduction in VE, or VE >90% with no comparator, or that there was a <2-fold reduction in neutralization; "↓" 10 to <20% reduction in VE, or 2 to <5-fold reduction in neutralization; "↓↓" 20 to <30% reduction in VE, or 5 to <10-fold reduction in neutralization; "↓↓↓" ≥30% reduction in VE, or ≥10-fold reduction in neutralization. When more than one neutralization study is available, the interquartile range (25th and 75th percentiles) of fold-reductions across all studies for specific vaccine/variant was used. "Moderna-mRNA-1273/Pfizer BioNTech-Comirnaty" indicates that both vaccines were evaluated together in study. The number of studies is shown as subscripts: vaccine effectiveness and neutralization studies informing this table can be found on the VIEW-hub Resources Library. References indicated by superscripts next to VOC name in column 1 are vaccine efficacy results from randomized controlled trials informing this table.

Presented as a poster at the FHP Event from 3rd to 4th NOV 21

A Novel Military-Civilian Clinical Collaboration to Assess Military Patients Post SARS-CoV-2 Infection

Rebecca R Chamley [1,2], Robert M Barker-Davies [1,3], Oliver O'Sullivan [3,4], Rory McDonald [1,5], Kayleigh Pierce [1,6], Ben Coombs[1,5], James Winchester [1,5], Jonny Collins [1,7], Edward Sellon[4,5], Cheng Xie [2], Jon Naylor [1,8], Joseph Mulae [1,5], Alexander N Bennett [1,3], Oliver J Rider [2], Edward D Nicol [1,8], David A Holdsworth[4,6]

Background

During the first wave of the COVID-19 pandemic, it became apparent that a large number of UK Armed Forces personnel would become infected, often being managed in the community with little face-to-face contact with medical professionals. The risk of unrecognised organ dysfunction (e.g. pulmonary fibrosis, pulmonary embolism or myocarditis) and persistent symptoms such as fatigue and exercise intolerance in a population required to work in arduous operational environments concerned military physicians and front line commands. This prompted the development of a clinical pathway to assess service personnel with severe acute illness, or persistent symptoms, post SARS-CoV-2 infection. The intention of this Defence COVID-19 Recovery Service (DCRS) was to identify those who required specialist care, and to return the rest to duty quickly and safely.

Methods

Assessment of all personnel was undertaken at two hospital sites (one Defence and one civilian) delivering clinical assessment, investigations, multidisciplinary opinion and treatment plans within eight days. The focus was on cardiopulmonary, psychological and cognitive function, capturing limitations in daily living and exercise capacity. Investigations were delivered by a team comprising military and civilian healthcare practitioners embedded at DMRC Stanford Hall, Oxford University NHS Foundation Trust and the University of Oxford. It included cardiopulmonary exercise testing, pulmonary function testing, computed tomography and magnetic resonance imaging (see Fig 1) . Individuals were assessed by experienced military rehabilitation and medicine specialists, and were either discharged back to their unit with local rehabilitation advice, referred for inpatient rehabilitation, or referred for specialist medical care.

Results

256 service patients have been fully assessed in the DCRS. 149 (58.2%) required input only from Defence clinical personnel with no indication for investigation in the NHS. 107 (41.8%) required investigations and/or follow up in a civilian (NHS) tertiary hospital following initial assessment by Defence clinicians. Time to reach a clinical opinion was very slightly shorter if a decision was made following assessment at the Defence hospital, compared with investigation at both sites (8 ± 0.0 days vs. 8.7 ± 4.0 days, $p<0.05$). Within the NHS/University hospital, civilians and military clinicians worked together to complete the complex investigations required. 15 military and 14 civilian personnel were involved to provide 7 military and 6 civilian clinical roles for each visit.

