



GLOBAL



247 656 715
Confirmed cases
235 900 000 recovered
5 014 850 deaths

USA

(7-days incidence 164,4)



45 935 203
confirmed cases
44 010 000 recovered
744 724 deaths

India

(7-days incidence 6,9)



34 296 237
confirmed cases
33 600 000 recovered
458 880 deaths

Brazil

(7-days incidence 37,4)



21 821 124
confirmed cases
21 020 000 recovered
608 071 deaths

News:

- **WHO:** has published WHO: Published the [statement on the ninth meeting](#) of the International Health Regulations (2005) Emergency Committee regarding the coronavirus disease (COVID-19) pandemic.
- **ECDC:** updated their [technical reports on contact tracing in the EU](#): public health management of persons, including healthcare workers, who have had contact with COVID-19 cases.
- **MSD/MPP:** The Medicines Patent Pool (MPP) and MSD have been signing of a [voluntary licensing agreement](#) to facilitate affordable access to *molnupiravir*, a new medicine being tested in clinical trials for treating COVID-19 in adults.
- **WHO** published a new [Science in 5 video, Episode #59-](#) About the flu and COVID-19. Explaining how to differentiate the disease, when and how to get the vaccine and how WHO decided on the composition of the flu vaccine.
- **WHO:** The new [ACT-Accelerator strategy](#) calls for US\$ 23.4 billion international investment to solve inequities in global access to COVID-19 vaccines, tests & treatments.
- **CDC:** published [a new study](#) that shows that vaccination offers a higher protection than a previous COVID-19 infection. Study participants were over 5 times more likely to have COVID-19 if they were unvaccinated and had a prior infection.
- **GAVCS:** The COVID-19 subcommittee of the WHO Global Advisory Committee on Vaccine Safety (GACVS): [updated statement regarding myocarditis and pericarditis](#) reported with COVID-19 mRNA vaccines.
- **CDC:** The CDC health authority issued a vaccination recommendation for children between the ages of five and eleven with the vaccine from BioNTech on Tuesday evening (local time). This means that the vaccination campaign can start this week.

Topics:

- Global situation
- European situation
- Vaccination news
- SARS-CoV-2 VOIs and VOCs
- Subject in Focus: COVID-19 vs. COVID-19 vaccine: Risk of neurological complications
- Flu Awareness Campaign 2021
- Other Infectious Disease Outbreaks
- NATO Member State: Summary of information on the individual national Corona restrictions

A study of hospitalized patients with symptoms similar to COVID-19* found...

Unvaccinated people with a previous infection were
5x
more likely to have a positive COVID-19 test compared to vaccinated people[†]

*COVID-19-like illness hospitalizations 90-179 days after prior infection or full vaccination
†Received two doses of an mRNA vaccine and no previous infection

**Get vaccinated
as soon as possible**

bit.ly/MMWR7044e1



Myocarditis (inflammation of part of the heart muscle) occurs more frequently among COVID-19 patients

16x higher risk
of myocarditis among patients with COVID-19*



Vaccination is the best way to protect against COVID-19-related complications

*Premier Healthcare Database Special COVID-19 Release

bit.ly/MMWR83121b



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EUROPE



73 240 479
confirmed cases

68 180 000
recovered

1 382 757 deaths

GBR

(7-days incidence 417,9)



9 130 861
confirmed cases

8 332 000 recovered
140 964 deaths

Russia

(7-days incidence 183,9)



8 455 232
confirmed cases
7 649 000 recovered
236 462 deaths

Turkey

(7-days incidence 219,1)



8 061 636
confirmed cases
7 590 000 recovered
70 828 deaths

Situation by WHO Region, as of 02 November

Global epidemiological situation overview; WHO as of 02 November 2021

During the week 25 to 31 October 2021, a slight upward trend (3% increase) in new weekly cases was observed, with just over 3 million new cases reported (Figure 1). Apart from the WHO European Region, which reported a 6% increase in new weekly cases as compared to the previous week, other regions reported declines or stable trends. The largest decreases were reported from the Eastern Mediterranean Region (12%), followed by the South-East Asia and African Regions (both 9%).

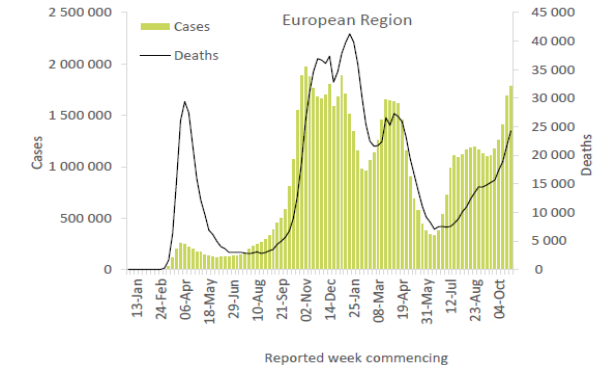
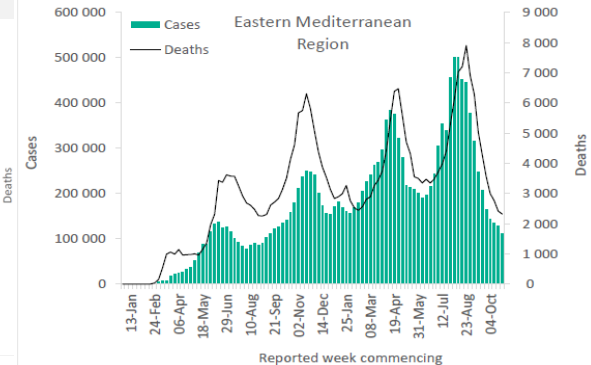
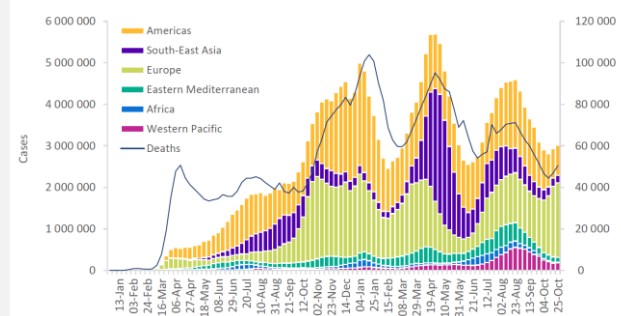
New weekly deaths increased by 8% as compared with the previous week, with over 50 000 new fatalities. The observed rise in new weekly deaths has been mainly driven by the South-East Asia Region, which reported the largest increase (50%), followed by the European Region (12%) and the Western Pacific Region (10%).

As of 31 October, over 246 million confirmed cases and nearly 5 million deaths have been reported.

The highest numbers of new cases were reported from:

- United States of America (582 455 new cases; 7% increase)
- United Kingdom (285 028 new cases; 14% decrease)
- Russian Federation (272 147 new cases; 9% increase)
- Turkey (182 027 new cases; 8% decrease)
- Ukraine (152 897 new cases; 14% increase)

Figure 1. COVID-19 cases reported weekly by WHO Region, and global deaths, as of 31 October 2021**

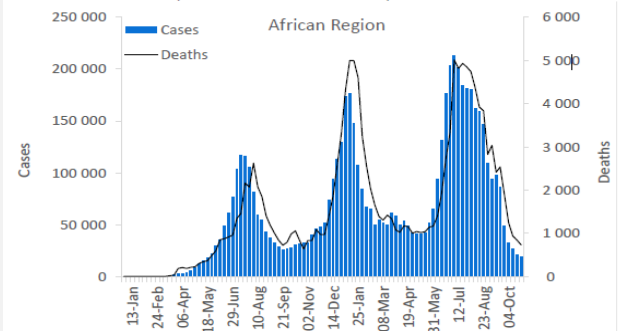


WHO regional overviews Epidemiological week 25-31 October 2021

African Region

Declining trends observed in the Region since mid-July continued this week with over 19 000 new cases and over 700 new deaths reported, decreases of 9% and 13%, respectively, as compared to the previous week. Nevertheless, 17/49 countries (34%) reported increases of over 10% as compared with the previous week, with the largest increases observed in Rwanda (100%), Comoros (94%) and Eritrea (68%). The highest numbers of new cases were reported from Ethiopia (3313 new cases; 2.9 new cases per 100 000 population; a 14% increase), South Africa (2554 new cases; 4.3 new cases per 100 000; a 19% decrease), and Cameroon (2210 new cases; 8.3 new cases per 100 000; a 17% increase).

