Force Health Protection Branch
NATO MilMed COE
Munich

Update 103
COVID-19
Coronavirus Disease
16 February 2022

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GLOBAL
↘
394 151 576
Confirmed cases
350 500 000 recovered
5 840 982 deaths

USA
(7-days incidence 290,4)
↘
77 504 838
confirmed cases
72 680 000 recovered
920 951 death

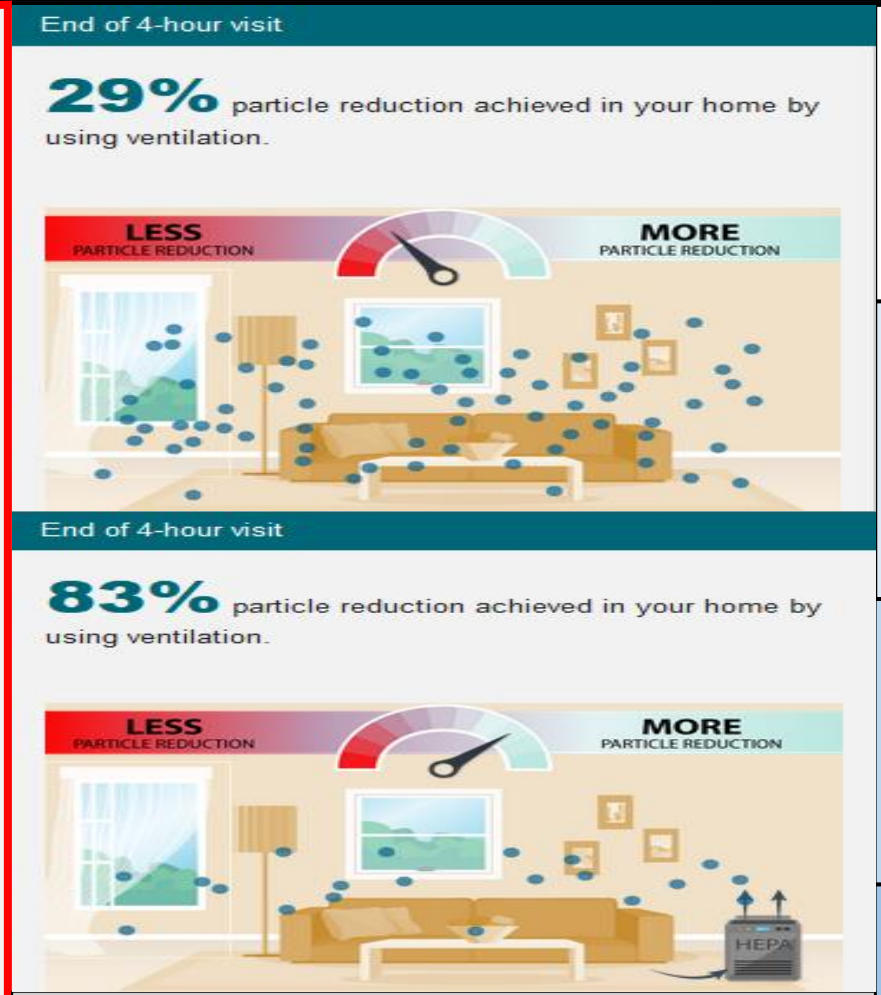
India
(7-days incidence 26,0)
↘
42 723 558
confirmed cases
40 380 000 recovered
509 872 deaths

Brazil
(7-days incidence 366,9)
↘
27 677 468
confirmed cases
24 550 000 recovered
640 076 deaths

News:

- **WHO:** prequalifies first monoclonal antibody - tocilizumab – to treat COVID-19. Tocilizumab will be presented in three presentations (three vials, each with a different quantity).
- **WHO:** Together with a number of government, public and private sector partners collaborating to develop and build WHO's global mRNA vaccine technology transfer hub in South Africa. The central aim is to develop a training facility where mRNA technology is developed to the scale required for mass production of vaccines and then for that full package of technology to be transferrable to multiple recipients in low- and middle-income countries.
- **WHO:** The new International Classification of Diseases (ICD-11) has now come into effect, with the latest update gone online on February 11. Compared with previous versions, ICD-11 is entirely digital with a new user-friendly format and multilingual capabilities that reduce the chance of error.
- **CDC**: published an Interactive Ventilation Tool that help people to decrease the level of virus particles during and after a guest visit.
- **CDC**: published instruction videos for using FDA-authorized self-tests. The complete list of authorized tests can be found on the FDA's website. Learn more about Self-Testing at home or anywhere here.
- **CDC**: published a new study on the effectiveness of face mask or respirator use in indoor public settings for prevention of SARS-CoV-2 infection.
- **EU**: EU countries dispose of significantly more unused corona vaccine doses than are donated to African countries, according to aid organizations. According to the activists of the People's Vaccine Alliance, 30 million doses of vaccine sent by The Europeans to Africa were offset by around 55 million doses, which must be disposed of by the end of February.

- **Topics:**
- Global situation
- European situation/Vaccination News
- European Situation on Vaccination
- SARS-CoV-2 VOIs and VOCs
- Subject in Focus: 2021 Year-in-Review of Infectious Diseases
- Other Infectious Disease Outbreaks
- Summary of information on the individual national Corona restrictions
- Travel Recommendations and other Useful Links



EUROPE
↘
138 662 428
confirmed cases
117 900 000 recovered
1 763 384 deaths

GBR
(7-days incidence 694,1)
↘
18 441 183
confirmed cases
16 950 000 recovered
159 978 deaths

Russia
(7-days incidence 900,2)
↗
14 267 875
confirmed cases
11 360 000 recovered
334 785 deaths

Germany
(7-days incidence 1.400,8)
↘
12 800 411
confirmed cases
9 878 000 recovered
120 472 deaths

Situation by WHO Region, as of 15 February

Global epidemiological situation overview; WHO as of 15 February 2022

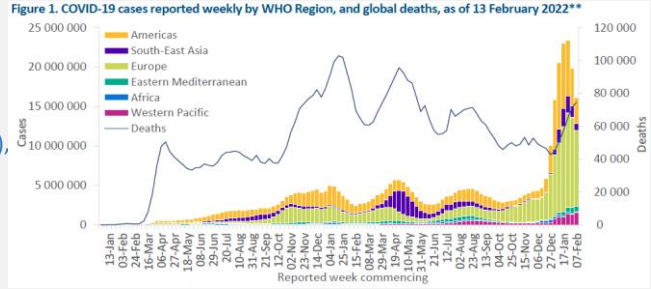
Globally, during the week of 7 to 13 February 2022, the number of new COVID-19 cases decreased by 19% as compared to the number reported during the previous week, while the number of new deaths remained similar to that of the previous week (Figure 1). Across the six WHO regions, just over 16 million new cases and just under 75 000 new deaths were reported (Table 1). As of 13 February 2022, over 409 million confirmed cases and over 5.8 million deaths have been reported globally.

At the regional level, the Western Pacific Region reported an increase of 19% in the number of new weekly cases while all other regions reported decreases: the South-East Asia Region (37% decrease), the Region of the Americas (32% decrease), the African Region (30% decrease), the European Region (16% decrease) and the Eastern Mediterranean Region (12% decrease). The number of new weekly deaths increased in the Eastern Mediterranean Region (38%), the Western Pacific Region (27%), the African Region (14%) and the Region of the Americas (5%), while it remained similar to that of the previous week in the European Region and decreased in the South-East Asia Region (9%).

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

- Russia (1 323 392 new cases; 23% increase)
- Germany (1 322 071 new cases; similar to previous week),
- United States of America (1 237 530 new cases; 43% decrease),
- Brazil (1 009 678 new cases; 19% decrease) and,
- France (979 228 new cases; 43% decrease),

Figure 1. COVID-19 cases reported weekly by WHO Region, and global deaths, as of 13 February 2022**

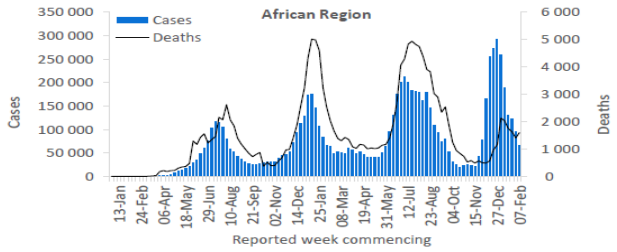


WHO regional overviews Epidemiological week 7-13 February 2022**

African Region

The African Region reported a continued decrease in the number of cases since the beginning of January with over 69 000 new cases reported, a 30% decrease as compared to the previous week. However, four countries reported an increase of over 20% in cases; Congo (130 vs 25 new cases; a 420% increase), Liberia (82 vs 22 new cases; a 273% increase), Lesotho (114 vs 82; a 39% increase) and Central African Republic (131 vs 104; a 26% increase). The highest numbers of new cases were reported from Réunion (30 782 new cases; 3438.1 new cases per 100 000 population; a 32% decrease), South Africa (17 952 new cases; 30.3 new cases per 100 000; a 13% decrease), and Algeria (3628 new cases; 8.3 new cases per 100 000; a 56% decrease).

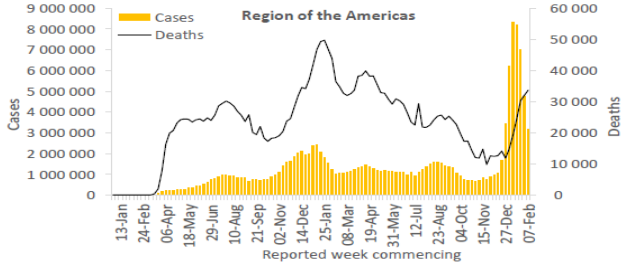
The African Region reported just under 1600 new deaths, a 14% increase as compared to the previous week. The highest numbers of new deaths were reported from South Africa (1168 new deaths; 2.0 new deaths per 100 000 population; a 28% increase), Algeria (75 new deaths; <1 new death per 100 000; a 12% decrease), and Ethiopia (65 new deaths; <1 new death per 100 000; a 124% increase).



Region of the Americas

The Region of the Americas reported over 3.2 million new cases, a 32% decrease as compared to the previous week, a trend that has continued since mid-January. However, ten countries reported increases in new cases of 20% or greater, with the highest proportional increases reported from the Falkland Islands (seven vs two new cases; an 250% increase), Antigua and Barbuda (559 vs 174 new cases; a 244% increase) and Haiti (358 vs 105 new cases; a 241% increase). The highest numbers of new cases were reported from the United States of America (1 237 530 new cases; 373.9 new cases per 100 000; a 43% decrease), Brazil (1 009 678 new cases; 475.8 new cases per 100 000; a 19% decrease) and Chile (247 900 new cases; 1296.8 new cases per 100 000; a 9% increase).