Discussion

The practice of posting Defence Medical Services clinical staff to UK NHS Trusts and academic centres prior to the COVID-19 pandemic allowed strong relationships to develop between these institutions. These were key to the development of an end-to end clinical pathway at pace for UK Armed Forces personnel with persistent symptoms post Sars-CoV2 infection. A dedicated team of both military and civilian healthcare professionals delivered a comprehensive assessment process which has provided reassurance for individuals and front line commands that Service Personnel are fit for operational duties.

Pre-existing relationships between the Defence Medical Services, NHS Trusts and UK universities enabled the **rapid** development of **a novel clinical pathway** to assess military patients with **symptoms post Sars-CoV2 infection.**

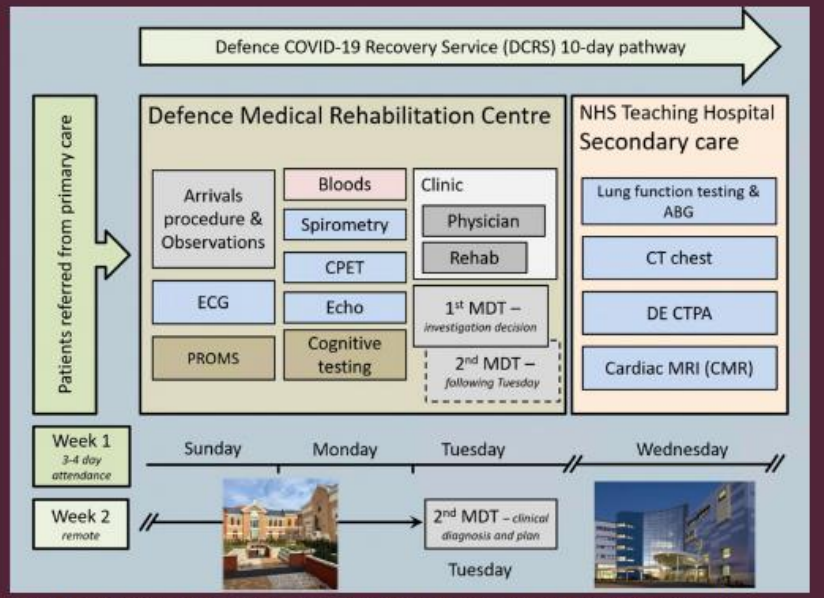


Figure 1. A diagram illustrating the DCRS. After referral from primary care, patients spend three days at DMRC Stanford Hall, where they undergo a range of initial cardiopulmonary and cognitive investigations. They are then reviewed in clinic on the third day by military rehabilitation and medicine physicians. Those who require further testing are referred to Oxford University NHS Foundation Trust, for investigations on day 4. Following this, patients are returned to their units and the results are reviewed the following week at a final multidisciplinary team meeting (MDT), where a clinical diagnosis and plan are recommended.

Please scan the QR code to read the concept publication

1. Royal Air Force 2. University of Oxford, UK 3. Academic Department of Military Rehabilitation, Defence Medical Rehabilitation Centre, Stanford Hall, Loughborough, UK 4. Royal Army Medical Corps 5. Oxford University Hospitals NHS Foundation Trust, UK 6. Royal Centre of Defence Medicine, Oxford, UK 7. Tactical Medical Wing, Carterton, UK 8. Royal Centre of Defence Medicine, Birmingham, UK

DMS Defence Medical Services

NHS Oxford University Hospitals NHS Foundation Trust

Presented as a poster at the FHP Event from 3rd to 4th NOV 21

Understanding the organisational impact of COVID: The development, delivery and use of the Royal Navy's COVID-19 self-reporting tool.

1. Surgeon Commander Will Sharp MBE, SO1 Health Analysis, Navy Command HQ

Background

COVID-19 impacted health, employment, and patterns of working throughout the United Kingdom. The Royal Navy (RN) wanted to understand the organisational impact with rising levels of COVID-19, national lockdowns, and a geographically dispersed population. This resulted in the creation of a self-reporting tool.

Methods and development

Over a six week period, the rapid development and release (18 Dec 20) of a COVID status reporting tool within the MyNavy app[1], allowed the RN to develop a 'live' and interrogable COVID Recognised People Picture (RPP), incorporating data across JPA, SCIO and MyNavy, using a data integration software platform.