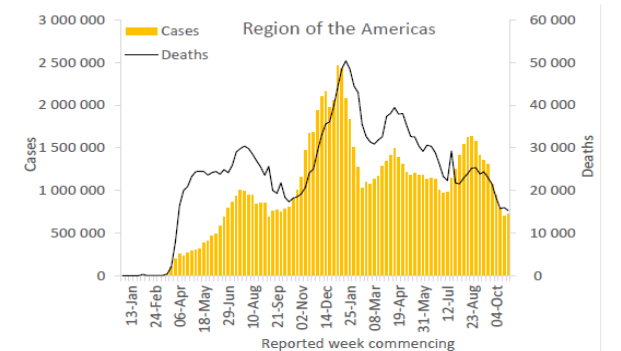
The highest numbers of new deaths were reported from South Africa (249 new deaths; <1 new death per 100 000 population; a 24% decrease), Ethiopia (118 new deaths; <1 new death per 100 000; a 13% decrease), and Cameroon (86 new deaths; <1 new death per 100 000; a 72% increase).



Region of the Americas

Declining trends in the Region of the Americas have slowed, with over 734 000 new cases (similar to the previous week) and over 15 000 new deaths (similar to the previous week) reported. Eleven countries in the Region (19%) reported increases in new cases in the past week, with the largest increases observed in the Cayman Islands (145%), Uruguay (38%) and Puerto Rico (21%). The highest numbers of new cases were reported from the United States of America (528 455 new cases; 159.7 new cases per 100 000; a 7% increase), Brazil (81 558 new cases; 38.4 new cases per 100 000; similar to the figures of the previous week), and Mexico (18 880 new cases; 14.6 new cases per 100 000; a 6% decrease).

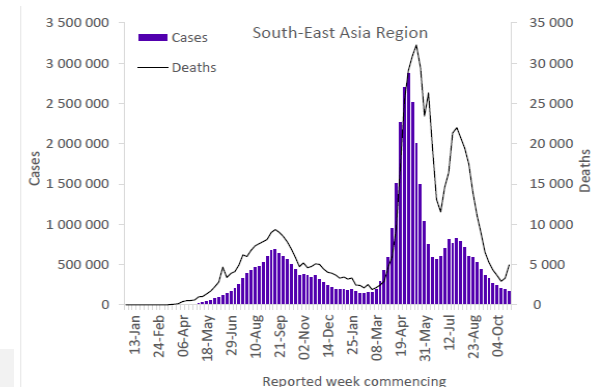
The highest numbers of new deaths were reported from the United States of America (9550 new deaths; 2.9 new deaths per 100 000; a 6% decrease), Brazil (2323 new deaths; 1.1 new deaths per 100 000; a 6% decrease), and Mexico (1539 new deaths; 1.2 new deaths per 100 000; a 40% increase).



South-East Asia Region

The South-East Asia Region reported over 180 000 new cases and over 4900 new deaths, a 9% decrease and a 50% increase, respectively, as compared to the previous week. While weekly case incidence has continued to decrease week on week for over three months, weekly death incidence increased for the second consecutive week. The highest numbers of new cases were reported from India (97 832 new cases; 7.1 new cases per 100 000; a 9% decrease), Thailand (61 542 new cases; 88.2 new cases per 100 000; an 8% decrease), and Myanmar (5810 new cases; 10.7 new cases per 100 000; a 9% decrease).

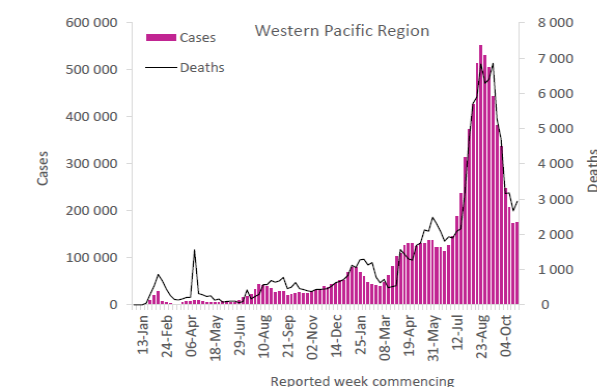
The highest numbers of new deaths were reported from India (3917 new deaths; 0.3 new deaths per 100 000; an 83% increase), Thailand (450 new deaths; 0.6 new deaths per 100 000; a 7% decrease), and Indonesia (200 new deaths; 0.1 new deaths per 100 000; a 21% decrease). The number of deaths in India accounted for 79% of new weekly deaths in the Region.



Western Pacific Region

The Western Pacific Region reported over 178 000 new cases, similar to numbers of the previous week, and over 2900 new deaths, a 10% increase as compared to the previous week. The highest numbers of new cases were reported from Malaysia (40 613 new cases; 125.5 new cases per 100 000; similar to the previous week), the Philippines (32 222 new cases; 29.4 new cases per 100 000; a 16% decrease), and Viet Nam (30 708 new cases; 31.5 new cases per 100 000; a 28% increase). These three countries comprised 58% of new weekly cases reported in the Region.

The highest numbers of new deaths were reported from the Philippines (1459 new deaths; 1.3 new deaths per 100 000; a 45% increase), Malaysia (522 new deaths; 1.6 new deaths per 100 000; a 5% increase), and Viet Nam (410 new deaths; 0.4 new deaths per 100 000; a 16% decrease). These three countries comprised 81% of new weekly deaths reported in the Region.



Global Situation



IND: After a break of almost two years, all state schools in the Indian capital New Delhi have reopened. Initially, however, only half of the children are allowed to return to the classrooms. The remaining students should continue to study online. However, less than half of the nearly 1.4 billion Indians have access to the Internet. The United Nations warns of an increase in child labour and child marriage in the context of school closures and widespread poverty as a result of the pandemic. The long closures are likely to have widened the gap between rich and poor.

FRA: There has been a continuous drop in cases since mid-August, with the seven-day rolling average number of daily new cases decreasing from 18,195 on August 26 to 4,251 on October 12. However, officials have warned of a potential fifth wave and are monitoring as cases have slightly risen from 4,341 on October 13 to 5,389 on October 26. The seven-day rolling average number of daily new deaths has also declined from 62 on September 26 to 29 on October 26. On October 21, officials are maintaining restrictions until at least November 15. International travel to France is filtered through a three-tier colour-coded system, where green countries are considered to be a low disease risk, orange countries are considered moderate risk, and red countries are considered to have the highest risk. Vaccinated travellers from green countries can travel unrestricted, while unvaccinated travellers must present negative PCR tests within 72 hours before departure. Unvaccinated travellers coming from red-designated countries additionally must quarantine for 10 days at a monitored facility upon arrival. Individuals who have also recently recovered from the disease (between 11 days and six months) and can present a certificate of recovery may be permitted to enter without restriction if from orange and green-designated countries. All travellers must complete a declaration form before travel. Domestically, health passes are required to access some public facilities such as bars, venues, and public transit. As of October 15, COVID-19 tests are no longer offered for free to unvaccinated individuals.