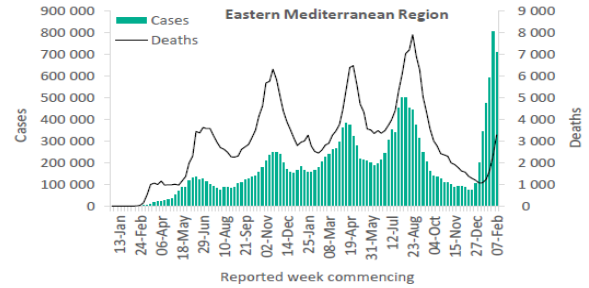
The Region reported over 33 000 new deaths this week, a 5% increase as compared to the previous week. The highest numbers of new deaths were reported from the United States of America (17 225 new deaths; 5.2 new deaths per 100 000; similar to the previous week's figures), Brazil (6658 new deaths; 3.1 new deaths per 100 000; a 44% increase) and Mexico (2530 new deaths; 2.0 new deaths per 100 000; a 7% increase).



Eastern Mediterranean Region

The Eastern Mediterranean Region reported over 712 000 new cases this week, a 12% decrease as compared to the previous week. This is the first reported decline in incidence following weekly increases from early December 2021. An increase of over 20% in new cases was reported by two countries: Yemen (415 vs 251 new cases; a 65% increase) and the Syrian Arab Republic (800 vs 542 new cases; 48%). The highest numbers of new cases were reported from the Islamic Republic of Iran (236 616 new cases; 281.7 new cases per 100 000; a 7% increase), Jordan (136 567 new cases; 1338.5 new cases per 100 000; a 17% increase), and Lebanon (46 417 new cases; 680.1 new cases per 100 000; a 20% decrease).

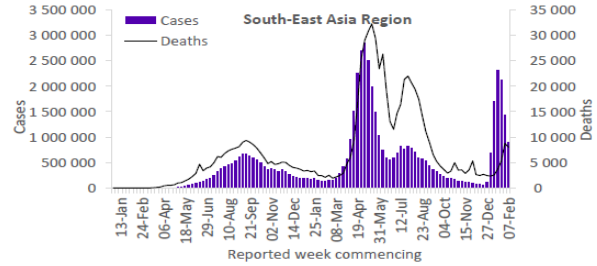
Over 3200 new deaths were reported in the Region this week, a 38% increase as compared to the previous week. The highest numbers of new deaths were reported from the Islamic Republic of Iran (825 new deaths; 1.0 new death per 100 000; a 126% increase), Tunisia (453 new deaths; 3.8 new deaths per 100 000; an 18% increase), and Egypt (415 new deaths; <1 new death per 100 000; a 33% increase).



South-East Asia Region

The number of new weekly cases has continued to decline in the South-East Asia Region since mid-January, with over 915 000 new cases reported, a 37% decrease as compared to the previous week. This week, four countries reported increases of 20% or greater: Myanmar (8870 vs 2647 new cases; a 235% increase), Timor-Leste (1228 vs 466 new cases; a 164% increase), Indonesia (291 298 vs 173 295 new cases; a 68% increase), and Thailand (96 326 vs 64 467 new cases; a 49% increase). The highest numbers of new cases were reported from India (443 283 new cases; 32.1 new cases per 100 000; a 60% decrease), Indonesia (291 298 new cases; 106.5 new cases per 100 000; a 68% increase), and Thailand (96 326 new cases; 138.0 new cases per 100 000; a 49% increase).

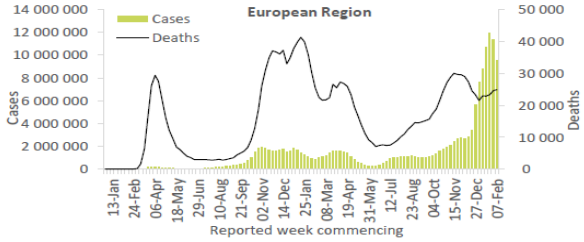
Over 7900 new deaths were reported in the Region this week, a 9% decrease as compared to the previous week. The highest numbers of new deaths were reported from India (6686 new deaths; <1 new death per 100 000; a 15% decrease), Indonesia (622 new deaths; <1 new death per 100 000; a 148% increase), and Bangladesh (230 new deaths; <1 new death per 100 000; similar to the previous week's figures).



European Region

The European Region reported just under 9.6 million new cases, a 16% decrease as compared to the previous week, the second consecutive week of a decline in the number of new cases since the peak observed at the end of January. However, four countries reported increases of 20% or greater over the past week; Belarus (53 969 vs 30 475 new cases; a 77% increase), the Netherlands (877 154 vs 561 539 new cases; a 56% increase), Iceland (13 802 vs 9797 new cases; a 41% increase) and the Russian Federation. The highest numbers of new cases were reported from the Russian Federation (1 323 391 new cases; 906.8 new cases per 100 000; a 23% increase), Germany (1 322 071 new cases; 1589.7 new cases per 100 000; similar to the previous week's figures), and France (979 228 new cases; 1505.6 new cases per 100 000; a 43% decrease).

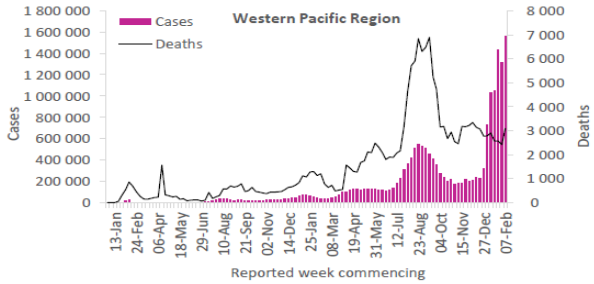
The European Region reported over 24 000 new deaths, similar to the previous week's figures. The highest numbers of new deaths were reported from the Russian Federation (4834 new deaths; 3.3 new deaths per 100 000; similar to the previous week's figures), Italy (2282 new deaths; 3.8 new deaths per 100 000; a 13% decrease), and France (2270 new deaths; 3.5 new deaths per 100 000; a 23% increase).



Western Pacific Region

The Western Pacific Region reported over 1.5 million new cases, a 19% increase as compared to the previous week. Half of the countries (14/28) and territories of the Region reported increases in new cases of 20% or greater, with the highest proportional increases reported from Tonga (62 vs 10 new cases; a 520% increase), China (7571 vs 1787 new cases; a 324% increase), and Brunei Darussalam (4175 vs 1059 new cases; a 294% increase). The highest numbers of new cases were reported from Japan (624 240 new cases; 493.6 new cases per 100 000; similar to the previous week's figures), the Republic of Korea (340 950 new cases; 665.0 new cases per 100 000; an 88% increase), and Australia (162 079 new cases; 635.6 new cases per 100 000; a 25% decrease).

There was a 27% increase in the number of new deaths as compared to the previous week, with over 3000 new deaths reported in the Region. The highest numbers of new deaths were reported from Japan (945 new deaths; <1 new death per 100 000; a 79% increase), the Philippines (716 new deaths; <1 new death per 100 000; a 109% increase), and Viet Nam (601 new deaths; <1 new death per 100 000; a 16% decrease).



Source: https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---15-february-2022

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https://www.nature.com/articles/d41586-020-03218-z

Global Situation

bluedot

WHO prequalifies first monoclonal antibody - tocilizumab – to treat COVID-19

Together with tocilizumab to date, six COVID-19 treatments have been prequalified by WHO. Tocilizumab will be presented in three presentations (three vials, each with a different quantity) these are manufactured by the originator company, Roche, but the listings should pave the way for more companies coming forward to seek WHO prequalification, thereby increasing the number of quality-assured products and creating competition leading to potentially lower prices. The prequalification of these products will also facilitate low- and middle-income countries' authorization of them as COVID treatments.

Tocilizumab is a monoclonal antibody that inhibits the Interleukin-6 (IL-6) receptor. Interleukin-6 induces an inflammatory response and is found in high levels in patients critically ill with COVID-19.

Tocilizumab given intravenously has been shown in clinical studies to reduce death in certain patients with COVID-19 who are severely ill, are rapidly deteriorating and have increasing oxygen needs, and who have a significant inflammatory response. In the largest clinical trial (RECOVERY), tocilizumab also reduced patients' time in hospital.

WHO recommends tocilizumab only for patients diagnosed with **severe or critical COVID-19**. It should be administered by a healthcare worker in a monitored clinical setting along with the current standard of care for COVID-19, which includes oxygen, corticosteroids, and other medications.

Overview of COVID-19 in Japan

Disease Activity: Since early January, **COVID-19 activity in Japan has rapidly increased due to the Omicron variant (B.1.1.529)**, surpassing all observed peaks from the previous waves. Nearly 50% of the total cases since the beginning of the pandemic have been reported in the last 30 days. **The seven-day rolling average number of new cases increased by 96% in the past two weeks**, from 45,593 cases as of January 24, to 89,568 cases on February 7, 2022. Within the same time frame, **the seven-day rolling average number of new deaths increased from 12 to 87 deaths**. In the past month, the **14-day test positivity rate increased from at least one percent (0.81%)** on January 1, **to 35.9%** on February 7, while the 14-day average number of tests per million increased by 4-fold (2,235 tests per million population on February 7). Notably, the recent surge in cases has strained testing capacities and is causing shortages of testing kits.

Hospital Occupancy: According to official sources, **hospital occupancy has surpassed 50% in at least 18 out of 47 prefectures as of February 2**, with the highest rates observed in Kumamoto, Osaka, and Tokyo. In the Osaka prefecture, these rates increased from 70% of beds allocated for COVID-19 on February 2 to over 100% on February 8. Notably, a large majority of the patients are elderly, 70 years and older. Similarly, the rates of hospitalization of patients in serious conditions are increasing, rates have passed 10% occupancy in at least 15 prefectures as of February 2. In Tokyo, hospital occupancy for patients with severe illness is 15.1%, and 8% for those who require oxygen supply support. This is below the government's set benchmarks of 30%, for both.

Public Measures: **Thirty-four prefectures are under a quasi-state of emergency**, which will be extended to March 6, for 12 select prefectures with strained health systems. The quasi-state contains fewer restrictions than the full state of emergency but includes restricted business hours and limits on nonessential domestic travel. Additionally, borders remain closed for international travellers since November 30, 2021, after a short re-opening.

