ECDC Weekly Policy Brief – 15 October 2021

Not for publication

COVID-19 in EU/EEA

Reporting period: 4 – 10 October 2021

Epidemiological summary

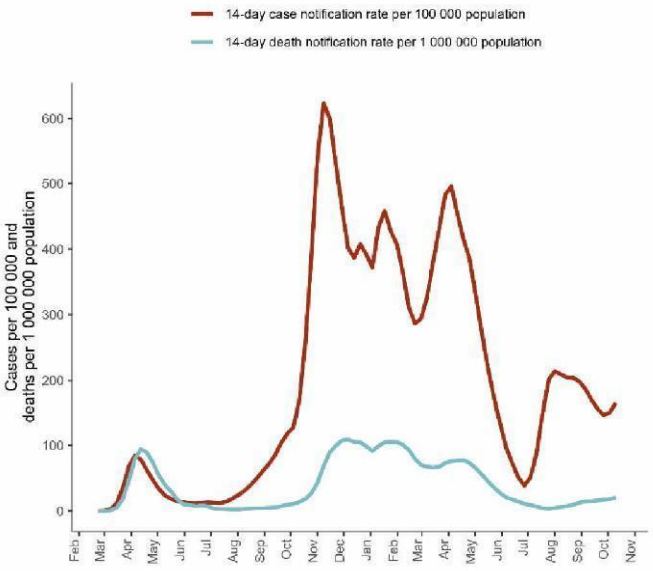
- The overall epidemiological situation in EU/EEA is characterised by a high and increasing overall case notification rate and a low death rate which has been very slowly increasing over time. Case and death notification rates are forecast to continue increasing over the next two weeks. Hospitalisations and ICU admissions are also forecast to slowly increase. Case notification rates are currently highest among children below 15 years of age. Notification rates among all other groups have started to increase again. The picture varies considerably between countries. Increasing case notification rates and an overall epidemiological situation of high or very high concern are mainly concentrated in countries in the eastern part of the EU/EEA, particularly in those with lower rates of vaccination uptake.
- As of 10 October 2021, the overall COVID-19 **case notification rate for the EU/EEA was 165.8 per 100 000 population (150.9 the previous week).** This rate has been increasing for one week. The 14-day COVID-19 death rate was 20.4 deaths per million population, compared with 18.1 deaths the previous week. The trend is now classified as increasing, although a slow rise in the death notification rate has already been observed for a few weeks.
- Overall, the EU/EEA was categorised as of **moderate concern**, an increase from the classification of low concern during the previous week. There is **considerable variation** among countries. Five countries were categorised as of very high concern (Bulgaria, Estonia, Latvia, Lithuania and Romania), two countries as of high concern (Ireland and Slovakia) and 12 countries as of moderate concern (Austria, Belgium, Croatia, Denmark, Finland, Germany, Greece, Hungary, Luxembourg, Netherlands, Poland and Slovenia). The other 11 countries were categorised as of low (9 countries) or very low (two countries) concern.
- The two-week forecasts up to 24 October by the European COVID-19 Forecast Hub and ECDC show increasing trends in all indicators (cases, deaths, hospitalisation and ICU admissions) at the EU/EEA level by the end of the period.
- Variant **B.1.617.2 (Delta) continues to be dominant in the EU/EEA**, accounting for a median of **99.9%** of all sequenced samples. All 18 countries with an adequate sequencing volume reported Delta above 90%.
- COVID-19 **vaccine uptake among the total population**[1] in EU/EEA has reached 68.6% for at least one vaccine dose and 63.6% for full vaccination. **Rapid vaccination** of all eligible individuals with a full vaccine course, in Europe and globally, is key to controlling the impact of the pandemic in the context of the spread of the Delta variant.
- Non-pharmaceutical interventions should be maintained at a level sufficient to **contain community transmission of the Delta variant** until a higher proportion of the population is fully vaccinated, to avoid further resurgence of cases with a possible increase in hospitalisations and mortality. Continued **strong surveillance**, comprehensive **testing strategies and contact tracing** should remain a priority in all countries.

[1] As of this issue, ECDC has decided to report vaccination uptake among the total population including adolescents and children, instead of the adult (over 18 years of age) population only that was applied previously.