SERBIA: Disease activity has been oscillating around a high peak since mid-September, with case numbers being comparable to the all-time peak in December 2020. The current wave began at the end of June with a substantial increase in activity observed since then. The seven-day rolling average number of new cases has increased from 6,139 cases during a local minimum on October 14, to 7,000 cases on October 26. The seven-day rolling average number of new deaths increased slightly from 52 to 60 deaths within the same time period. The 14-day test positivity rate as of October 26, was 31% with 4,051 tests per one hundred thousand people performed. Test positivity rates have ranged between 25 – 30% since mid-September, indicating a substantial degree of under-detection.

Most domestic and international travel measures remain the same to date, with the addition of a COVID-pass effective October 23. The pass will be required for entry to hospitality businesses after 10 p.m. and any indoor events. Individuals must be fully vaccinated or obtain a negative COVID-19 test to receive a COVID-pass. Individuals are required to follow proper hygiene practices and physically distance, including wearing facemasks indoors and wherever distancing of 1.5 meters is not possible. Indoor dining is permitted within a designated time period. Large gatherings of over 500 people are not allowed. Serbian nationals and diplomatic officials must provide one of the following requirements for entry: a PCR test taken within 72 hours prior to arrival, certificate of vaccination, or a certificate of recovery within six months. Individuals without the requirements will need to quarantine at their residence for 10 days. Any person travelling from the USA providing a PCR test must provide a test taken within 48 hours prior to arrival. Certificates of vaccination or recovery for non-residents must be issued by a government-approved country (i.e., there is an agreement on the recognition of vaccination/documentation). Minors 12 years and younger are exempted from the travel requirements and those up to 15 years are also exempted given that an accompanying family member satisfied the requirements.

DEU: The Ministry of Health wants to enable all citizens, regardless of their age, a [booster vaccination against the coronavirus](#). In principle, it should be offered to all persons who wish to do so after six months after completion of the first vaccination series.

ROM: Romania has reported a [record 591 corona deaths a day](#). 541 of them had not been vaccinated. The previous daily record of 574 fatalities was recorded on 19 October. Only 37 percent of the country's adults are fully vaccinated. Of the 27 EU Member States, only Bulgaria has an even lower vaccination rate. The persistently low vaccination rate and a wave of coronavirus infections are overwhelming Romania's ailing health system. Six seriously ill corona patients from Romania were flown to Hamburg/DEU for treatment on Tuesday.

CZE: With 7591 new corona infections, the authorities report the [highest value within one day](#) since the end of March, on Tuesday.

RUS: [Russia's daily COVID-19 death toll rose to a record high](#) of 1,178 on Tuesday amid a surge that has forced officials to re-impose a partial lockdown nationwide.

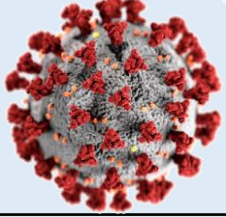
CHN: China [will not give up on its zero-tolerance policy towards local COVID-19 cases any time soon](#), some experts said, as the policy has allowed it to quickly quell local outbreaks, while the virus continues to spread outside its borders. To stop local cases from turning into wider outbreaks, China has developed and continually refined its COVID-fighting arsenal - including mass testing, targeted lockdowns and travel restrictions - even when those anti-COVID measures occasionally disrupted local economies. Against the backdrop of increasingly strict corona restrictions, China's government has called for stocks of essential products to be stockpiled.

JAP: According to media reports, Japan will [soon relax its entry regulations](#). From next Monday, the quarantine period for business travellers may be shortened to three of the previous ten days. Also in November, it is also planned to let more people into the country. The entry limit should be increased to up to 5000 people per day from the previous 3500. The government only confirms that it wants to gradually relax the entry restrictions.

MMR: There have been nearly 300 attacks or threats against healthcare since Myanmar's February coup, a 26 October [analysis by groups including Physicians for Human Rights](#) found. Rights groups accuse the military junta of weaponising healthcare and the coronavirus response, targeting healthcare workers for treating anti-coup demonstrators, and using health facilities to arrest civilians.

BRA: A Senate committee has [recommended](#) that the general prosecutor's office charge President Jair Bolsonaro over errors in his handling of COVID-19, which has killed over 607,000 people so far in Brazil. A 1,200-page [investigative report](#) found that the president was "the main person responsible" in the government during the pandemic. While few expect the chief prosecutor, a political appointee, to charge Bolsonaro, the president was briefly banned from YouTube after broadcasting a video message suggesting COVID-19 vaccines were allowing UK citizens to contract AIDS faster.

USA: The US epidemic authority CDC advises against travel to Belgium and Russia. The reason is the "very high" COVID-19 infection numbers, says the CDC. For this reason, American citizens should also avoid Slovakia as a travel destination.



Vaccination News



A total of 10 countries accounted for 68.7% of all vaccinations administered globally as of October 28. The top five countries/territories with the highest number of cumulative people vaccinated with at least one dose per 100,000 population are Gibraltar (120,350), Palau (100,210), United Arab Emirates (96,320), Portugal (88,630), and Cuba (86,770). Conversely, the top five countries with the lowest number of cumulative people vaccinated with at least one dose per 100,000 population are the Burundi (0), Congo (120), Haiti (690), South Sudan (750), and Chad (920).

CDC: A new science brief provides an overview of the current scientific evidence regarding infection-induced and vaccine-induced immunity, including both peer-reviewed and preprint publications, as well as unpublished CDC data.

Executive Summary (find the [full brief here](#))

Key findings and considerations for this brief are as follows:

- Available evidence shows that fully vaccinated individuals and those previously infected with SARS-CoV-2 each have a low risk of subsequent infection for at least 6 months. Data are presently insufficient to determine an antibody titer threshold that indicates when an individual is protected from infection. At this time, there is no FDA-authorized or approved test that providers or the public can use to reliably determine whether a person is protected from infection.
 - The immunity provided by vaccine and prior infection are both high but not complete (i.e., not 100%).
 - Multiple studies have shown that antibody titers correlate with protection at a population level, but protective titers at the individual level remain unknown.
 - Whereas there is a wide range in antibody titers in response to infection with SARS-CoV-2, completion of a primary vaccine series, especially with mRNA vaccines, typically leads to a more consistent and higher-titer initial antibody response.
 - For certain populations, such as the elderly and immunocompromised, the levels of protection may be decreased following both vaccination and infection.
 - Current evidence indicates that the level of protection may not be the same for all viral variants.
 - The body of evidence for infection-induced immunity is more limited than that for vaccine-induced immunity in terms of the quality of evidence (e.g., probable bias towards symptomatic or medically-attended infections) and types of studies (e.g., observational cohort studies, mostly retrospective versus a mix of randomized controlled trials, case-control studies, and cohort studies for vaccine-induced immunity). There are insufficient data to extend the findings related to infection-induced immunity at this time to persons with very mild or asymptomatic infection or children.
- Substantial immunologic evidence and a growing body of epidemiologic evidence indicate that vaccination after infection significantly enhances protection and further reduces risk of reinfection, which lays the foundation for CDC recommendations.

IDN: Indonesia has become the first country to approve the corona vaccine Covovax of the US pharmaceutical company Novavax. Because the vaccine can be stored at refrigerator temperature, the remedy is considered a beacon of hope for poorer countries.

KHM: Cambodia has [launched a vaccination campaign for five-year-old children](#). Premier Hun Sen said the children should be immunized before they start school at the age of six. The head of government also announced a slow opening of the borders to foreign tourists. More than 85 percent of Cambodians have received at least one dose of a corona vaccine since the campaign began in February. Most of the time, the Chinese vaccines from Sinovac and Sinopharm were used. The campaign to vaccinate two million children between the age of six and eleven began on 17 September and is almost complete. The approximately 300,000 five-year-old boys and girls are to receive the vaccine from Sinovac.