Vaccination Coverage: According to BlueDot's COVID-19 Data Suite, as of February 7, **80% (101,422) of Japan's total population (126 million) have received their first dose of a COVID-19 vaccine and 79% (99,894,922) have received two doses**. Vaccine rollout for third doses began in December with healthcare workers. Since then, only 7% of the total population has been administered a booster dose, slightly more than half the initial target for the end of January. The initial rollout may have been stunted by vaccine hesitancy for heterologous regimens and the original eight-month period between doses, which has now been amended to six months. Children 5 to 11 years of age can anticipate primary immunization in March. Three COVID-19 vaccines are approved for use in Japan, including Comirnaty (Pfizer/BioNTech), Vaxzevria (Oxford/AstraZeneca), and Spikevax

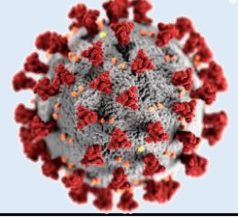
First evidence of hamster-to-human transmission of SARS-CoV-2 in Hong Kong

According to a recently published case study that has not yet been peer-reviewed, **the first evidence of hamster-to-human transmission of the SARS-CoV-2 virus, that causes COVID-19, has been reported**. Following genomic analysis of viral samples from the animals, the study provides evidence that pet hamsters, which were carrying the Delta variant (B.1.617.2) of the SARS-CoV-2 virus, were responsible for a human COVID-19 outbreak in Hong Kong during January 2022.

The investigation began when a 23-year-old pet-shop worker tested positive for the Delta variant on January 15, 2022. This event was unusual given that the Delta variant had not been detected in the community since October 2021. Public health officials responded quickly by swabbing more than 100 animals at the pet shop and another 500 at the supplying warehouse. Officials detected SARS-CoV-2 viral RNA or antibodies against the virus in 15 of 28 Syrian hamsters (*Mesocricetus auratus*), but not in any of the dwarf hamsters, rabbits, guinea pigs, chinchillas, or mice that had been tested. In total, **two independent events of hamster-to-human transmission were reported among the pet-shop worker and a visitor to the shop, and at least one further human-to-human transmission event** (a family member of the shop visitor). All human cases had previously received two doses of a COVID-19 vaccine. The genomic sequences of the samples collected from 12 hamsters and three infected people (which included two events of hamster-to human transmission in the pet-shop worker and a visitor to the shop and an additional case of onward human-to-human transmission) were analyzed and all samples contained a variant of Delta that had not previously been detected in Hong Kong and probably originated from the same source. Researchers concluded that, due to some diversity in the sequences, the hamsters were most likely first infected in November, before their arrival in Hong Kong, and that the virus had spread undetected among the animals before infecting humans. Despite having had replicated in hamsters, the virus was found to continue to effectively transmit between humans. The hamsters had been imported from the Netherlands and further analysis revealed that the closest genetic match to the sequences collected in Hong Kong was among people in Eastern Europe. However, researchers have stated that they cannot rule out the possibility that the hamsters were first infected by a person in Hong Kong as there are many individuals who handle the animals during the transportation process.

Overall, **the risk of infection from hamsters appears to be low but this event highlights the potential for non-human reservoirs of SARS-CoV-2**. Previously, it had been known that hamsters could be infected with the virus in laboratory settings for research purposes, however, little evidence was available to suggest that the rodents could go on to transmit the virus to humans. Hamsters are only the second animal known to be able to transmit the SARS-CoV-2 virus to humans. In late 2020, small human outbreaks of COVID-19 in Denmark were linked to farmed mink.

UKR: On 8 February, UNHCR, the UN Refugee Agency, and OCHA, the United Nations Office for the Coordination of Humanitarian Affairs, facilitated a humanitarian convoy to the non-government-controlled area through the Entry-Exit Checkpoint "Shchastia". Eight trucks crossed the contact line into Luhansk NGCA carrying 59.6 tons of aid from Médicos del Mundo (MDM) and the International Organization for Migration (IOM). The humanitarian convoy consists of personal protective equipment (PPEs) for COVID-19 prevention, hygiene materials, medical equipment and construction materials to support the conflict-affected population in eastern Ukraine.



European Situation

Vaccination News

ECDC COVID-19 country overviews report Week 02, as of 03 February 2022

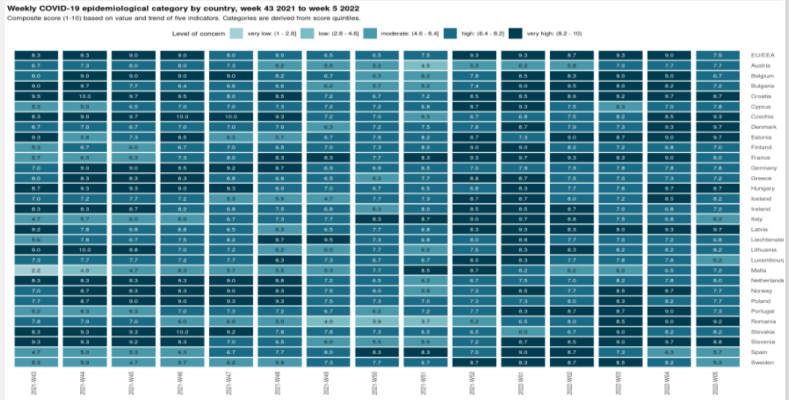
At the end of week 5 2022 (week ending Sunday, 6 February), the overall epidemiological situation in the EU/EEA was characterised by a very high overall case notification rate that increased rapidly in January but has been decreasing or stable for one week, and an elevated but stable death rate. Case notification rates were highest among age groups under 50 years old. Rates among older age groups have also been increasing but appear to have stabilised over recent weeks. Case notification rates are forecast to slightly decrease over the next two weeks, while death rates are forecast to continue to increase. An epidemiological situation of high or very high concern was observed in 26 EU/EEA Member States. The Omicron variant of concern is now dominant in most EU/EEA countries. The picture varies between countries, and while a decreasing or stable trend in case rates is observed in several countries, others continue to see an increasing trend. The rapidly changing and diverse testing strategies currently adopted by EU/EEA countries should be considered when interpreting case notification rates and test positivity.

The overall COVID-19 case notification rate for the EU/EEA was 3 509 per 100 000 population (3 728 the previous week). This rate has been decreasing for one week. The 14-day COVID-19 death rate (51.2 deaths per million population, compared with 51.0 deaths the previous week) has been stable for 11 weeks. Of 27 countries with data on hospital or ICU admissions or occupancy up to week 5, 17 reported an increasing trend in at least one of these indicators compared to the previous week.

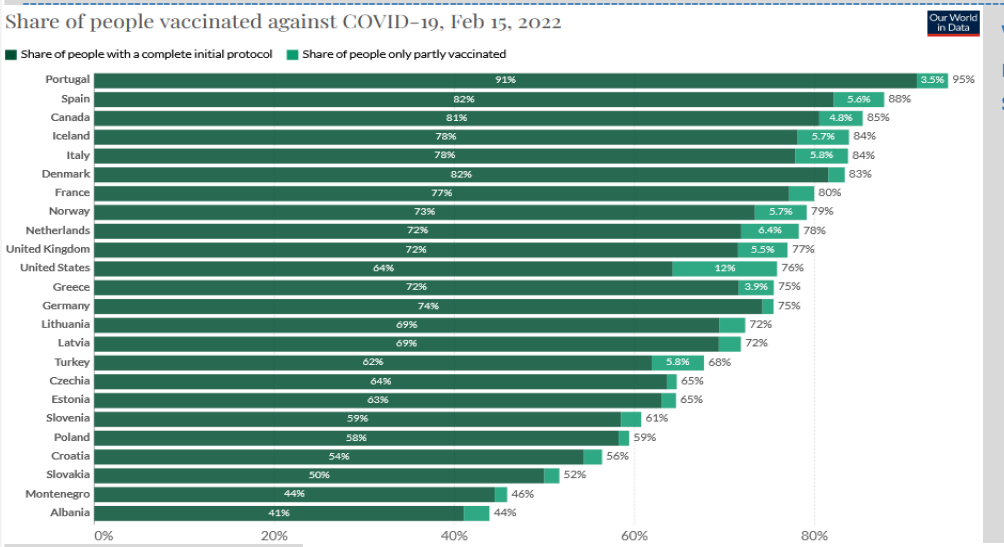
ECDC's assessment of each country's epidemiological situation is based on a composite score based on the absolute value and trend of five weekly COVID-19 epidemiological indicators. As shown below, for week 5, eight countries (Croatia, Czechia, Denmark, Estonia, Hungary, Latvia, Romania and Slovenia) were categorised as of very high concern, 18 countries (Austria, Belgium, Bulgaria, Cyprus, Finland, France, Germany, Greece, Iceland, Ireland, Liechtenstein, Lithuania, Malta, the Netherlands, Norway, Poland, Portugal and Slovakia) as of high concern and four countries (Italy, Luxembourg, Spain and Sweden) as of moderate concern. Compared with the previous week, nine countries (Belgium, Bulgaria, France, Iceland, Italy, Luxembourg, Norway, Portugal and Sweden) moved to a lower category and 21 countries stayed in the same category.

Forecasts of cases and deaths from the European COVID-19 Forecast Hub provide predictions for weeks 6 and 7. Compared with the current week, decreasing trends in cases and increasing trends in deaths are forecast in the EU/EEA by the end of week 7. By the end of week 5, the cumulative uptake of the primary course of COVID-19 vaccination in the EU/EEA was 82.0% (country range: 35.0–94.7%) among adults aged 18 years and older and 70.7% (country range: 29.3–84.9%) in the total population. The cumulative uptake of a booster/additional dose was 56.9% (country range: 10.0–84.3%) among adults aged 18 years and older and 46.9% (country range: 8.2–66.7%) in the total population. The estimated distribution (median and range of values from 22 countries for weeks 3 to 4, 17 January to 30 January 2022) of variants of concern (VOCs) was 95.4% (53.1–99.9%) for B.1.1.529 (Omicron), 3.5% (0.1–44.9%) 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 B.1.617.

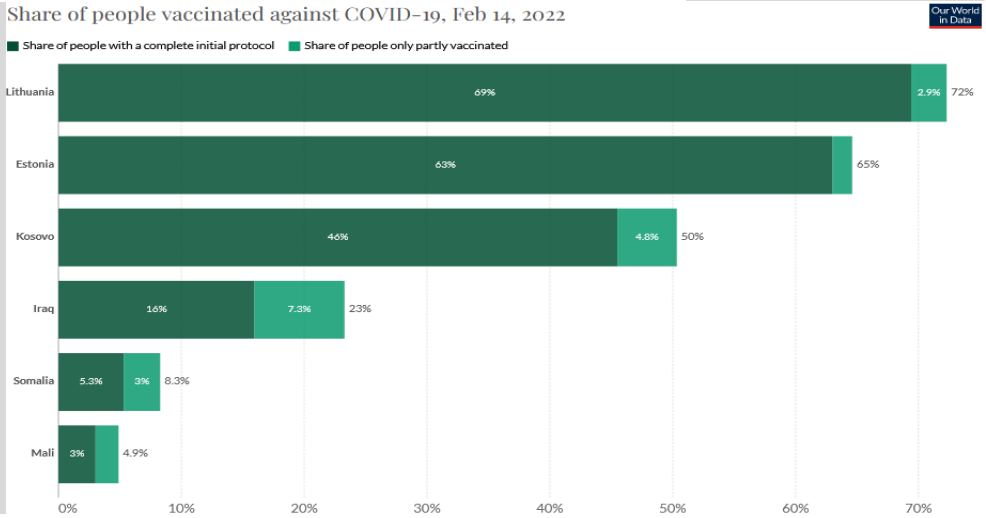
In the same period, B.1.1.529 (Omicron) was the dominant variant (accounting for >50% of sequenced viruses) in 22 of the 22 EU/EEA countries with adequate sequencing volume. A description of trends in aggregate detections and of the epidemiology of 521 216 reported Omicron cases is available in the virus variants summary and variants sections.