There were over 300 flow variations within the self-reporting tool, to provide data capture points including: current and historical COVID status, 'well'/'unwell' state, isolation status, vaccination status and location (Figure 1). Personnel were requested to update their status, initially daily and then on a weekly basis, or whenever their circumstances changed[↓]. Subsequently, Lateral Flow testing data from units was also incorporated. The RPP was rolled out to Unit Commands and Medical Centres to support the local management of their populations.

Results

Across the RN Regulars (33 500), 2.27million status updates (18 Dec 20 – 24 Jun 21) were recorded across 33 098 personnel (a mean of 67 updates per person). The data was used to monitor trends, outbreaks, working location and sickness within the population. Sickness and isolation trends mirrored the national lockdowns and periods, including where cases were increasing in the community (Figures 2 and 3).

Vaccination states were monitored, and population were targeted according to Joint Committee on Vaccination and Immunisation priority group. The vaccine status of cohorts within the population was compared with National Immunisation Management Service (NIMS) data[2], this enabled vaccines to be targeted at age cohorts showing a lower vaccine uptake rate compared with the national average.

There was no significant difference in the number of positive cases recorded in the self–reporting tool vs the DMICP data ($p=0.965$), helping validate the tool and ensure a historical record.

The absolute risk of a self-reported COVID positive result were higher at 1.3936 (95% CI 1.2804 – 1.5168) for personnel in sea-going units was compared to those based in shore-side establishments, this was found to be statistically significant ($p<0.0001$).

Discussion

The rapid development and roll-out COVID status reporting tool within MyNavy App transformed the RN's organisational view of the impact of COVID, providing a source of data that has enabled data integration to establish rich insights never previously seen. The outcome supported force generation, improved the ability to track and identify outbreaks, enabled understanding and targeting of at risk populations based on the vaccination/COVID status, and provide a unique sickness/absence monitoring tool.

Figure 1: COVID Self Reporting Tool on MyNavy App - flows

Figure 2: Self report 'unwell status' with significant time points reflecting the national picture

Figure 3: Self report 'self-isolation status' with significant time points reflecting the national picture

[1] https://www.royalnavy.mod.uk/my-navy/login
[2] https://www.england.nhs.uk/statistics/statistical-work-areas/covid-19-vaccinations/
[↓] Not all personnel could access devices to update depending on operational activity.

Other Infectious Disease Outbreaks / Human Disasters

bluedot

Meningococcal Meningitis

Bulgaria - An outbreak of meningococcal meningitis has been declared in Sofia, the capital city of Bulgaria. In addition, and according to a local media report, a 5-year-old child passed away on December 26 after confirmation of meningococcal meningitis. As a result, health authorities proceeded to identify close contacts at the school the child attended, where 290 laboratory samples were tested and 23 were confirmed to have the pathogen. The epidemic of meningococcal meningitis is characterized by a cyclical nature with periodic rises and falls in the incidence. A rise in the incidence of meningococcal infection was predicted for 2021-2024. Health authorities continue to encourage the population to ensure immunizations are up-to-date.

Source: ProMed - https://promedmail.org/promed-post/?id=8700168

Dengue

Argentina - Cases of dengue fever continue to be reported in Argentina in 2021. This year to date, Argentina has seen a 93% decrease in cases, as compared to the same period last year. In addition, officially available information indicates that of the total cases, the majority (93% of the total) have been classified as caused by dengue serotype 1 (DENV-1). The remainder of the cases reported corresponded to DENV-2 (3% of all cases) and DENV-4 (4% of all cases). DENV-1 has been the prevalent serotype over the last two years which may explain the downward trend in case incidence, as there has been increased immunity among the population. Health officials continue to advise to take precautions against mosquito bites and increase vector control activities including the elimination of breeding sites.