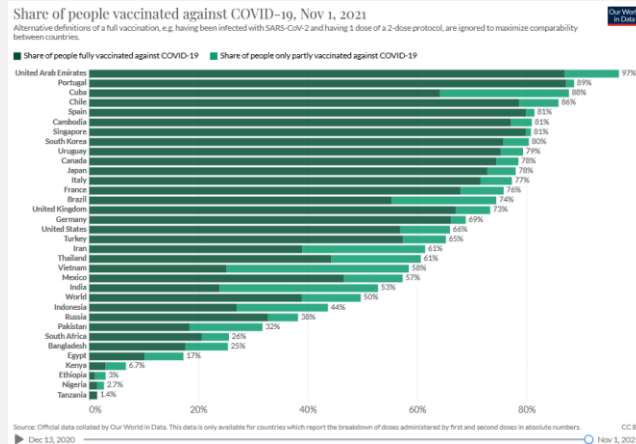
FRA: As of October 26, of the country's population of over 67 million, 76% (50,987,174) has received at least one dose of a COVID-19 vaccine and 68% (45,606,061) are fully vaccinated. The country's vaccination campaign began in December 2020 and has since been administering the Comirnaty (BioNTech/Pfizer), Janssen (Johnson & Johnson), Spikevax (Moderna), and Vaxzevria (Oxford/AstraZeneca) vaccines.

Serbia: As of October 26, 45% (3,120,462) of the country's population of over 6.9 million has received at least one dose of a COVID-19 vaccine and 43% (2,983,451) are fully vaccinated. Vaccines administered include Comirnaty (BioNTech/Pfizer), Vaxzevria (Oxford/AstraZeneca), BBIBP-CorV (Sinopharm), and Sputnik V (Gamaleya). According to media sources, a general mistrust and lack of transparency of the government and healthcare system is considered to be largely contributing to the stagnant vaccination rates.

BEN: COVID-19 vaccinations in Benin, and most of Africa, remain well behind many countries globally. In Africa, roughly 4.5% of the population is fully vaccinated, compared to the average of 55-66% in the United States and Europe. As of October 18, of Benin's more than 11.8 million population, 2.2 % (264,442) have received at least one dose of a COVID-19 vaccine and 1.7% (197,685) are fully vaccinated. Benin received 302,400 doses of the Janssen (Johnson & Johnson) vaccine in July and 332,280 doses of the Comirnaty (Pfizer/BioNTech) vaccine in October. Government officials continue to work to improve the availability of vaccines nationwide. Other vaccines available include the CoronaVac (Sinovac) vaccine and the Vaxzevria (Oxford/AstraZeneca) vaccine

CDC: On 2 Nov the [CDC director endorsed the CDC Advisory Committee on Immunization Practices' \(ACIP\) recommendation](#) that children 5 to 11 years old be vaccinated against COVID-19 with the Pfizer-BioNTech pediatric vaccine. CDC now expands vaccine recommendations to about 28 million children in the United States in this age group and allows providers to begin vaccinating them as soon as possible.

Novavax: announced that it has already [completed its rolling submission to the Therapeutic Goods Administration \(TGA\)](#) in Australia for provisional approval of its COVID-19 vaccine candidate. They recently filed for conditional marketing authorization in the U.K. and expect to submit the complete package to the FDA by the end of the year.



European Situation on Vaccination

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

Total doses distributed to EU/EEA countries

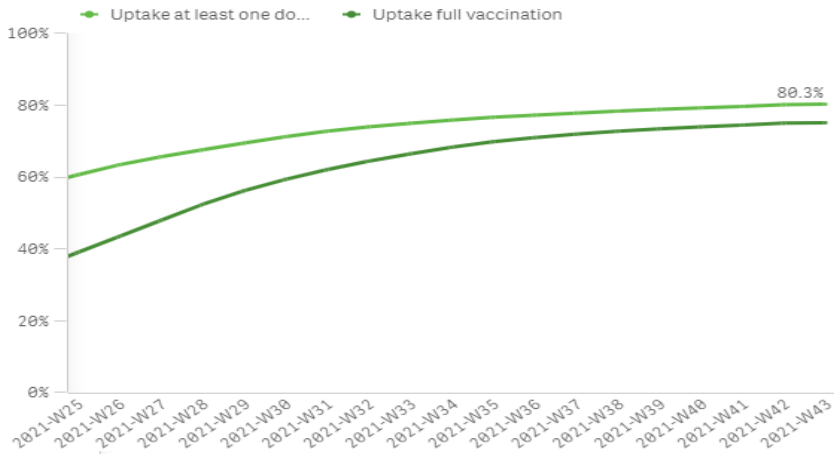
766,574,903

585,758,237

Indicator: Uptake full vaccination

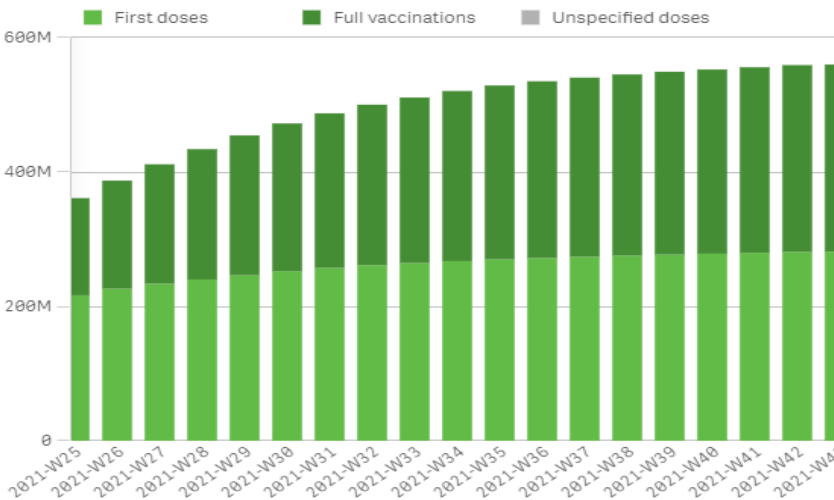
Cumulative uptake (%) of at least one vaccine dose and full vaccination among adults (18+) in EU/EEA countries as of 2021-11-02

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



Cumulative number of vaccine doses administered to adults (18+) in EU/EEA countries as of 2021-11-02

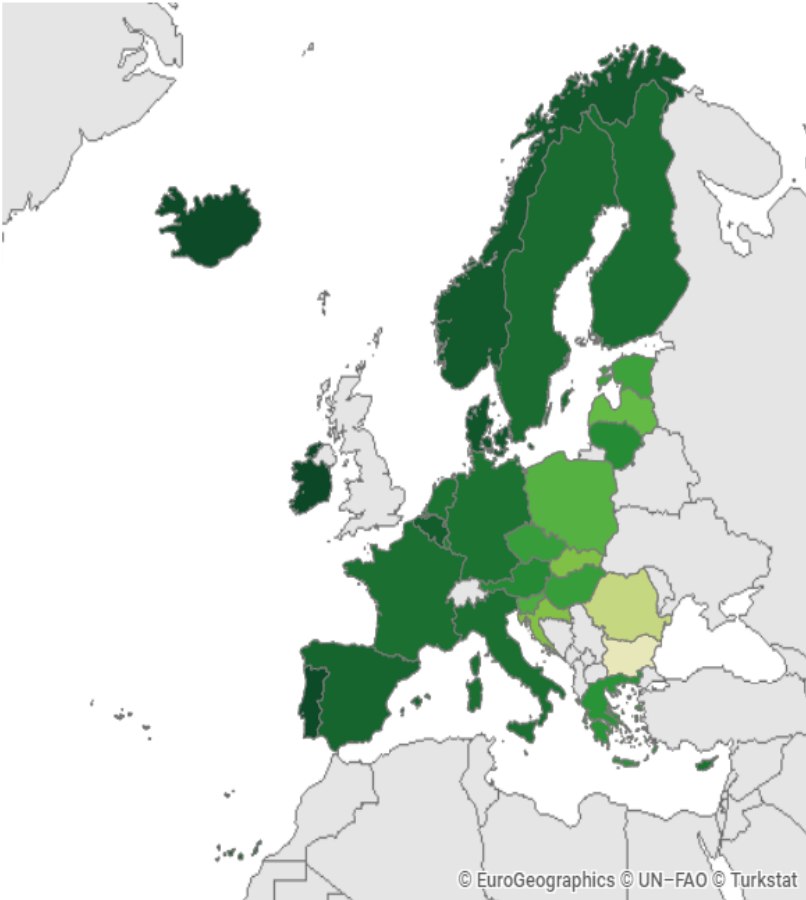
by reporting week (data for current week are preliminary)