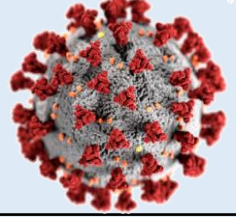
A total of 10 countries accounted for **67.1%** of all vaccinations administered globally as of February 10. The top five countries/territories with the highest number of cumulative people fully vaccinated per 100,000 population are **Gibraltar** (120,930), **United Arab Emirates** (93,840), **Brunei Darussalam** (91,360), **Portugal** (91,220), and **Chile** (88,600). Conversely, the top five countries with the lowest number of cumulative people fully vaccinated per 100,000 population are **Burundi** (60), the **Democratic Republic of the Congo** (230), **Chad** (800), **Haiti** (810), and **Yemen** (1,180).



Vaccination rates NATO states



Vaccination rates NATO mission states



Vaccination News

Considerations for the use of antibody tests for SARS-CoV-2 – first update, ECDC

The original brief technical note that was developed at the request of the European Commission to inform the discussion on Digital Green Certificates to facilitate the safe and free movement of citizens within the EU during the COVID-19 pandemic.

Key messages

- At present, antibody tests are mostly used in research studies (mainly sero-epidemiological) at population level rather than for individual diagnosis of COVID-19 cases.
- A positive antibody test result can indicate a previous infection or vaccination but cannot be used to determine whether an individual is currently infectious or protected against infection.
- In the absence of a positive diagnostic test result, antibody tests cannot determine the time of infection.
- The antibody titres that correlate with protection from infection are currently unknown.
- There are a variety of antibody tests available and it is extremely difficult to compare their results due to the diversity and lack of standardisation.
- Antibody tests that target the spike protein are unable to distinguish between those who have been previously infected and those who have received at least one dose of a SARS-CoV-2 vaccine.
- There is a risk that the antibodies detected by the commercial tests currently in use will not prevent infection with newly emerging SARS-CoV-2 variants.

COVID-19 Boosters Remain Safe, Continue to Offer High Levels of Protection Against Severe Disease Over Time and During Omicron and Delta Waves, CDC

On February 11 CDC reported two studies that both show that COVID-19 vaccine boosters remain safe and continue to be highly effective against severe disease over time.

In the first study, CDC reviewed data from two of its vaccine safety monitoring systems, v-safe and the Vaccine Adverse Event Reporting System (VAERS). They found that people 18 years and older who received the same mRNA vaccine brand for all their vaccinations experienced fewer adverse reactions following the booster dose, than they did after their second dose of mRNA vaccine. Ninety two percent (92%) of reports to VAERS were not considered serious, and headache, fever, and muscle pain were among the most commonly reported reactions. V-safe data found medical care was rarely received after a booster dose.

A second study reveals that a third dose of mRNA vaccine continues to offer high levels of protection against severe disease, even months after administration, underscoring the importance of staying up to date when eligible after receiving a primary series. CDC examined data on 93,000 hospitalizations and 241,000 emergency department and urgent care visits across 10 states during the Delta and Omicron waves. In the study, about 10% of people were boosted and over 50% of people hospitalized were over 65 years old. During Omicron, vaccine effectiveness against hospitalization was 91% during the first two months after a third dose and remained high, at 78%, four or more months after a third dose.

Boosters are safe and effective, and CDC continues to recommend everyone 5 and older remain up to date with recommended COVID-19 vaccinations, to ensure optimal protection against hospitalizations and severe outcomes. For most people, that means getting a booster dose 5 months after receiving an mRNA vaccine or 2 months after receiving Johnson and Johnson's Janssen vaccine. CDC is continuing to closely monitor the effectiveness of COVID-19 vaccines to help inform public health efforts.

Source: https://www.cdc.gov/mmwr/volumes/71/wr/mm7107e1.htm?s_cid=mm7107e1_x
https://www.cdc.gov/mmwr/volumes/71/wr/mm7107e2.htm?s_cid=mm7107e2_x

COVID-19 vaccines for adolescents offer a very high level of protection against infection, symptomatic disease, and severe disease, ECDC

Given the emerging evidence of waning immunity in adults following a two-dose schedule with authorised vaccines, the ECDC reviewed the evidence of COVID-19 vaccine effectiveness and duration of immunity following vaccination in adolescents aged 12-17 years.

Key messages

- The vaccination of adolescents was introduced during the summer of 2021, approximately six months after COVID-19 vaccines were introduced in EU/EEA countries. All EU/EEA countries now recommend COVID-19 vaccination of adolescents aged 12-17 years old, and of these, ten also recommend a booster dose for those under 18 years of age.
- To date, at the EU level, the administration of booster doses is currently exclusively authorised for individuals 18 years of age and older. The EMA Committee for Medicinal Products of Human Use (CHMP) is currently evaluating data on the use of booster doses in adolescents.
- As of week 4 (30 January 2022), the median uptake of the primary course of COVID-19 vaccine among adolescents aged 15-17 years old was 70.9% (range: 17.9-92.6%) and among 10-14 year-olds it was 34.8% (range: 3-63.8%) with broad heterogeneity across EU/EEA countries. More than half of adolescents aged 10 to 17 in the EU/EEA have not yet completed a primary course.
- SARS-CoV-2 notification rates of symptomatic disease in 12-17 year-olds have increased steadily since July 2021, largely mirroring the increased reporting rate observed in all age groups during the Delta and Omicron variant-dominated waves. However, a decrease in notification rates has been recently observed. The crude risk of hospitalisation, ICU admission and death remain very low for 12-17 year-olds.
- The studies available among adolescents mainly report vaccine effectiveness of the primary vaccination course against the Delta VOC and show a very high level of protection against infection, symptomatic disease, and severe disease.
- There is limited evidence available of waning of immunity following vaccination among adolescents. The available data suggest a waning of vaccine effectiveness against symptomatic infection five to six months following completion of the primary vaccination course, however no evidence of waning immunity against severe disease is currently available.
- There are currently limited data available on benefits and risks of a booster dose administered to adolescents who completed their primary vaccination course against COVID-19. Preliminary findings suggest an increase of vaccine effectiveness against documented SARS-CoV-2 infection in adolescents who received a booster compared to adolescents who have recently completed the primary vaccination course. However, no data are yet available on the duration of protection from a booster dose and on the additional effectiveness against severe disease of a booster dose in adolescents.
- Mathematical modelling suggests that the impact of administering a booster dose against COVID-19 to adolescents aged 12-17 years is a small reduction (1-3%) of the effective reproduction number (R(t)) in the whole population, varying according to the level of uptake of booster doses among adolescents.
- When considering the possibility of administering a booster dose to adolescents who completed the primary course, data on the benefit-risk of a booster dose in this age group should be carefully reviewed as they become available. Additionally, consideration should be given to the epidemiological situation, the national priorities and objectives of the COVID-19 vaccination campaign, the status of the rollout of the COVID-19 vaccine and of additional doses in priority groups and in the general population, as well as vaccine equity and supply.
- At this stage, priority should still be given to completion of the primary series in the eligible population and to administering booster doses to priority groups, before considering giving booster doses to adolescents aged 12-17 years with no underlying conditions.

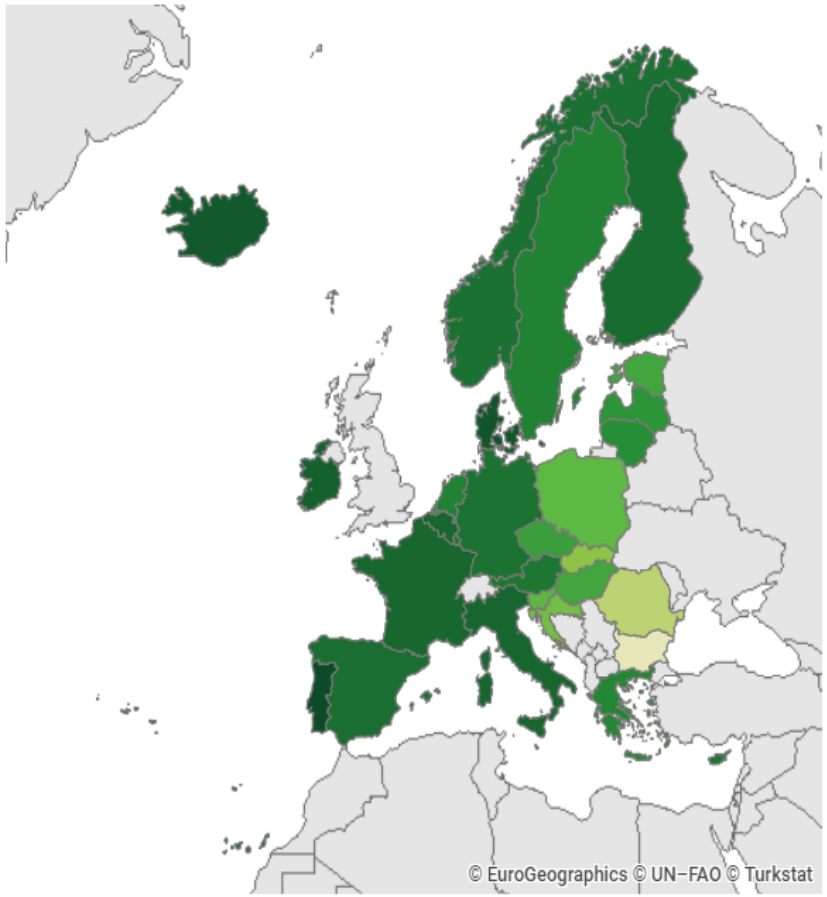
European Situation on Vaccination

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

Total doses distributed to EU/EEA countries 1,089,840,758 | 853,573,192

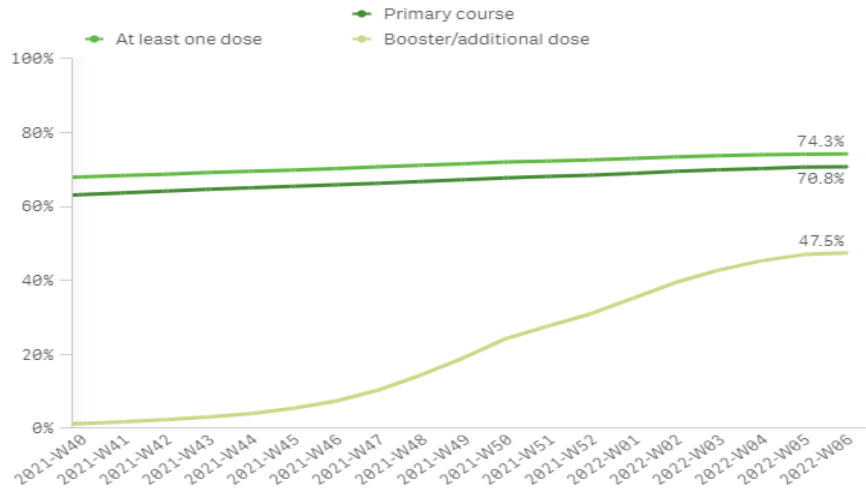
Indicator: Uptake of the primary course

Cumulative uptake (%) of the primary course in the total population in EU/EEA countries as of 2022-02-14