Source: News Media – https://www.todojujuy.com/salud/dengue-preven-un-aumento-casos-2022-n212764
https://lavozdecataratas.com/2021/12/09/nacion-anticipa-un-verano-con-aumento-de-casos-de-dengue/

Circulating vaccine-derived poliovirus type 2 (cVDPV2)

Yemen – On 22 November 2021, the International Health Regulations national focal point (IHR NFP) for Yemen notified WHO of the detection of circulating vaccine-derived poliovirus type 2 (cVDPV2) in stool samples from two children with acute flaccid paralysis (AFP) in Yemen. The first case, a nine-year-old girl, from Thubab district, Taiz governorate, south-western Yemen, experienced onset of paralysis on 30 August. The child had not been vaccinated against polio. Two stool samples were collected on 31 August and 2 September, and VDPV2 was confirmed on 22 November, with 10 nucleotide differences from the Sabin type 2 poliovirus vaccine strain. The second case, a 26-month-old girl, from Marib district, Marib governorate, north-east of Sana'a city, experienced onset of paralysis on 1 September. The child had also not been vaccinated against polio. Two stool specimens were collected on 4 and 5 September, and VDPV2 was confirmed on 22 November with 11 nucleotide differences from the Sabin type 2 poliovirus vaccine strain. The two districts do not share a border and are approximately 430 km apart. The two VDPV isolates are genetically linked, and therefore, classified as cVDPV2. This is a new emergence and the viruses detected are not related to other known cVDPV2s globally. The confirmation of cVDPV2 comes in the context of an ongoing outbreak of circulating vaccine-derived poliovirus type 1 (cVDPV1), which has to date paralyzed 35 children (three in 2021, 31 in 2020, and one in 2019). The last VDPV2 case in the country was reported in June 2016 in Aden governorate, southern Yemen, and was classified as ambiguous[1] VDPV2 (aVDPV2). According to the WHO/UNICEF estimates of national immunization coverage, polio vaccine third dose (POL3) coverage was reported to be 66% in 2020.

Source: WHO - https://www.who.int/emergencies/disease-outbreak-news/item/circulating-vaccine-derived-poliovirus-type-2-(cvdpv2)-yemen

Neglected tropical diseases online courses

WHO - The virtual working environment created by the COVID-19 pandemic has prompted the World Health Organization (WHO) to adapt its capacity-building strategy for the health workforce by offering several online courses.

Currently, the OpenWHO platform hosts a channel dedicated to neglected tropical diseases (NTDs), with six multilingual courses dedicated to a wide range of health topics: NTDs and COVID-19 (in Arabic, English, French, Portuguese and Spanish); mycetoma (in English); rabies and One Health (in English); podoconiosis (in English); scabies (in English, French, Spanish and Russian); and tungiasis (in English).

By the end of 2020, more than 22 000 learners had enrolled in at least one of these courses, and more than 7000 Certificates of Achievement were issued. In 2022, the course on mycetoma will be available in Arabic, that on rabies and One Health in French, on scabies in Arabic and Portuguese, and on tungiasis in French, Portuguese and Spanish.

Also in 2022, several additional courses will be published, including Buruli ulcer; cutaneous leishmaniasis; cutaneous leishmaniasis in the Americas; leprosy; onchocerciasis; post-kala-azar dermal leishmaniasis; visceral leishmaniasis in East Africa; yaws; and others. Three courses will be dedicated to cross-cutting subjects such as tropical dermatology; supply chain management of NTD health products; and safety of NTD medicines.