Cumulative uptake (%) of at least one vaccine dose by age group in EU/EEA countries as of 2021-11-02

Country	80+ years	70-79 years	60-69 years	50-59 years	25-49 years
Austria	100.0%	84.3%	87.5%	78.2%	68.8%
Belgium	91.2%	96.4%	93.8%	90.5%	82.8%
Bulgaria	22.0%	34.3%	33.3%	29.5%	22.5%
Croatia	59.3%	76.6%	71.9%	60.4%	45.9%
Cyprus	97.6%	97.2%	90.3%	84.9%	78.4%
Czechia	84.9%	88.9%	76.9%	73.4%	58.3%
Denmark	100.0%	99.8%	96.8%	93.3%	82.3%
Estonia	68.5%	78.5%	74.7%	72.7%	64.7%
Finland	95.6%	100.0%	92.2%	89.0%	82.5%
France	86.9%	97.8%	90.6%	91.2%	86.7%
Germany	-	-	-	-	-
Greece	74.8%	83.1%	80.9%	75.3%	66.2%
Hungary	76.6%	87.2%	79.1%	73.2%	63.1%
Iceland	100.0%	100.0%	99.4%	92.5%	87.1%
Ireland	100.0%	100.0%	100.0%	98.5%	88.0%
Italy	98.0%	92.9%	91.7%	88.6%	81.6%
Latvia	49.7%	63.0%	68.8%	67.9%	65.9%
Liechtenstein	-	-	-	-	-
Lithuania	62.3%	79.0%	82.5%	76.8%	75.2%
Luxembourg	90.2%	87.3%	86.2%	84.1%	72.7%
Malta	100.0%	100.0%	95.6%	89.3%	90.8%
Netherlands	-	-	-	-	-
Norway	97.5%	100.0%	97.2%	95.5%	86.7%
Poland	77.7%	94.6%	74.3%	66.7%	55.6%
Portugal	100.0%	100.0%	100.0%	99.2%	94.9%
Romania	22.3%	41.3%	44.7%	45.8%	39.2%
Slovakia	60.8%	75.3%	64.8%	56.5%	46.9%
Slovenia	84.1%	88.2%	76.5%	69.3%	55.0%
Spain	100.0%	98.9%	98.7%	94.9%	84.2%
Sweden	95.3%	96.6%	92.0%	90.0%	79.9%

Cumulative uptake (%) of full vaccination among adults (18+) in EU/EEA countries as of 2021-11-02



Uptake full vaccination (%)



© EuroGeographics © UN-FAO © Turkstat

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



Source: <https://outbreak.info/situation-reports?pango=AY.4.2>

A New Delta Variant Sub-lineage (AY.4.2)

In a follow-up on the most recent variant under investigation (VUI), the **Delta variant sub-lineage, AY.4.2 (B.1.617.2.3)**, continues on an increasing trajectory and geographical expansion. According to outbreak.info, as of November 02, 26,498 sequences of AY.4.2 have been identified globally, with **95% (25,161) of those sequences occurring in the UK**. Worldwide, the AY.4.2 sequence has been detected in **36 countries**. The worldwide, seven-day rolling average percent of AY.4.2-positive sequences reported has increased from 4% as of October 1 to **7% as of October 20**.

Although the **Delta variant (B.1.617.2)** continues to be the most predominant strain, on November 02 the United Kingdom (UK) deemed the AY.4.2 sub-lineage as a VUI, mostly due to its reported growth rate of 17% when compared to other circulating variants. In addition, new information reveals that there **might be a higher secondary attack rate of 12.4% for household contacts** when compared with 11.1% for the original Delta strain (B.1.617.2). This means that, within the same household, there may be a higher chance of the AY.4.2 strain passing from one individual to another when compared to the Delta strain. However, for non-household settings, the secondary attack rate for AY.4.2 is similar to Delta and this may explain why the sub-lineage has not taken off at a greater rate.

Though there are still unknowns about the lineage, there are concerns that this sub-lineage could be more infectious and spread rapidly. While there is little to no evidence that AY.4.2 can evade vaccine-induced immunity, what is known is that the lineage contains a concerning mutation (**A1711V**), which affects the virus's Nsp3 protein, which plays a number of roles in viral replication and could lead to higher transmission.

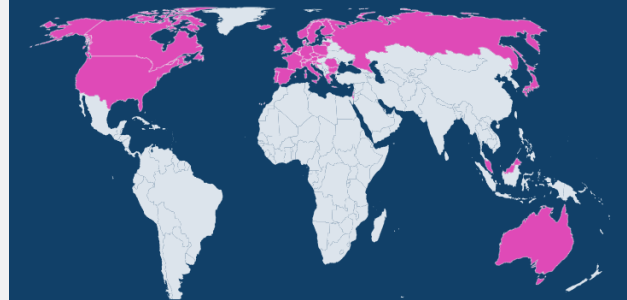
Summary

As of 2 November 2021 07:26 AM, **26,498** sequences in the **AY.4.2** lineage have been detected since the lineage was identified:

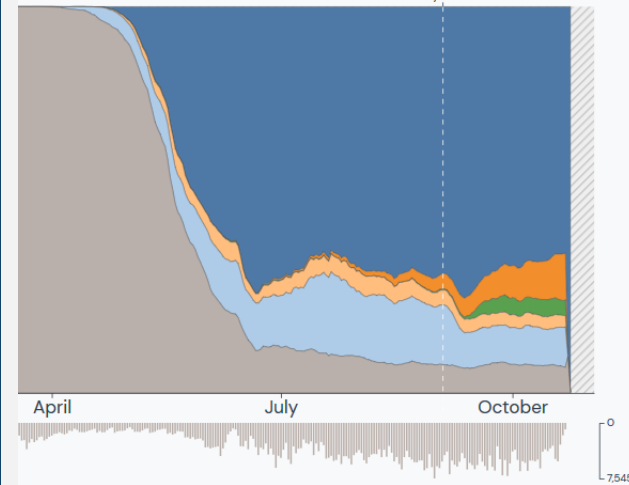
location	AY.4.2 found		when found**	
	total	cumulative prevalence*	first	last
Worldwide	26,498	1%	13 May 2021	26 Oct 2021
California, United States	2	< 0.5%	4 Sep 2021	23 Sep 2021
United States	10	< 0.5%	24 Aug 2021	14 Oct 2021

* Apparent cumulative prevalence is the ratio of the sequences containing AY.4.2 to all sequences collected since the identification of AY.4.2 in that location. ** Dates are based on the sample collection date. [Read about biases](#)

The strain has been detected in at least **36 countries** and **9 U.S. states**.