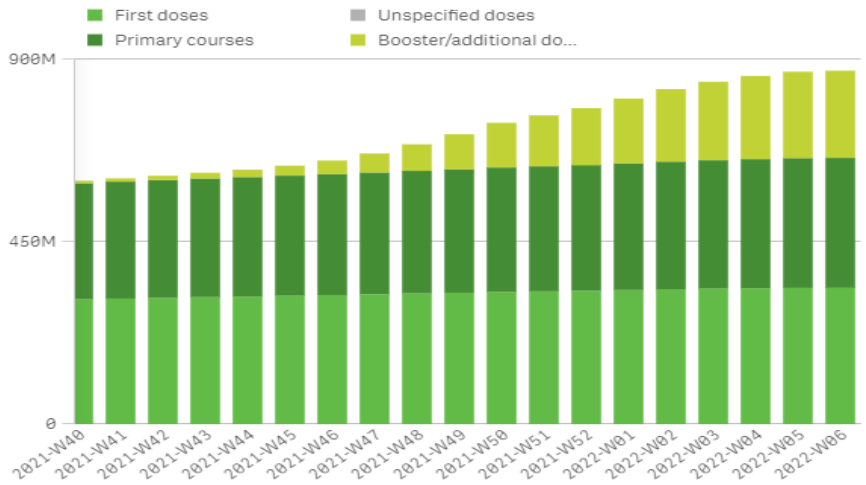
Cumulative vaccine uptake (%) in the total population in EU/EEA countries as of 2022-02-14

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 2022-02-14

by reporting week (data for current week are preliminary)



Cumulative uptake (%) of the primary course by age group in EU/EEA countries as of 2022-02-14

Country	60+ years	50-59 years	25-49 years	18-24 years	<18 years
Austria	92.6%	82.7%	76.7%	74.8%	29.2%
Belgium	94.2%	91.3%	84.9%	82.7%	33.0%
Bulgaria	37.8%	38.8%	32.5%	27.4%	1.9%
Croatia	77.2%	69.5%	57.4%	43.9%	4.0%
Cyprus	94.3%	88.1%	84.8%	71.2%	18.8%
Czechia	85.8%	78.1%	65.2%	68.5%	18.8%
Denmark	99.7%	94.2%	85.5%	82.7%	42.1%
Estonia	78.4%	74.5%	67.9%	71.2%	18.4%
Finland	95.1%	88.0%	82.4%	77.5%	27.6%
France	91.7%	90.8%	86.5%	88.8%	26.1%
Germany	89.6%	-	-	-	-
Greece	88.3%	82.1%	74.5%	69.3%	19.1%
Hungary	81.5%	75.2%	64.8%	52.3%	22.4%
Iceland	100.0%	92.5%	87.4%	86.1%	39.5%
Ireland	100.0%	99.3%	88.8%	86.7%	29.2%
Italy	91.4%	86.0%	79.8%	85.5%	35.0%
Latvia	75.6%	78.3%	76.4%	78.8%	19.4%
Liechtenstein	-	-	-	-	1.7%
Lithuania	78.6%	79.1%	79.6%	74.4%	16.1%
Luxembourg	91.1%	87.5%	78.2%	73.7%	29.1%
Malta	99.2%	88.8%	93.1%	85.1%	39.4%
Netherlands	-	-	-	-	21.5%
Norway	99.3%	95.3%	86.0%	85.2%	11.3%
Poland	76.3%	67.8%	59.8%	55.2%	20.7%
Portugal	100.0%	94.7%	89.3%	87.3%	34.1%
Romania	46.2%	56.3%	49.4%	48.7%	6.7%
Slovakia	72.7%	61.4%	52.3%	51.7%	10.1%
Slovenia	84.2%	69.9%	56.7%	57.9%	10.3%
Spain	98.3%	89.2%	77.4%	72.7%	27.4%
Sweden	94.0%	90.2%	81.0%	76.2%	12.1%

SARS-CoV-2 Variant of Concern: Update on BA.2 Pango lineage of Omicron

Since the designation of B.1.1.529 as a VOC on 26 November 2021, several lineages have been identified. These include Pango lineages BA.1, BA.1.1, BA.2 and BA.3, which are all being monitored by WHO under the umbrella of 'Omicron'. Recent data on BA.2 is summarised based on a targeted literature search and an assessment based on the framework applied by the UK Health Security Agency (UKHSA). The Annex 3 provides further information on how the evidence was gathered and appraised.

Epidemiology

The prevalence of BA.2 among sequenced Omicron cases globally submitted to GISAID has been steadily increasing, reaching 21.09% in week 5 of 2022.3 As of 14 February, 10 countries reported a predominance of BA.2 (>50%): Bangladesh, Brunei Darussalam, China, Denmark, Guam, India, Montenegro, Nepal, Pakistan, Philippines. However, there are differences between regions observed, with the South-East Asia Region reporting the highest prevalence of BA.2 among Omicron sequences (44.7%) and the Region of the Americas reporting the lowest prevalence (1%). This analysis is based on all sequences submitted to GISAID with samples collected from 13 January to 11 February 2022. These trends should be interpreted with due consideration of the limitations of surveillance systems, including differences in sequencing capacity and sampling strategies between countries, as well as laboratory turn-around times for sequencing and delays in reporting. Additionally, it is important to consider the relative proportions of the BA.2 sequences in the context of the case incidence when interpreting the spread and relative growth of different lineages.Examples of countries which have seen an increase in the prevalence of BA.2 include: South Africa where the prevalence rose from 27% on 4 February 20224 to 86% by 11 February 20225; the United Kingdom6 where the prevalence increased six-fold from 17 to 31 January 2022 (from 2.2% to 12%); Denmark where the prevalence doubled from week 52 of 2021 to week 2 of 2022 (from 20% to 45%) and became the dominant variant (66% of sequenced by week 3 of 20227) and the United States of America where the prevalence tripled from 1.2% during the week ending 29 January 2022 to 3.6% during the week ending 5 February 2022.8 The prevalence of BA.2 appears to be increasing both in countries experiencing a decline in Omicron cases and in countries that are in the growing phase of the wave.

Transmission

Early evidence from limited studies suggests BA.2 is more transmissible as compared to BA.1. Estimates of growth rates in Denmark indicate that BA.2 is 30% more transmissible than BA.1.7 An analysis of GISAID data shows a growth rate advantage of BA.2 over BA.1 in all 43 countries with sufficient sequence data and co-circulation of the two lineages, translating to a pooled mean transmission advantage (i.e. relative difference in effective reproduction numbers) of 84% (95% CI: 68% – 101%) across epidemiological contexts under the assumption of an unchanged generation time.

Currently available evidence on the secondary attack rate (SAR) among contacts of BA.2 compared to BA.1 was obtained from household transmission studies in Denmark and the United Kingdom. Danish researchers10 found higher SAR for BA.2 compared to BA.1 at one (8% vs 6%), seven (39% vs 29%) and 14 (42% vs 36%) days of follow-up. Similar results were reported in the United Kingdom with a higher SAR for BA.2 (13.4%; 95% CI:10.7%-16.8%) compared to BA.1 (10.3%; 95% CI: 10.1%-10.4%). These estimates are likely to change over time as more data become available.

It is currently unclear what factors drive the growth advantage of BA.2 over BA.1. Preliminary data show similar antibody responses to BA.1 and BA.2. This supports findings from a household transmission study conducted in Denmark, in which unvaccinated primary cases infected with BA.2 were more likely to transmit to household contacts when compared to BA.1. The increase in proportion of BA.2 relative to BA.1 in contexts with decreasing case numbers also supports increased transmissibility of BA.2 in comparison to BA.1, rather than immune evasion.

Diagnostic testing

In contrast to Omicron Pango lineages BA.1 and BA.1.1, the BA.2 Pango lineage does not have the 69-70 deletion in the Spike protein which is responsible for S-gene target failure (SGTF) on certain PCR assays. The presence of SGTF was previously considered to screen for Omicron, enabling a proxy to distinguish between BA.1 and other VOCs, such as Delta, in the absence

of sequencing. In settings where Omicron is the dominant circulating variant, employing this screening approach could enable some distinction between BA.1 (SGTF) and BA.2 in which the result would be S-gene target positive (SGTP). This approach is only possible in settings where the prevalence of Omicron is very high and it should be noted that sequencing is the only way to definitively confirm a particular variant. Following analysis of publicly available sequences, several antigen, antibody and PCR tests were found to perform equally well in detecting SARS-CoV-2 infections caused by BA.1 and BA.2.12 Another study found differences in sensitivity of various PCR assays in detecting BA.1 and BA.2 Pango lineages (from 0% to 100%).13 Further studies are underway to fully understand the impact of Omicron Pango lineages on diagnostic assays.

There are other mutations/deletions in Omicron that may overlap with primer or probe targets of commercially available PCR kits, leading to target failure. One example includes a report in which N-gene target failure (NGTF) has been reported for one assay in individuals with sequence-confirmed infection with Omicron variant (including BA.1 and BA.2) due to the lineage-defining ERS31-33 deletion, but not in those infected with the Delta variant. This implies that multigene PCR assays which target this region of the N gene may be considered as a way to screen for Omicron (NGTF) to distinguish it from other VOCs, including Delta (NGTP) in settings where there is incomplete replacement of Delta by Omicron.

Disease severity

At present, there is limited evidence on the severity of BA.2 relative to BA.1 or other Omicron Pango lineages. As the proportion of BA.2 has steadily increased in recent weeks in the United Kingdom, there has been a consistent decrease in the number of hospitalizations and deaths. In the United States of America, there have been decreases in hospitalizations and increases in the number of deaths across successive weeks. In this context, a 5.9% reduction in the number of new deaths was reported during the week ending 8 February 2022 as compared to the previous week ending 1 February 2022. However, this does not allow inferences to be made as to the relative severity of BA.2 as in both these countries, BA.1 or BA.1.1 was the dominant Pango lineage during this period.