Source: WHO - https://openwho.org/channels/ntd

Middle East respiratory syndrome coronavirus (MERS-CoV)

United Arab Emirates – On 17 November 2021, the National IHR Focal Point of the United Arab Emirates (UAE) notified WHO of one laboratory-confirmed case of MERS-CoV in UAE. The case is a 60-year-old male from the Abu Dhabi region, UAE. He developed fever, sore throat, shortness of breath, and a runny nose on 3 November and presented to hospital on 5 November. On 6 November, he was admitted to hospital where a computerized tomography (CT) scan confirmed the diagnosis of pneumonia. On 11 November, a nasopharyngeal swab was collected and tested positive for MERS-CoV by reverse transcriptase-polymerase chain reaction (RT-PCR). SARS-CoV-2 testing was also performed, and the results were negative. The patient has diabetes, hypertension, and dyslipidemia as co-morbidities. He owns a dromedary camel farm in Abu Dhabi and had a history of close contact with dromedary camels at his farm in the 14 days prior to the onset of symptoms. No travel history was reported during the same period. The patient has recovered and was discharged following two negative tests for MERS-CoV. Since July 2013, a total of 93 cases including the current case of MERS-CoV have been reported from UAE.

Source: WHO - https://www.who.int/emergencies/disease-outbreak-news/item/middle-east-respiratory-syndrome-coronavirus-(mers-cov)-united-arab-emirates

Influenza

Europe - Week 48/2021 (29 November - 05 Dezember 2021)

- Influenza activity has increased throughout the European Region.
- 5% of all sentinel primary care specimens from patients presenting with ILI or ARI symptoms tested positive for influenza virus;
- Several countries reported seasonal influenza activity above the 10% positivity threshold in sentinel primary care or hospital settings (Armenia, Israel, Kazakhstan, Kosovo*, Kyrgyzstan, Russian Federation)
- Hospitalized cases with confirmed influenza virus infection were reported from intensive care units and SARI surveillance
- Both influenza type A and type B viruses were detected with a dominance of A(H3) viruses across all monitoring systems and in nearly all SARI cases.

Source: ECDC - https://flunewseurope.org/

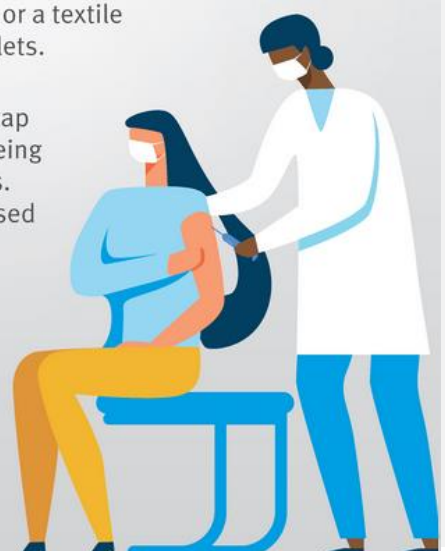
Flu Awareness Campaign 2021

Influenza

during the COVID-19 pandemic

How do I protect myself and others from COVID-19 during influenza vaccination?

- Don't come for a vaccination if you are ill or have had close contact with a COVID-19 case in the past two weeks.
- Keep a distance of at least one metre (ideally two) to other people, except for the vaccinator, in the facility.
- Schedule your vaccination during less busy times when there are no queues.
- Use a surgical face mask or a textile mask to protect against droplets.
- Wash your hands with soap and water before and after being in the facility for vaccinations. Alternatively, use alcohol-based disinfectant.
- Avoid touching surfaces with bare hands, or shaking hands with anyone in the facility.



The Flu Awareness Campaign is a communication campaign marked across the WHO European Region every year in October. It aims to raise awareness of the importance of vaccination for people's health and well-being and to increase the uptake of seasonal influenza vaccination of people with underlying risk factors.

ECDC supports the Flu Awareness Week by providing scientific evidence on vaccination and promoting vaccination uptake among risk- and priority groups.

Source:
https://www.euro.who.int/en/health-topics/communicable-diseases/influenza
https://www.ecdc.europa.eu/en/news-events/flu-awareness-campaign-2021
https://flunewseurope.org/

Influenza

during the COVID-19 pandemic

Why is it important to get vaccinated against influenza during the COVID-19 pandemic?