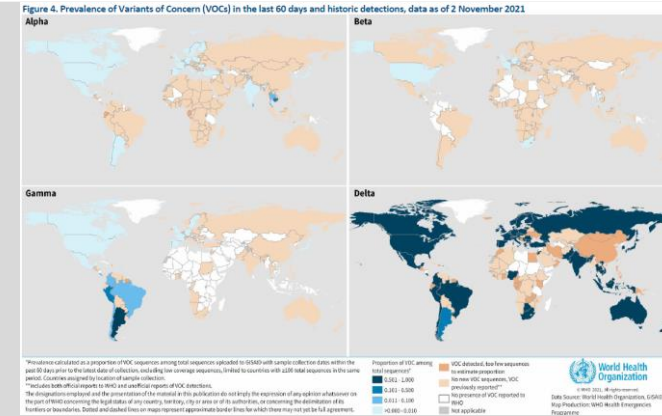


Lineage prevalence in United Kingdom, 2021



Geographic spread and prevalence of VOCs

The current global genetic epidemiology of SARS-CoV-2 is characterized by a predominance of the Delta variant, with declining prevalence of other variants among sequences submitted to publicly available datasets or detections reported to WHO (Figure 4, Annex 2). Delta has outcompeted other variants, including other VOCs, in most countries. Of 842 510 sequences uploaded to GISAID with specimens collected in the last 60 days, 838 398 (99.5%) were Delta, 1545 (0.2%) Gamma, 584 (0.1%) Alpha, 43 (<0.1%) Beta, and 0.2% comprised other circulating variants (including VOCs Mu and Lambda).



Household transmissions for Delta variant index cases

A peer-reviewed matched case-control study conducted in the United Kingdom estimated the odds of household transmission (≥ 2 cases within 14 days) for Delta variant index cases as compared with Alpha cases. The study provides supporting evidence of increased transmissibility of the Delta variant, suggesting that it is more strongly associated with onward transmission within household settings as compared to the Alpha variant.

Effectiveness of three vaccines

large test-negative case-control study from Canada (not yet peer-reviewed) evaluated the effectiveness of three vaccines, including heterologous regimens, at preventing infections and hospitalizations due to Alpha, Gamma, and Delta variants for residents 18 years and older in British Columbia and Quebec provinces.

VE against infection due to Alpha:

- AstraZeneca-Vaxzevria - 74% (95% CI: 29-90%),
- Moderna-mRNA-1273 - 95% (85-98%),
- Pfizer BioNTech-Comirnaty - 96% (93-98%),
- heterologous regimes of AstraZeneca-Vaxzevria followed by an mRNA vaccine - 74% (29-90%), and
- heterologous mRNA vaccinations - 96% (93-98%).

VE against infection due to Gamma was >90% for all vaccines, including both heterologous regimens. Pfizer BioNTech-Comirnaty effectiveness against hospitalization due to Alpha and Gamma was 96% (83-99%) and 95% (83-99%), respectively. VE against infection due to Delta was greater than 90% for all vaccines/regimens, except for homologous AstraZeneca vaccination (VE 70%, 66-73%). All vaccines/regimens showed >90% VE against hospitalization due to Delta after ≥ 14 days following a second dose.

Source: <https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---2-november-2021>

Table 3. Summary of vaccine performance against Variants of Concern

	AstraZeneca-Vaxzevria/ChAdOx1-S	BioNTech-Pfizer/BNT162b2	Moderna-mRNA-1273	Novavax-NVX-CoV2373	Novavax-NVX-CoV2373	Novavax-NVX-CoV2373	Novavax-NVX-CoV2373	Novavax-NVX-CoV2373	Novavax-NVX-CoV2373
Alpha ^{1,2,3}	Protection retained against all outcomes								
Summary of VE	↔	↔	↔	↔	↔	↔	↔	↔	↔
- Severe disease	↔	↔	↔	↔	↔	↔	↔	↔	↔
- Symptomatic disease	↔	↔	↔	↔	↔	↔	↔	↔	↔
- Infection	↔	↔	↔	↔	↔	↔	↔	↔	↔
Neutralization	↔	↔	↔	↔	↔	↔	↔	↔	↔
Beta ^{1,2,3}	Protection retained against severe disease; reduced protection against symptomatic disease; limited evidence								
Summary of VE	↔	↔	↔	↔	↔	↔	↔	↔	↔
- Severe disease	↔	↔	↔	↔	↔	↔	↔	↔	↔
- Symptomatic disease	↔	↔	↔	↔	↔	↔	↔	↔	↔
- Infection	↔	↔	↔	↔	↔	↔	↔	↔	↔
Neutralization	↔	↔	↔	↔	↔	↔	↔	↔	↔
Gamma	Unclear impact; very limited evidence								
Summary of VE	↔	↔	↔	↔	↔	↔	↔	↔	↔
- Severe disease	↔	↔	↔	↔	↔	↔	↔	↔	↔
- Symptomatic disease	↔	↔	↔	↔	↔	↔	↔	↔	↔
- Infection	↔	↔	↔	↔	↔	↔	↔	↔	↔
Neutralization	↔	↔	↔	↔	↔	↔	↔	↔	↔
Delta ^{1,2,3}	Protection retained against severe disease; possible reduced protection against symptomatic disease and infection; limited evidence								
Summary of VE	↔	↔	↔	↔	↔	↔	↔	↔	↔
- Severe disease	↔	↔	↔	↔	↔	↔	↔	↔	↔
- Symptomatic disease	↔	↔	↔	↔	↔	↔	↔	↔	↔
- Infection	↔	↔	↔	↔	↔	↔	↔	↔	↔
Neutralization	↔	↔	↔	↔	↔	↔	↔	↔	↔

¹VE refers to vaccine effectiveness or vaccine efficacy. ²Summary of VE indicates the general conclusions but only for the vaccines evaluated against the specific variants. Always generalize the magnitude of reduction in VE or neutralization. ³↔: <50% reduction in VE, or VE >90% with no comparator; or that there was a <0.5-fold reduction in neutralization. ↗: 10% to <50% reduction in VE, or <2-fold reduction in neutralization. ↘: >50% to <90% reduction in VE, or 1 to <2-fold reduction in neutralization. ↙: >90% 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. ⁴Moderna-mRNA-1273/Pfizer BioNTech Comirnaty indicates that both vaccines were evaluated together in study. Subscripts denote the number of studies informing this table, which may be found on the [WHO Weekly Epidemiological Update on COVID-19](https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---2-november-2021).

Subject in Focus

COVID-19 vs. COVID-19 vaccine: Risk of neurological complications

Vaccines are proving effective at reducing SARS-CoV-2 infections, hospitalizations, and deaths. All approved vaccines have been through randomized clinical trials to test their quality, safety, and efficacy. However, the rapid development of the COVID-19 vaccines means that these trials were not large enough to detect very rare adverse events. But these are important for ongoing risk–benefit evaluations of these vaccines and for informing post-vaccination clinical practice. Therefore, the identification of such rare adverse events is now a global scientific priority.

A **recent study** found that the risk of neurological complications was higher in people with a positive COVID-19 test than in those who had received COVID vaccines.

COVID-19 vaccines undergo testing in large randomized clinical trials before being licensed for use. The Oxford-AstraZeneca (ChAdOx1 nCoV-19) vaccine for example, underwent testing in more than 11,000 people from across the United Kingdom and Brazil. Additionally, over 43,000 individuals engaged in testing for the Pfizer-BioNTech (BNT162b2) vaccine trial.

Despite the large size of these studies, they were not able to detect very rare adverse events — those that occur in fewer than 1 person out of 10,000. What means that as more of the world’s population becomes vaccinated against SARS-CoV-2, the risk–benefit evaluations of these vaccines are increasingly important.

The increased risk of cerebral venous sinus thrombosis following the AstraZeneca vaccine is an example of a rare adverse neurological event. These findings have prompted the United Kingdom, several European countries and two Canadian provinces to limit the use of the AstraZeneca vaccine or restrict its use pending further risk–benefit analysis in those at low risk of severe outcomes from infection. Furthermore, two cases of transverse myelitis were identified in the treatment arm during AstraZeneca clinical trials. These cases triggered two temporary study pauses, including careful regulatory review by the UK’s Medicines and Healthcare Products Regulatory Agency (MHRA). One case of transverse myelitis was possibly causally related to the vaccine, and an association of rare neuroinflammatory side-effects with AstraZeneca could not be ruled out.