An analysis conducted in Denmark showed no difference in risk of hospitalisation between those infected with BA.2 and those infected with BA.1, although as BA.2 has become the dominant variant, there has been a recent rise in the number of hospitalisations and deaths in the country. In Nepal, as published on 1 February 2022, ten of eleven samples sequenced at Kathmandu University, Nepal were of the BA.2 lineage.17 However, the number of patients in hospital in the Kathmandu Valley has been decreasing since a peak on 23 January 2022 with the numbers in intensive care and on mechanical ventilation also showing some initial signs of a decrease. In South Africa, BA.2 now accounts for 86% of all sequences; however, hospital admissions continue to decline.

Overall, there is no difference in severity when looking at countries where BA.2 is dominant and those where BA.1 is dominant.

Source: https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---15-february-2022

SARS-CoV-2 Variant of Concern:
Update on BA.2 Pango lineage of Omicron

Source: https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---15-february-2022

Impact on immunity:

1. Neutralization

A preprint study including eight individuals with a history of SARS-CoV-2 infection and 24 individuals who had received primary series vaccination and a booster with Pfizer BioNTech-Comirnaty showed similar neutralizing antibody titres to BA.1 and BA.2.

2. Vaccination

Preliminary results from a test-negative case control study in the United Kingdom found no difference in vaccine effectiveness against symptomatic disease between BA.1 and BA.2 25 weeks after two doses of the primary series (9% [95%CI:7-10] vs13% [95%CI: -26-40]) or two weeks after an additional booster vaccine dose (63%% [95%CI:63-64] vs 70% [95%CI: 58-79]).19

Preliminary results from a household transmission study conducted in Denmark showed that primary cases infected with BA.2 who had received two doses of vaccine (OR = 0.60; 85%CI: 0.42-0.85) and primary cases infected with BA.2 who had received a booster dose (OR = 0.62; 95%CI: 0.42-0.91) were less likely to infect household contacts compared to primary cases infected with BA.1. There was no difference in susceptibility for vaccinated and unvaccinated household contacts of primary cases who were infected with either BA.1 or BA.2. This suggests that vaccination is at least equally effective in preventing acquisition of BA.2 and could be more effective in preventing transmission of BA.2 compared to BA.1.

3. Treatment

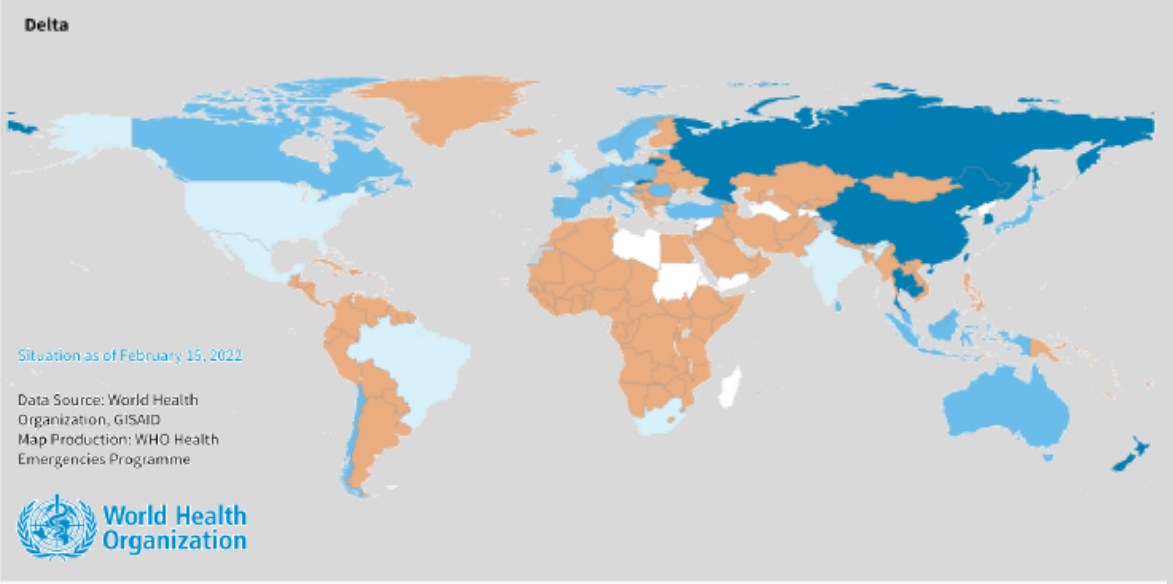
There is currently insufficient evidence on differences in efficacy of treatment options for BA.2 compared to other Omicron Pango lineages.

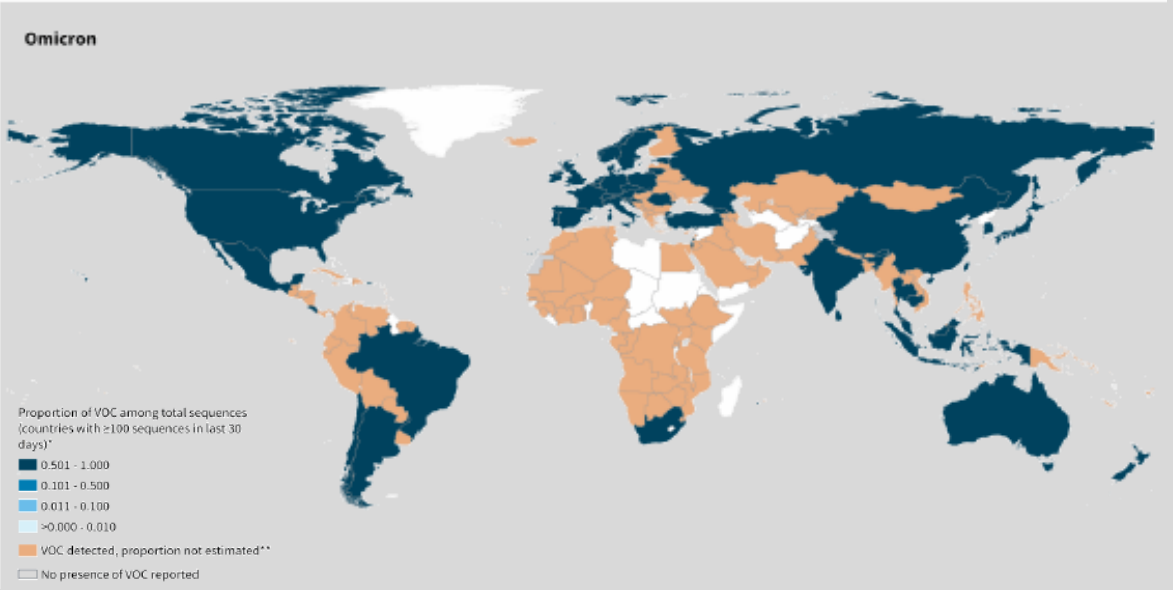
Summary

Summary assessment of evidence on BA.2 compared to BA.1

Indicator	Assessment	Confidence level	Rationale for assessment
Transmissibility	Red	Moderate	Evidence from Denmark and the UK indicating higher growth rates of BA.2 when compared to BA.1.
Disease severity	Green	Low	No evidence of increase in severity of BA.2 relative to BA.1
Immune escape	Green	Moderate	Similar vaccine effectiveness on BA.2 and BA.1. Comparable neutralizing antibody titres against BA.1 and BA.2 in both previously infected and booster vaccinated individuals
Impact on detection capacity	Green	Low	No difference in diagnostic accuracy of some PCR, antigen and antibody tests that were assessed.
Impact on therapeutics			Insufficient data on differences in effectiveness of current treatments between BA.2 and other Pango lineages

Prevalence of variants of concern (VOCs) Delta and Omicron in the last 30 days





Subject in Focus

2021 Year-in-Review of Infectious Diseases: Part 1 - Emerging Infectious Diseases & Pathogens

Despite the ongoing COVID-19 pandemic in 2021, the continued surveillance of other infectious disease threats did not stop. One critical lesson the pandemic has offered is that the world is woefully unprepared to prevent the spread of novel infectious threats. To reflect on the past year and bring awareness to the ranging concerns shaping the global disease landscape, the report has showcased a collection of non-COVID-19 worldwide infectious disease events in 2021 that were notable.

In this report focus on emerging infectious diseases and pathogens in 2021. Emerging infectious disease is an umbrella term that can include diseases/pathogens that have appeared in a new population, or pre-existing diseases/pathogens that are rapidly increasing in incidence or geographic range (either due to a true increase or increased surveillance).[1]

Background: [2]

Since the 1970s, about 40 infectious diseases have been discovered, including SARS (severe acute respiratory syndrome), MERS (Middle East respiratory syndrome), Ebola virus, chikungunya, avian flu, swine flu, Zika, dengue, and most recently COVID-19, caused by a new coronavirus, SARS-CoV-2. We now see the magnitude to which a pandemic like COVID-19 can harm public health and global society, acutely highlighting the importance of maintaining vigilance towards emerging infection us diseases. There are many factors which contribute to the emergence and re-emergence of infectious diseases (Figure 1).

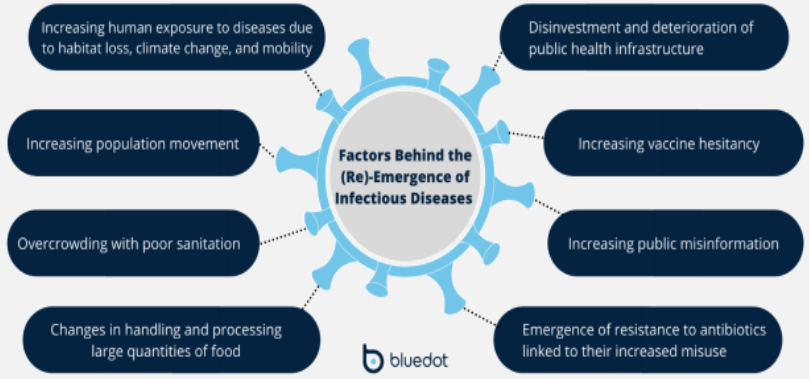


Fig. 1. Contributing factors of the emergence and re-emergence of infectious diseases. Figure recreated by BlueDot from original source[1]

The following are select examples of emerging/re-emerging diseases that have been monitored throughout 2021.

First Historical Human Marburg Fever Case Confirmed in Guinea (Emerging): [3]

Why this is noteworthy: Marburg is a highly virulent epidemic-prone disease with no specific treatment or preventatives. The case fatality rate of Marburg fever is extremely high; 227 of 252 total confirmed historical cases were fatal. The identification of the case in 2021 raised concerns amid an already overwhelmed healthcare system as a result of the COVID-19 pandemic. The identification of the virus in bats in Sierra Leone and the human case in Guinea indicate that risk of zoonotic spillover exists in the region and warrants continued vigilance.