- By getting vaccinated, you help protect the vulnerable, such as the elderly and those with chronic underlying medical conditions. These are people who are at increased risk of severe outcomes such as respiratory difficulties or death.
- Both influenza and COVID-19 can cause severe disease, but note that the influenza vaccine only protects against influenza.
- Dual infection with COVID-19 and influenza is likely to cause more severe outcomes.
- Both COVID-19 and influenza can disrupt healthcare services and the functioning of nursing homes. It is especially important this year that healthcare staff get vaccinated against influenza and that healthcare services keep running.

Travel Recommendations and other Useful Links

Travel Recommendations

Many countries have halted some or all international travel since the onset of the COVID-19 pandemic but now have re-open travel some already closed public-travel again. This document outlines key considerations for national health authorities when considering or implementing the gradual return to international travel operations.

The decision-making process should be multisectoral and ensure coordination of the measures implemented by national and international transport authorities and other relevant sectors and be aligned with the overall national strategies for adjusting public health and social measures.

Travel has been shown to facilitate the spread of COVID-19 from affected to unaffected areas. Travel and trade restrictions during a public health event of international concern (PHEIC) are regulated under the International Health Regulations (IHR), part III.

The majority of measures taken by WHO Member States relate to the denial of entry of passengers from countries experiencing outbreaks, followed by flight suspensions, visa restrictions, border closures, and quarantine measures. Currently there are exceptions foreseen for travellers with an essential function or need.

Information on COVID-19 testing and quarantine of air travellers in the EU and the US you can find following the link:

- **https://www.ecdc.europa.eu/en/publications-data/guidelines-covid-19-testing-and-quarantine-airtravellers**
- **https://www.cdc.gov/coronavirus/2019-ncov/travelers/how-level-is-determined.html**

More information about traveling worldwide:

- National regulation regarding travel restrictions, flight operation and screening for single countries you will find **here** (US) and **here** (EU).
- Official IATA travel restrictions. You will find **here**.

More information about traveling in the EU

- by the ***European Commission*** you will find here:
https://www.consilium.europa.eu/en/policies/coronavirus/covid-19-travel-and-transport/

- The ***ECDC*** publishes a map of EU Member States, broken down by regions, which show the risk levels across the regions in Europe using a traffic light system. Find it **here**.

As a general rule, information on new measures will be published 24 hours before they come into effect.

All information should also be made available on **Re-open EU**, which should contain a cross-reference to the map published regularly by the European Centre for Disease Prevention and Control.

Useful links

ECDC:

- All info about the COVID-19 pandemic; (situation updates, latest news and reports, risk assessments etc.)
- COVID-19 Vaccine tracker
- SARS-CoV-2 variants dashboard for EU
- Latest Risk assessment on COVID-19 , 15 Feb 2021
- All “guidance's and technical reports” can be found under “All COVID-19 outputs” on this page here

WHO:

- Epi-WIN webinars and updates
- Status of “COVID-19 Vaccines within WHO EUL/PQ evaluation process” and the “Draft landscape and tracker of COVID-19 candidate vaccines”
- Weekly Epidemiological and operational updates
- COVID-19 new variants: Knowledge gaps and research
- COVID-19 Dashboard
- Vaccines explained
- Tracking SARS-CoV-2 variants
- Science in 5: WHO’s series on science and COVID-19
- Quick links

CDC:

- COVID Data Tracker and weekly review
- What´s new and Updated
- Guidance for COVID-19

References:

- European Centre for Disease Prevention and Control www.ecdc.europe.eu
- World Health Organization WHO; www.who.int
- Centres for Disease Control and Prevention CDC; www.cdc.gov
- European Commission; https://ec.europa.eu/info/live-work-travel-eu/health/coronavirus-response/travel-and-transportation-during-coronavirus-pandemic_en
- Our World in Data; https://ourworldindata.org/coronavirus
- Morgenpost; https://interaktiv.morgenpost.de/corona-virus-karte-infektionen-deutschland-weltweit/
- BlueDot; https://bluedot.global/


Thank you very much
for all the support!
We wish you a
Merry Christmas and a
Happy New Year!