Key COVID-19 trends in Europe

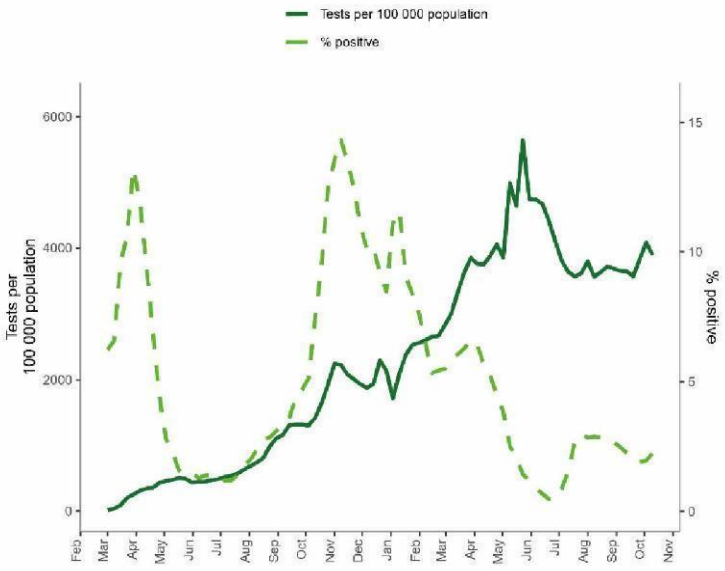
1 March 2020 to 10 October 2021: 14-day COVID-19 case and death notification rates, testing rate and test positivity trends

EU/EEA: 14-day COVID-19 case notification rate, 1 March 2020 to 10 October 2021



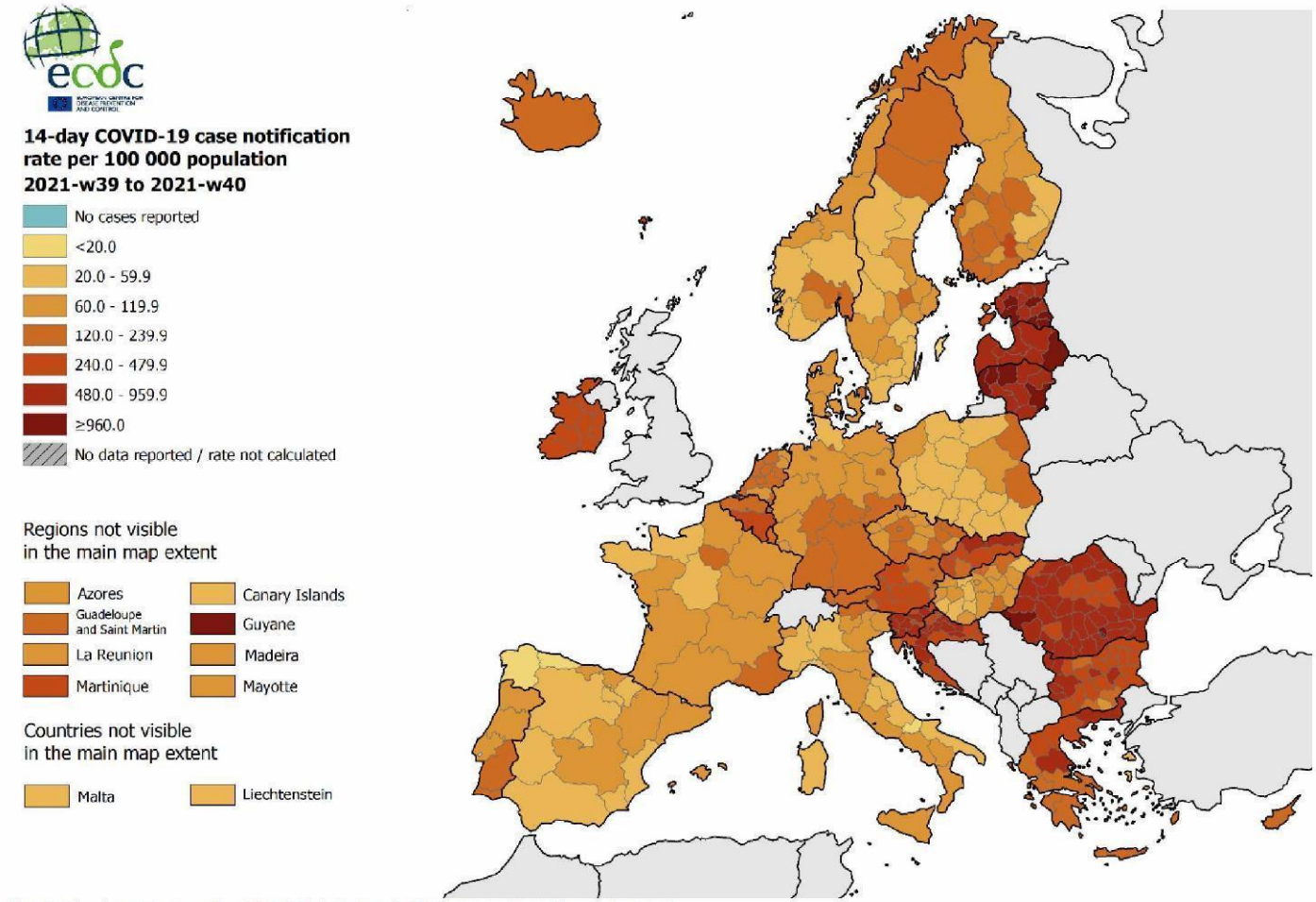
Source: Epidemic intelligence, national weekly data