Surveillance studies have found a possible link between SARS-CoV-2 infection and neurological events, including Guillain–Barré syndrome and myelitis. However, case reports and surveillance studies are limited by small numbers, as well as potential selection and recording biases. Therefore, detailed assessments of potential neurological adverse events associated with COVID-19 vaccines and infection are urgently needed.

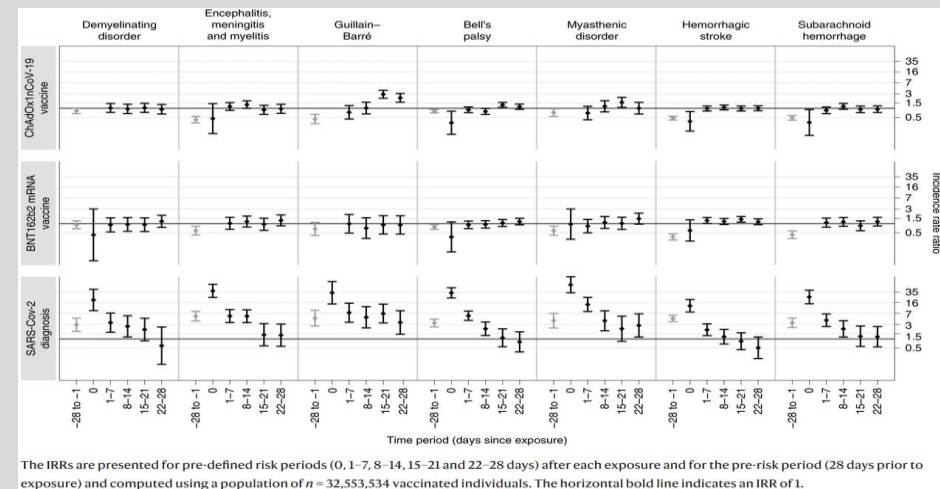
Scientists in the U.K. recently completed a large, population-based study. They compared the risk of neurological complications in people with a SARS-CoV-2 infection with individuals who had recently received a first dose of either the Oxford-AstraZeneca or Pfizer-BioNTech vaccines. Therefore researchers at the University of Oxford, U.K., investigated these very rare events by taking real-world data from over 32 million healthcare records of vaccinated people in England. This data included 2 million individuals with a positive SARS-CoV-2 test — of these, about 90% tested positive before vaccination.

The scientists calculated the risk of developing neurological complications within 28 days of a first dose of either the Oxford-AstraZeneca or Pfizer-BioNTech vaccines or within 28 days of a positive SARS-CoV-2 PCR test.

Results

- The results indicated an increased but low risk of Guillain–Barré syndrome and Bell’s palsy following a first dose of the Oxford–AstraZeneca vaccine. There was also an increased but low risk of hemorrhagic stroke following a first dose of the Pfizer–BioNTech vaccine.
- The authors estimated 60 excess cases of hemorrhagic stroke per 10 million people who had received the Pfizer-BioNTech vaccine and 123 extra events of encephalitis meningitis and myelitis per 10 million people with a SARS-CoV-2 infection.
- They also estimated 38 excess cases of Guillain–Barré syndrome per 10 million people receiving the Oxford-AstraZeneca vaccine and 145 excess cases per 10 million individuals after a positive SARS-CoV-2 test.

Figure 1: IRRs and 95% CIs for neurological outcomes following ChAdOx1nCoV-19 vaccination, BNT162b2 vaccination and positive SARS-CoV-2 test.



Future Implications

Scientists will need to monitor these rare events continually as younger people are vaccinated. Although rare, these events can cause lifelong problems, including disabilities, which may require long-term care. Further work is also necessary to investigate the link between the Oxford-AstraZeneca vaccine and Guillain-Barré syndrome. It is suggested that antibodies against the vaccine may react with components of the peripheral nerves.

Limitations

The authors of the paper note there were limitations to this study, which need acknowledging:

- The data came only from England, although there was some data from Scotland in the secondary analysis. Therefore, rates of complications might vary between populations.
- The analysis only looked at hospital admissions and mortality, meaning it may not have included anyone with milder neurological conditions. Therefore, the scientists could have underestimated the overall rates of neurological adverse events from vaccination and infection.
- Due to data limitations, the researchers could only examine risks associated with the first vaccine dose.

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.

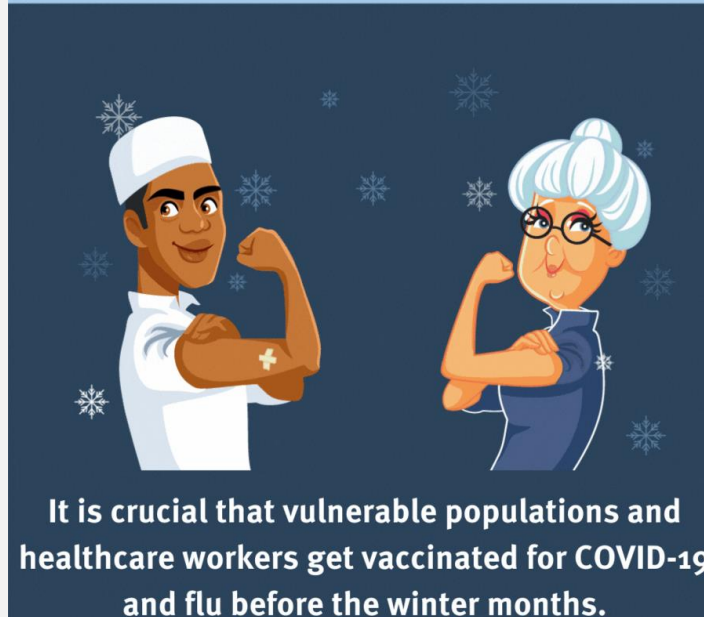
Source:

<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/>

Get ready for the upcoming flu season!



It is crucial that vulnerable populations and healthcare workers get vaccinated for COVID-19 and flu before the winter months.

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.



ESCAID 2021

The European Scientific Conference on Applied Infectious Disease Epidemiology (ESCAIDE 2021) will be online this year with free registration for all. The conference will take place from 16 to 19 November to discuss current issues facing infectious disease prevention and control, hear the latest high-quality research in the field and meet fellow public health professionals and researchers. [Register here](#).

Registration closes on 12 November 2021 (presenters must register by 7 November).

Other Infectious Disease Outbreaks / human disasters

Dengue fever

South Asia – Dengue outbreaks are flaring across a wide swathe of South Asia, testing healthcare systems already overstretched by the COVID-19 pandemic. Outbreaks of the mosquito-borne disease have erupted in parts of northern and western India, Pakistan, and even Afghanistan – where the health system has largely collapsed in the aftermath of the Taliban's resurgence. In India, soaring dengue caseloads are putting pressure on hospitals in Delhi and in states like Punjab and Rajasthan. Across the border in Pakistan, "alarming" surges in Islamabad and elsewhere have pushed health authorities to ask Pakistan's Red Crescent Society for support. Outbreaks in parts of Afghanistan's Nangarhar province, which borders Pakistan, killed four people in October, Tolo News reported. Dengue is common in tropical and sub-tropical climates, but research suggests climate change is expanding the reach of the mosquito species that carry the virus. Dengue was once rare in most of Nepal, for example, but is now seen as "an annual epidemic". Afghanistan recorded its first-ever cases only two years ago.

Source: <https://reliefweb.int/report/pakistan/>; <http://www.emro.who.int/afg/afghanistan-news/first-dengue-case-reported-in->

Circulating vaccine-derived poliovirus type 2

Kenya - Cases of circulating vaccine-derived polio type 2 are still present in the region including in Kenya, despite the certification of the African region as free from wild poliovirus in August 2020. Kenya confirmed a case of circulating vaccine-derived poliovirus type 2 on 6 October 2021, making it the second case reported in 2021. Environmental samples have also been confirmed this year. The ministry of health continues its ongoing response activities to combat the polio outbreak.