First-ever human case of avian-origin H10N3 influenza virus in China and first-ever human cases of avian-origin H5N8 influenza virus in Russia (Emerging): [4]

Why this is noteworthy: These marked the first appearance of spillover events of these particular avian influenza strains in humans. Animal influenza viruses that infect humans are non-adapted (to humans) and usually result in limited to no onward human-to-human spread. At this time, the human cases of H5N8 and H10N3 appear to be isolated rare events. However, influenza viruses have relatively high mutation rates and the potential to undergo reassortment – which is the process of exchanging gene segments. If both a human and animal-adapted virus undergo reassortment in a host, a new strain that is capable of efficient spread between humans may arise. Hence, spillover influenza events warrant close investigation and monitoring as there is the potential for the emergence of a strain with pandemic potential.

A human case of Murray Valley encephalitis (MVE) virus (Re-emerging): [5]

Why this is noteworthy: Although infections in humans are rare, they can cause permanent neurological disease or death. No human cases of MVE virus have been confirmed since 2011. The detection in a sentinel chicken indicated potential increased risk in the region and demonstrate the value of sentinel surveillance for informing public health.

Ebola re-emerges in Guinea after five years (Re-emerging): [6]

Why this is noteworthy: Genetic sequencing indicates that the 2021 virus strain is consistent with samples from the 2013–2016 epidemic. This is a significant finding as it suggests that the 2021 outbreak started from a long-term persistent human infection, rather than a new emergence from an animal reservoir.

Some emerging pathogens detected in 2021 were not previously known to have public health impacts. These are important to monitor as there is limited understanding on what the potential future impacts may be:

Nairovirus in Japan: [7]

Research published by scientists at Japan's Hokkaido University in 2021 detailed the discovery of a novel nairovirus virus, Yezo virus, which is transmitted through tick bites.

In 2019, the Yezo virus was found in a 41-year-old patient admitted to the hospital with fever and leg pain. In 2020, a second patient appeared with similar symptoms after a tick bite.

After its discovery, scientists checked blood samples collected from hospital patients with similar symptoms after tick bites. In total, they found at least seven people infected with this new virus in Japan since 2014 and no deaths have been confirmed.

The presence of viral RNA were found in three common tick species in the Hokkaido region, indicating these species are likely vectors of the virus.

Why this is noteworthy: Although this virus has only been detected in Hokkaido to date, the disease may be found in other areas with presence of competent tick species. Japanese scientists are working to track this virus nationwide and inform healthcare providers to test for the virus among patients with similar symptoms.

Manych Virus in Russia: [8]

In September 2021, experts in Russia reported a new virus, which was named Manych. It was detected in blood serum samples from several individuals in the Rostov region of Russia. According to experts, it is transmitted to individuals through tick bites and the main symptom experienced by affected individuals is a fever.

Why this is noteworthy: Experts have stated that while this virus does not appear to pose a danger to people at this time, it is possible that the virus can mutate and become more dangerous in the future. The most common symptom is also observed with many illnesses and may make Manych virus challenging to identify and monitor.

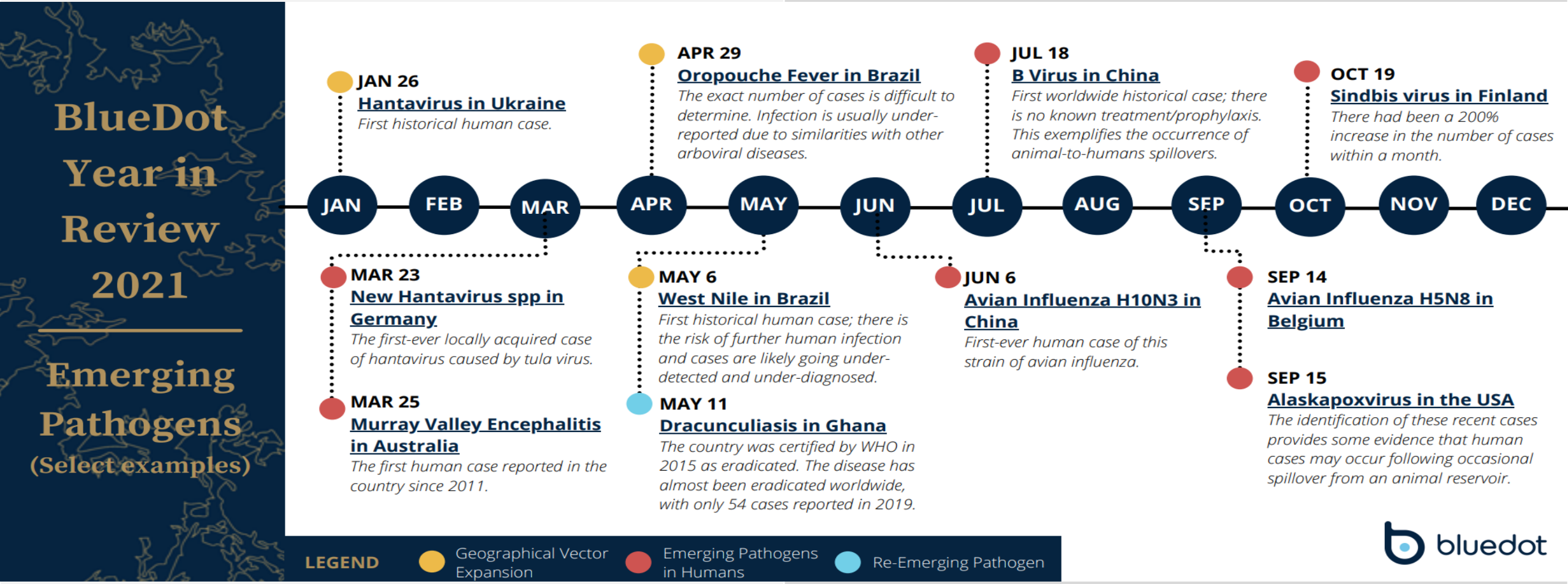
New Hendra Virus in New South Wales, Australia: [9, 10]

A new variant of the Hendra virus was identified in a horse in West Wallsend, New South Wales, Australia during routine surveillance in 2021.

Why this is noteworthy: This is the southern-most Hendra virus case detected in the country to date. It indicates that the geographic distribution of Hendra virus-carrying bats is likely wider than previously thought. It is important to maintain surveillance of Hendra virus as it is a zoonotic disease hosted within the bat vector and transmitted to horses, which can subsequently infect humans. While cases have been rare to date, the fatality rates among both humans and horses infected with the virus are very high. Since 1994, four of the seven Australians who contracted Hendra virus have died.

Subject in Focus

2021 Year-in-Review of Infectious Diseases: Part 1 - Emerging Infectious Diseases & Pathogens



There were several other notable emerging pathogens and re-emerging pathogens reported in 2021. Displayed here in a timeline

Subject in Focus

2021 Year-in-Review of Infectious Diseases: Part 1 - Emerging Infectious Diseases & Pathogens

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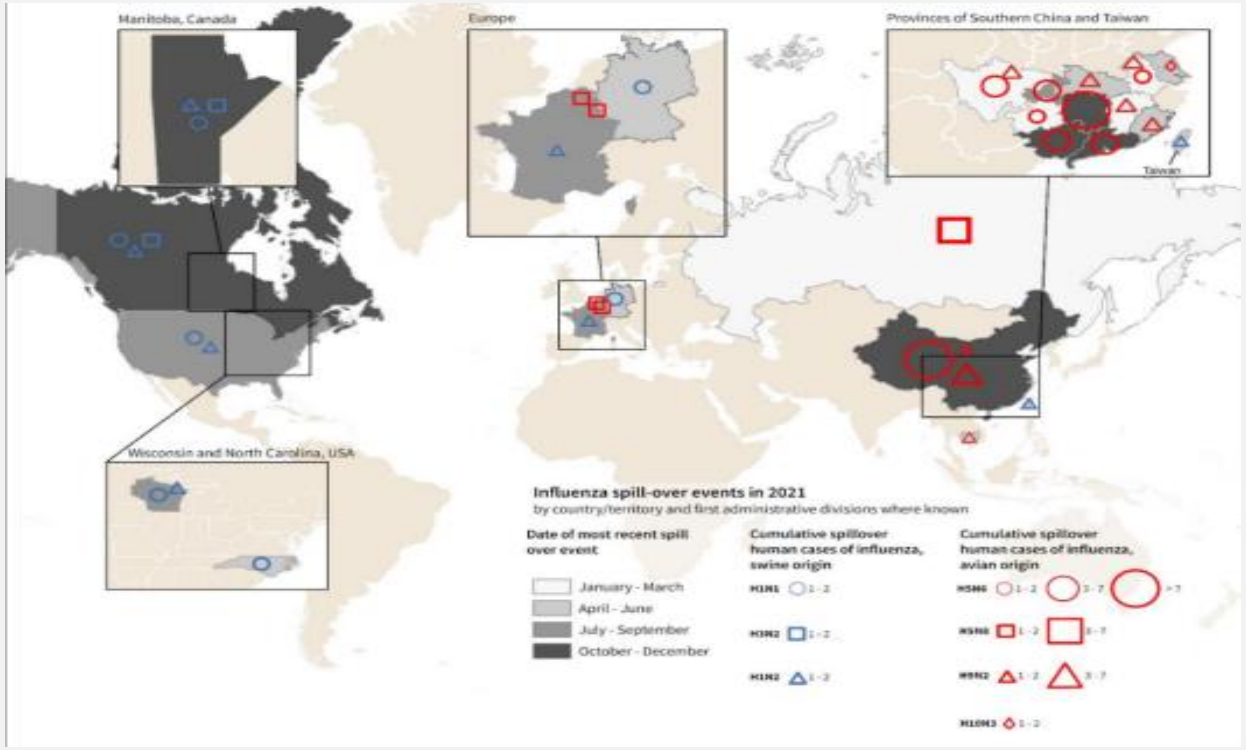
Influenza spillover events [11; 12 ; 13]

Spillover infections or pathogen spillovers refer to the spread of a pathogen from one species to another. These events are very common. It is estimated that just over two-thirds of human viruses are zoonotic (can spread from animals to humans), approximately half of those can spread between people, and a further half are capable of efficient human-to-human transmission.

In 2021, some notable spillover infections recorded were influenzas of avian and swine origin. In the past year, about 60 spillover influenza events were recorded across the globe in countries such as China, Russia, Canada, the United States, Cambodia, Taiwan, Germany, France, Belgium, and Luxembourg. Avian influenza strains that were detected in humans include H5N6 (31 cases), H5N8 (10 cases), H9N2 (7 cases), and H10N3 (1 case). Of these strains, newly emerging were H5N6, H5N8 and H10N3. Swine influenza strains reported as spillover events in humans (i.e., for which there was exposure to swine) were: H1N2 (6 cases), H1N1 (3 cases), and H3N2 (1 case). The distribution of globally reported spillovers of influenza from animals to humans can be found in Figure below.