EU/EEA: testing rate and test positivity (%), 1 March 2020 to 10 October 2021

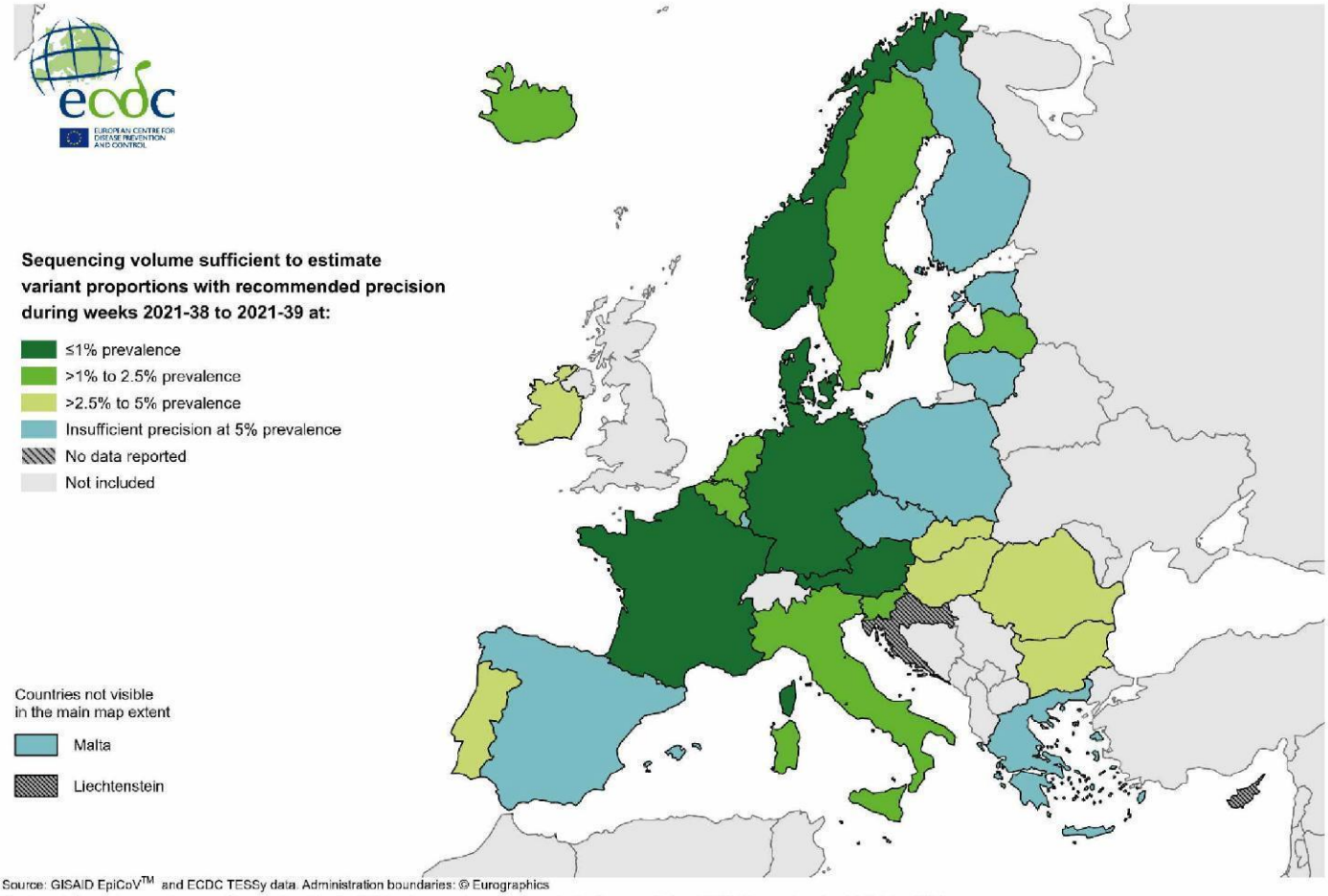


Source: TESSy and public websites. Data shown for countries submitting data up to 10 October 2021

10 October 2021: current 14-day COVID-19 case notification rate per 100 000 population



Sequencing volume for estimating variant proportions by country, 20 September – 4 October 2021, using data submitted to TESSy and to the GISAID EpiCoV database



Sequencing capacity varies greatly across the EU/EEA. ECDC uses data reported to the GISAID EpiCoV database or to TESSy to estimate the distribution of variants in countries reporting an adequate average weekly volume (adequate for detection of a variant at 5% prevalence or lower; levels 1a-c below) of SARS-CoV-2-positive cases sequenced. Due to reporting delays in many countries, the two-week window excludes the most recent week and covers 20 September to 4 October 2021.

Sequencing volume in the reporting period	Countries
1a. Precision at 1% or lower prevalence	Austria, Denmark, France, Germany and Norway
1b. Precision at >1% to 2.5% prevalence	Belgium, Iceland, Italy, Latvia, Netherlands, Slovenia and Sweden
1c. Precision at >2.5% to 5% prevalence	Bulgaria, Hungary, Ireland, Portugal, Romania and Slovakia
2. Insufficient precision at >5% prevalence	Czechia, Estonia, Finland, Greece, Lithuania, Luxembourg, Malta, Poland and Spain
No data	Croatia, Cyprus and Liechtenstein