Source: WHO - <https://apps.who.int/iris/bitstream/handle/10665/347690/OEW44-2531102021.pdf>

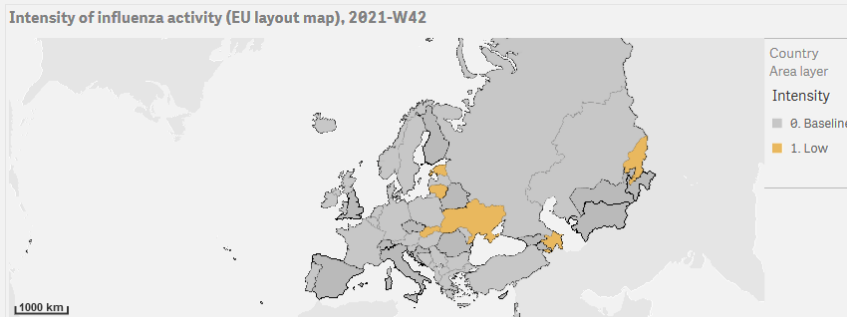
Influenza

Europe - Week 42/2021 (18 - 24 October 2021)

- Influenza activity was low throughout the European Region, though Croatia and Kyrgyzstan experienced early influenza activity related to A(H3) circulation.
- Influenza viruses were detected sporadically in specimens from persons with respiratory illness presenting to medical care.

- Both influenza A and B type viruses were detected, with A(H3) subtype predominating.
- Type A virus infection was reported for two patients in intensive care units. Twelve patients with SARI in hospital settings were infected with A(H3) viruses

Source – ECDC/WHO - <https://flunewseurope.org/>



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Distribution of West Nile virus infections among humans and outbreaks among equids and/or birds in the EU as of 28.10.



West Nile fever cases in 2021 in the EU

Ebola

DR Congo - Two new cases of Ebola virus disease (EVD) were confirmed in new Health Areas (HA) of Ngilinga and Bundji (one each) in Beni Health Zone (HZ) in North Kivu Province. To date, three HAs have reported confirmed cases, namely, Butsili HA (6 cases), Bundji (one case) and Ngilinga HA (one case). As of 30 October 2021, total of eight confirmed cases of EVD have been reported in Beni HZ in the Democratic Republic of the Congo, with six deaths (including four community deaths) (case fatality ratio (CFR) 75.0%). Children below the age of five years accounts for 50.0% (4/8) of the cases. A total of 551 contacts are under follow up, of which 448 (81.3%) are being actively followed up, 70 (12.7%) contacts had never been seen, 11 contacts have not been seen in the past 48 hours and 9 (1.6%) contact are lost to follow-up. On 30 October 2021, Beni Health Zone reported 198 new alerts including nine deaths. An additional 445 alerts including 21 deaths were notified from other seven HZs, of these, 436 (98.0%) were investigated, 45 (10.0%) were validated as suspected cases. Only 18 (40.0%) samples were collected from the suspected cases who accepted to be tested.

Source: WHO - <https://apps.who.int/iris/bitstream/handle/10665/347690/OEW44-2531102021.pdf>

Crimean-Congo Hemorrhagic Fever (CCHF)

South Africa - The first case of Crimean-Congo Hemorrhagic Fever (CCHF) has been confirmed in South Africa in 2021. The National Institute for Communicable Diseases (NICD) indicated that the case was detected in September in a 70-year-old woman, who suffered a tick bite while on a guided trip in the Namaqualand Flower Route, Northern Cape Province. This is the first CCHF case in South Africa since February 2020. About two-thirds of confirmed CCHF cases in South Africa are linked to tick bites, but infection can also occur from exposure to infected animal tissues and blood. CCHF cases are often reported among animal workers, such as farmers, veterinarians, wildlife or abattoir workers, or hunters.

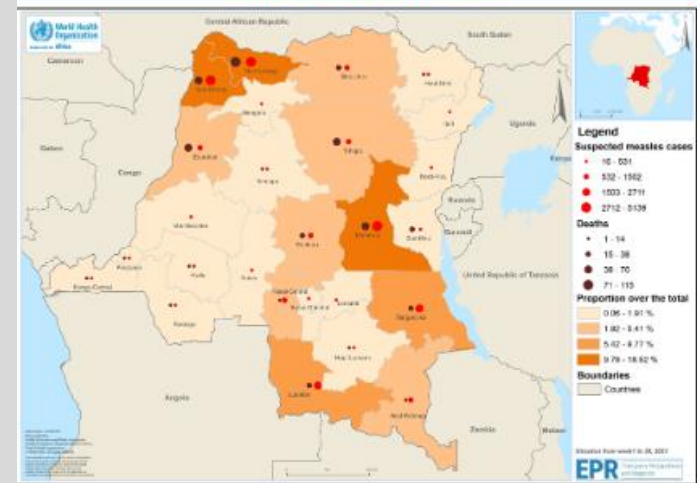
Source: News Media - <http://outbreaknewstoday.com/south-africa-reports-1st-crimean-congo-hemorrhagic-fever-case-of-2021/>

Measles

DR Congo - The Democratic Republic of the Congo has been experiencing a measles outbreak since the beginning of 2021. Although sporadic measles cases are currently reported in 369 health districts across 26 provinces, more than 80 health districts across 23 affected provinces including the capital city of Kinshasa are having an ongoing measles outbreak. Efforts to control measles in the Democratic Republic of the Congo have faced some challenges; the need to strengthen the national vaccination program and measles surveillance, a fragile health system, and inaccessibility of some affected areas due to harsh geographic and security conditions. The ongoing measles outbreak has been declared in the country amidst coexistence of many other outbreaks which may have weakened the health system.

Source: WHO - <https://apps.who.int/iris/bitstream/handle/10665/347690/OEW44-2531102021.pdf>

Geographic distribution of measles cases in the Democratic Republic of the Congo, as of 18 October 2021



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-air-travellers>
- <https://www.cdc.gov/coronavirus/2019-ncov/travelers/testing-air-travel.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:

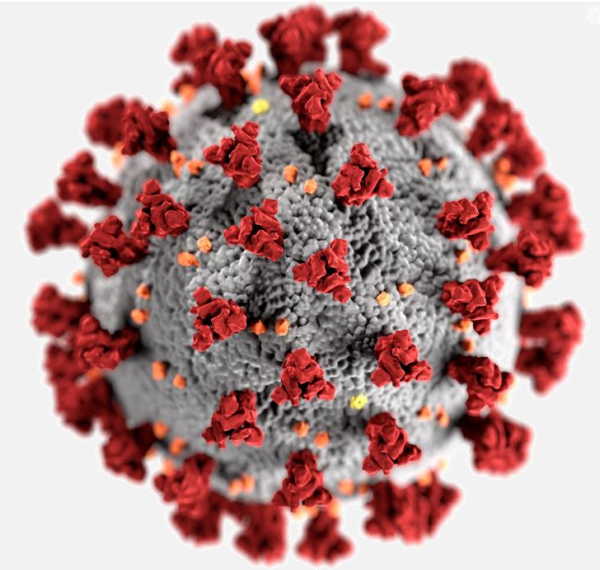
- COVID [Data Tracker](#) and [weekly review](#)
- [What’s new and Updated](#)
- [Guidance for COVID-19](#)

References:

- European Centre for Disease Prevention and Control www.ecdc.europa.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/>

Upcoming Events FHPB

We are happy to announce the;
Force Health Protection Event:
COVID-19; A retrospective look at a turbulent time



When: 3rd to 4th November 2021
Location: Virtual event via Microsoft Office
Teams platform
Registration: Open 3rd May 2021
Link: Registration [page](#)