Distribution of reported influenza spillover events in humans around the world in 2021

There was an increase in human influenza cases attributed to spillover infections for 2021 compared to 2020 (Table 1), including an over 14-fold increase in H5N6 cases in China. Countries such as Russia, Belgium, and Luxembourg reported the cases of avian-origin H5N8 for the first time in 2021. In 2021, avian influenza strain H10N3 was identified for the first time in a human in China. The detection of many of these newly emerging strains could be the result of improved surveillance and genomic sequencing. Of note, there were some cases of avianorigin influenza in humans in 2021 where no source of exposure to live poultry could be found and appear to be isolated events without evidence of human-to-human transmission thus far.

Mutations among avian influenza strains are becoming more common as these viruses have also broadened their geographic distribution through migratory birds. The concerns related to the potential for animal influenza viruses to mutate or reassort with human strains and transmit efficiently between people highlights the need for their prompt identification and reporting. This enables rigorous, timely investigation of potential human-to human transmission, and implementation of public health measures to prevent further spread.

A comparison of human cases of reported spillover animal-origin influenza events in 2021 and 2020 (detected by BlueDot), by strain and country

Strain and animal origin	Reported Country	2020	2021
Influenza A(H5N6) – avian origin	China	2	31
Influenza A(H5N8) – avian origin	Russia	0	7
	Belgium	0	2
	Luxembourg	0	1
Influenza A(H9N2) – avian origin	China	11	6
	Cambodia	0	1
Influenza A(H10N3) – avian origin	China	0	1
Influenza A(H1N2) – swine origin	Canada	1	2
	Taiwan	0	1
	United States	N/A	2
	France	0	1
Influenza A(H1N1) – swine origin	Canada	N/A	1
	United States	1	2
	Germany	1	1
Influenza A(H3N2) – swine origin	Canada	N/A	1
	Total	16	60

Other Infectious Disease Outbreaks

Dengue

Timor-Leste – has reported a surge of dengue cases since late 2021, at unusually high levels compared to previous years. There were 1451 reported cases and 10 deaths (CFR 0.7%) in 2020 and 901 cases and 11 deaths (CFR 1.2%) in 2021. In January 2022 alone 1286 cases were reported, of which 790 (61.4%) were children under the age of 14 years, 142 were severe dengue cases and 20 fatalities were reported (case fatality ratio 1.6%). Dengue is endemic in Timor-Leste year-round, with peak transmission reported from December to April during the hottest months of the year (Figure 1). The ongoing monsoon season may increase mosquito density and the likelihood of further transmission of dengue in the next few months. The surge in dengue is forcing Timor-Leste to use former COVID-19 isolation facilities as cases overwhelm the health system.

USA - Cases of dengue fever continue to be reported in the United States in 2022. According to official data from the Centers for Disease Control and Prevention, this year to date, the United States has seen a 175% increase in cases, as compared to the same period in 2021.

Source: WHO - https://www.who.int/emergencies/disease-outbreak-news/item/dengue---timor-leste?
CDC - https://wonder.cdc.gov/nndss/static/2022/05/2022-05-table1j.html

Lassa fever

GBR - In a follow-up on the Lassa fever cases, the United Kingdom Health Security Agency (UKHSA) has indicated in a statement that the total number of confirmed cases of Lassa fever in the country has now reached three, as of February 11, 2022, and that a death has been also confirmed from the three individuals affected. All individuals are from the same household and recently travelled from an unspecified country in West Africa. Officially available information indicates that there have been four Lassa fever-associated deaths in the UK since 2000 when the first imported cases were confirmed. However, health authorities continue to ensure that the risk of transmission to the public continues to be low, as the Lassa fever virus does not spread easily from person to person and the UK has well-established and robust infection control procedures for dealing with imported infectious diseases (e.g. monkeypox as a recent example).

Nigeria - From 3 to 30 January 2022, 211 laboratory confirmed Lassa fever cases including 40 deaths (case fatality ratio: 19%) have been cumulatively reported in 14 of the 36 Nigerian states and the Federal Capital Territory across the country. Of the 211 laboratory confirmed cases, five cases have been reported among health workers in two states, Edo (3) and Benue (2). In contrast, noticeably less Lassa fever cases with less geographical spread were reported for the same period (epidemiological weeks 1- 4) in 2021 (54 confirmed cases, including 12 deaths, from 8 States). While endemic in Nigeria, cases are much higher than the previous epidemic seasons. This could be attributed to reduced response capacity in surveillance and laboratory testing. It is necessary to continue to monitor the annual peaks of Lassa fever in order to contextualize incidence and inform the effective management of Lassa fever.

Source: NewsMedia - https://www.gov.uk/government/news/lassa-fever-cases-identified-in-england-following-travel-to-west-africa-1
WHO - https://www.who.int/emergencies/disease-outbreak-news/item/lassa-fever---nigeria

Mass Gathering Monitoring - Winter Olympic Games in Beijing – 2022

Beijing - Between 8 and 10 February 2022, 25 Olympic-related COVID-19 cases were reported after screening for SARS-CoV-2. Eleven cases were detected at Beijing International Airport and 14 within the closed-loop system. Overall, since 23 January 2022 and as of 10 February 2022, there have been 418 Olympic-related cases, of which 176 have been among athletes and team officials and 242 among other stakeholders.

Daily COVID-19 updates can be found on the official Beijing 2022 Winter Olympics website.

From 4 to 10 February 2022, no other events of public health significance were detected in the context of the Beijing 2022 Winter Olympic Games.

Source: ECDC - https://www.ecdc.europa.eu/en/publications-data/communicable-disease-threats-report-6-12-february-2022-week-6

Poliomyelitis

Afghanistan - The first case of wild-type 1 (WP1) poliomyelitis in Afghanistan in 2022 has been reported. The case was reported in Paktika province, located in the eastern region of the country. In recent years, cases of WPV1 have declined in Afghanistan, with just four cases reported in 2021. With local resources stretched as a result of the COVID-19 pandemic, this event highlights the importance of ensuring broad and up-to-date vaccination coverage for vaccine-preventable diseases.

Source: NewsMedia - https://polioeradication.org/polio-today/polio-now/this-week/?bdId=2022-02-09

Measles

The ongoing measles outbreaks in many African states are likely the result of disruptions in mass vaccination campaigns amid the COVID-19 pandemic. A report released in November 2021, from the WHO and the US CDC warned that the COVID-19 pandemic may have halted the progress against vaccine-preventable diseases including measles due to disruptions on mass vaccination campaigns. In addition, this report emphasized that at least 22 million children missed their first dose of the measles vaccine in 2020, which is the highest figure recorded in the last 20 years. The recent events are noteworthy as raises the impacts of the COVID-19 pandemic across vaccine-preventable diseases and warns of global resurgence. Thus, enhancement in vaccination coverages and addressing immunity gaps, by reminding parents of the benefits of early immunization are key to reducing the mortality rate and burden of the already overwhelmed healthcare system.

Mali, Koutiala, Sikasso Region – Cases of measles have been reported in Koutiala, Mali. Local health authorities have reported more than 400 cases and at least four deaths since the end of December 2021. Individuals most affected by this recent measles epidemic are children aged one to five years. Health officials have launched vaccination campaigns in the region, but reports suggest that they are facing vaccine shortages, which may affect their ability to contain the spread.

Guinea - An unspecified number of cases is being reported at the Labé regional hospital located in the main city of Labé, which is the administrative capital of the Fouta Djallon region of Guinea. However, media reports indicate that outbreaks are being reported across the country. The provincial health officials are calling on the population to stay vigilant and to consult the nearest health centers in case of symptoms arising in children, including fever, generalized rash, conjunctivitis, cough and cold.

Source: NewsMedia - https://www.studiotamani.org/index.php/themes/breves/29413-koutiala-4-deces-a-cause-de-la-rougeole-depuis-decembre-2021
https://fr.allafrica.com/stories/202202090568.html

Malaria (source: ProMed - https://promedmail.org/promed-post/?id=8701477)

Spain - A case of malaria has been reported in Algeciras, Andalusia, in southern Spain. The affected individual was confirmed to have malaria after giving birth in a local hospital in December 2021 and had no recent travel history to countries where malaria is endemic. An investigation is being conducted to understand where the infection was acquired. Cases of malaria in Spain are usually travel-related. However, there is a risk of local transmission due to the presence of some mosquito vector species that are considered competent for the spread of certain malaria-causing parasites. Malaria remains a notifiable disease in Spain following its eradication in 1964. This event raises the importance of how importations may represent further risks of local transmission when there are suitable vector and environmental conditions present.

Influenza (Source: https://flunewseurope.org/)

Europe - Week 5/2022 (31 January – 6 February 2022)

- Albania, Estonia, Kazakhstan, Norway and Ukraine reported widespread influenza activity and/or at least medium influenza intensity.
- 8% of all sentinel primary care specimens from patients presenting with ILI or ARI symptoms tested positive
- Seven countries reported seasonal influenza activity at or above 10% positivity in sentinel primary care.
- Both influenza type A and type B viruses were detected, with A(H3) viruses being dominant across all monitoring systems.
- Hospitalized cases with confirmed influenza virus infection were reported from intensive care units (3 type A viruses), other wards (3 type A viruses) and SARI surveillance (9 type A viruses).

Source: https://covid19.trackvaccines.org/ as of 20.01.2022

Summary of information on the individual national Corona restrictions

The icons are linked to the respective information. Please click on the icons for information.

NATO Member State (click on country for official COVID-19 information)	Approved vaccines										
	Comirnaty	Spikevax	Janssen	Vaxzevria	Nuvaxovid	Sputnik V	CoronaVac	Covishield	Convidecia	Covilo	Turkovac
Albania	x			x		x	x				
Belgium	x	x	x	x	x						
Bulgaria	x	x	x	x	x						
Canada	x	x	x	x				x			
Croatia	x	x	x	x	x						
Czech Republic	x	x	x	x	x						
Denmark	x	x	x		x						
Estonia	x	x	x	x	x						
France	x	x	x	x	x						
Germany	x	x	x	x	x						
Great Britain	x	x	x	x							
Greece	x	x	x	x	x						
Hungary	x	x	x	x	x	x		x	x	x	
Italy	x	x	x	x	x						
Iceland	x	x	x	x	x						

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Source: https://covid19.trackvaccines.org/ as of 20.01.2022

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	Comirnaty	Spikevax	Janssen	Vaxzevria	Nuvaxovid	Sputnik V	CoronaVac	Covishield	Convidecia	Covilo	Turkovac
Latvia	x	x	x	x	x						
Lithuania	x	x	x	x	x						
Luxembourg	x	x	x	x	x						
Montenegro				x		x				x	
Netherland	x	x	x	x	x						
North Macedonia	x			x		x				x	
Norway	x	x	x		x						
Poland	x	x	x	x	x						
Portugal	x	x	x	x	x						
Romania	x	x	x	x	x						
Slovakia	x	x	x	x	x						
Slovenia	x	x	x	x	x						
Spain	x	x	x	x	x						
Turkey	x					x	x				x
USA	x	x	x								

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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/