Epidemiological overview in EU/EEA

Intensity of COVID-19 in the EU/EEA

Case notification rates

- The 14-day case notification rate for the EU/EEA for the reporting week, based on pooled data collected by ECDC from official national sources in 30 countries, was 165.8 per 100 000 population (country range: 49.0–972.2), compared to 150.9 (country range: 34.9–795.5) during the previous week. This pooled rate has been increasing for one week. The rate per 100 000 population was between 49 and below 100 in 10 countries, 100–<300 in 11 countries and 300 or higher in nine countries. Increasing trends were observed in 16 countries.

Testing rates and test positivity

- Notification rates are dependent on several factors, one of which is the testing rate. The weekly testing rate for the EU/EEA, based on pooled data reported by 30 countries, was 3 892 per 100 000 population (country range: 670–41 141), compared to 4 079 (country range: 709–39 154) during the previous week. This pooled rate has been stable for 19 weeks.
- Pooled test positivity for the EU/EEA was 2.2% (country range: 0.2–22.1%), compared to 1.9% (country range: 0.2–20.4%) during the previous week. This indicator has been stable for 12 weeks.
- Test positivity was <2% in 11 countries, 2–<4% in five countries (the Netherlands, Norway, Slovenia, Spain and Sweden), 4–<10% in 11 countries and 10% or higher in three countries (Bulgaria, Estonia and Romania). Increasing trends were observed in 11 countries.

Outbreaks in long-term care facilities (LTCFs)

- Between 7 and 14 October, the following COVID-19 outbreaks in LTCFs have been detected from media sources: Germany (1 outbreak in Bad Brückenau), Italy (3 outbreaks: 2 in Mugnano di Napoli and 1 in Varzi), the Netherlands (1 outbreak in the Hague), Portugal (1 outbreak in Arouca), Spain (3 outbreaks: 2 in La Coruña, 1 in Portugalete).
- Ten EU/EEA countries reported aggregate national data on COVID-19 outbreaks in LTCFs for the week of 27 September–3 October. Of these, seven countries reported data on LTCFs with at least one new COVID-19 case: Belgium (37 LTCFs; 2.4% of all participating LTCFs), France (45; no denominator available), Ireland (17; 0.7%), Lithuania (8; 3.9%), the Netherlands (41; 1.7%), Slovenia (8; 7.8%) and Spain (30; 0.6%).
- Three countries reported LTCFs that met the national definition of a cluster or outbreak for the week 27 September–3 October: Ireland (20 LTCFs; 0.8% of all participating LTCFs), Lithuania (4; 1.9%) and Spain (30; 0.6%).
- Overall, six countries provided weekly data including the denominator for the previous month on the number of LTCFs with one or more new COVID-19 cases. Comparing the week of 27 September–3 October to the average in the preceding four weeks, two countries (Belgium and Lithuania) reported an increase (i.e. at least 10% relative increase) and one country (Spain) reported a decrease (i.e. at least 10% relative decrease).

Severity of COVID-19 in the EU/EEA

Case notification rates in people 65 years and older

- The 14-day case notification rate in people aged 65 years and older for the EU/EEA, based on data reported by 27 countries, was 90.6 per 100 000 population (country range: 33.0–684.7), compared to 80.7 (country range: 28.7–522.0) during the previous week. This pooled rate has been increasing for one week. The rate per 100 000 population was 20–<50 in eight countries, 50–<150 in 11 countries and 150 or higher in eight countries. Increasing trends were observed in 16 countries.

Rates of hospitalisation and ICU admission and occupancy

- The hospital admission rate for the EU/EEA, based on data reported by 19 countries, was 1.9 per 100 000 population (country range: 0.3–35.4), compared to 2.4 (country range: 0.5–24.5) in the previous week. This pooled rate has been decreasing for five weeks. As a percentage of each country's pandemic peak, this rate was <10% in 11 countries, 10–<25% in five countries (Germany, Ireland, Liechtenstein, Norway and Slovakia), 25–<50% in two countries (Estonia and Slovenia) and 50% or higher in one country (Latvia). Increasing trends (duration in weeks) were observed in three countries.
- The hospital occupancy rate (mean daily occupancy in the last week per 100 000 population) for the EU/EEA, based on data reported by 25 countries, was 8.1 per 100 000 population (country range: 1.4–76.7), compared to 7.0 (country range: 1.5–74.1) in the previous week. This pooled rate has been increasing for one week. As a percentage of each country's pandemic peak, this rate was <25% in 18 countries, 25–<50% in three countries (Estonia, Norway and Slovenia) and 50% or higher in four countries (Bulgaria, Finland, Latvia and Lithuania). Increasing trends were observed in eight countries.
- The ICU admission rate for the EU/EEA, based on data reported by 14 countries, was 0.5 per 100 000 population (country range: 0.0–7.0), compared to 0.5 (country range: 0.1–5.8) in the previous week. This pooled rate has been stable for one week. As a percentage of each country's pandemic peak, this rate was <10% in six countries, 10–<25% in three countries (Malta, Norway and Slovakia), 25–<50% in four countries (Estonia, Greece, Ireland and Slovenia) and 50% or higher in one country (Latvia). Increasing trends (duration in weeks) were observed in three countries (Estonia (one), Latvia (four) and the Netherlands (one)).
- The ICU occupancy rate for the EU/EEA, based on data reported by 20 countries, was 1.7 per 100 000 population (country range: 0.2–8.0), compared to 1.8 (country range: 0.3–7.0) in the previous week. This pooled rate has been stable for six weeks. As a percentage of each country's pandemic peak, this rate was <25% in 12 countries, 25–<50% in five countries (Austria, Cyprus, Estonia, Finland and Ireland), 50–<75% in two countries (Bulgaria and Slovenia) and 75% or higher in one country (Romania). Increasing trends (duration in weeks) were observed in four countries (Estonia (three), Finland (two), Ireland (one) and Romania (nine)).
- Of 29 countries with data on hospital/ICU admissions or occupancy up to reporting week, 11 reported an increasing trend in at least one of these indicators compared to the previous week.

Mortality

The 14-day COVID-19 death rate for the EU/EEA for the reporting week, based on data collected by ECDC from official national sources for 30 countries, was 20.4 per million population (country range: 0.0–167.9), compared to 18.1 (country range: 0.0–145.3) in the reporting week. This pooled rate has been increasing for one week. The rate per million population was <20 in 21 countries, 20–<40 in two countries (Slovakia and Slovenia), 40–<100 in four countries (Croatia, Estonia, Greece and Latvia) and 100 or higher in three countries (Bulgaria, Lithuania and Romania). Increasing trends were observed in eight countries.

The overall epidemiological assessment for each country, based on the above indicators, is available in Annex 1.

Variants of concern and interest

- The following variants are currently listed as **of concern for EU/EEA: B.1.351** (Beta, first detected in South Africa); **P.1** (Gamma, first detected in Brazil) and **B.1.617.2** (Delta, first detected in India).
- The median (range) proportion of the **variants of concern (VOC)** reported in all samples sequenced from the 18 EU/EEA countries with sufficient level of sampling and a valid denominator was 99.9% (90.7–100.0%) for B.1.617.2 (Delta), 0.0% (0.0–9.3%) for B.1.617, 0.0% (0.0–0.1%) for B.1.351 (Beta) and 0.0% (0.0–0.1%) for P.1 (Gamma).This distribution was 0.0% (0.0–0.4%) for B.1.1.7 (Alpha) which was downgraded from the list of VOCs on 3 September 2021.
- No VOIs were reported by any country in this period.
- Variant **B.1.617.2** (Delta) **is the most common variant** in EU/EEA countries. Among the countries that reported an adequate sequencing volume, **Delta accounts for at least 90% of all sequenced viruses** in 18 countries (Austria, Belgium, Bulgaria, Denmark, France, Germany, Hungary, Iceland, Ireland, Italy, Latvia, Netherlands, Norway, Portugal, Romania, Slovakia, Slovenia and Sweden). Community transmission and outbreaks due to B.1.351 (Beta) and P.1 (Gamma) have been reported, but there is no clear overall increasing trend for these variants according to the available data in the European Surveillance System (TESSy) and GISAID EpiCoV.

Variants under monitoring

The list of variants under monitoring currently includes **7 variants**.

While the variants under monitoring have all been detected in the EU/EEA, they are not observed to be increasing substantially at this point. Variants under monitoring have been detected as signals through epidemic intelligence or through an automatic ECDC algorithm that screens for potentially concerning mutation profiles, indicating that they could have similar properties to variants of concern.

The lists of variants of concern, variants of interest and variants under monitoring in the EU/EEA are reassessed on a weekly basis. The latest assessment was done on 14 October and no changes were deemed necessary.

A full table with detailed information on current variants of concern, of interest and under monitoring in the EU/EEA as well as the list of de-escalated variants is available in Annex 2.

Vaccine rollout in the EU/EEA

Key figures on the vaccine rollout in adults in the EU/EEA as of 10 October 2021

Total doses distributed and administered

- Total number of vaccine doses distributed by manufacturers to EU/EEA countries: 743 535 333 (29 countries reporting, Malta missing)
- Total number of vaccine doses administered in EU/EEA countries: 583 354 676 (30 countries reporting)

NEW! Cumulative vaccine uptake in the total population

- Cumulative uptake of at least one vaccine dose among the total population: **68.6%** (range: 20.5-87.2%) (pooled data from 30 countries reporting)
- Cumulative uptake of full vaccination among the total population: **63.6%** (range: 19.6-80.5%) (pooled data from 30 countries reporting)

Cumulative vaccine uptake in adult target groups

- Cumulative uptake of at least one vaccine dose among persons aged 80 years and above: **median of 88.1%** (range: 20.8-100%) (27 countries reporting; missing countries: Germany, Liechtenstein, Netherlands)
- Cumulative uptake of full vaccination among persons aged 80 years and above: **median of 86.6%** (range: 20-100%) (27 countries reporting; missing countries: Germany, Liechtenstein, Netherlands)
- Cumulative uptake of at least one vaccine dose among healthcare workers: **median of 89.1%** (range: 24.6-100%) (17 countries reporting; missing countries: Austria, Cyprus, Finland, France, Germany, Italy, Liechtenstein, Lithuania, Netherlands, Norway, Poland, Portugal, Slovakia)
- Cumulative uptake of full vaccination among healthcare workers: **median of 86.2%** (range: 23.8-100%) (17 countries reporting; missing countries: Austria, Cyprus, Finland, France, Germany, Italy, Liechtenstein, Lithuania, Netherlands, Norway, Poland, Portugal, Slovakia)
- Cumulative uptake of at least one vaccine dose among residents of long-term care facilities: **median of 86.3%** (range: 40.8–100%) (13 countries reporting; missing countries: Austria, Belgium, Croatia, Cyprus, Finland, France, Germany, Italy, Liechtenstein, Lithuania, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia)
- Cumulative uptake of full vaccination among residents of long-term care facilities: **median of 82.6%** (range: 37.7-100%) (13 countries reporting; missing countries: Austria, Belgium, Croatia, Cyprus, Finland, France, Germany, Italy, Liechtenstein, Lithuania, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia)

More detailed information on the vaccine rollout may be found in the ECDC Vaccine Tracker.

Hot topics

Changed recommendations on COVID-19 vaccine Spikevax (Moderna) use in the Nordic countries

Public health bodies in the Nordic countries have recently changed their recommendations regarding the use of the COVID-19 vaccine Spikevax (by Moderna), based on a Nordic Collaboration register-based study including Denmark, Finland, Norway and Sweden. Preliminary analysis of data indicates an increased prevalence of myocardial inflammation as a side event after the second dose of Spikevax. The risk for developing myocardial inflammation following vaccination remains small and cases of myocardial inflammation are known to also occur as a result of various infections in unvaccinated people. Final study results are expected at the earliest in a month's time.

The following countries have adapted their strategies:

- In **Denmark**, children and adolescents aged 12-17 years will continue to be vaccinated with Comirnaty.
- According to the **Finnish** Institute for Health and Welfare (THL) guidelines, only Comirnaty should be offered to boys and men under the age of 30. Spikevax can be offered to girls and women under the age of 30.
- **Norway** recommends that young people under the age of 18 who are to be vaccinated are offered Comirnaty regardless of which mRNA vaccine they received as the first dose. Men under the age of 30 should consider choosing Comirnaty when they are to be vaccinated.
- The Public Health Agency of **Sweden** has decided to pause the use of Spikevax for everyone born in 1991 and later.
- In addition, **Iceland** recently halted the use of Spikevax until more information on safety is collected.

On 11 October, ECDC hosted an EU/EEA NITAG collaboration webinar on the topic, in which representatives from EMA as well as the Nordic Collaboration representatives were present.

Association between COVID-19 immunity within families and the risk of infection in non-immune family members, results from Swedish study

A recently published nationwide cohort study in Sweden investigated the association between the risk of COVID-19 in non-immune individuals and the number of their family members with known COVID-19 immunity (acquired from a previous COVID-19 infection or full vaccination (2 vaccine doses)).

The study found that family members without immunity had a 45% to 97% lower risk of contracting COVID-19 as the number of immune family members increased; i.e. the more immune individuals there were in a family, the lower the risk non-immune family members had of developing COVID-19. The study included 1 789 728 individuals from 814 806 families in Sweden. The authors conclude that vaccination is a key strategy for decreasing the transmission of the virus within families.

Clinical case definition of post COVID-19 condition published by WHO

On 6 October 2021, WHO published the below clinical case definition of post COVID-19 condition. Patients, patient-researchers, external experts, WHO staff and others were engaged. This is an important step for the monitoring and research on this condition.

> WHO case definition: Post COVID-19 condition occurs in individuals with a history of probable or confirmed SARS-CoV-2 infection, usually 3 months from the onset of COVID-19 with symptoms that last for at least 2 months and cannot be explained by an alternative diagnosis. Common symptoms include fatigue, shortness of breath, cognitive dysfunction but also others and generally have an impact on everyday functioning. Symptoms may be new onset following initial recovery from an acute COVID-19 episode or persist from the initial illness. Symptoms may also fluctuate or relapse over time. A separate definition may be applicable for children.

EMA receives application for marketing authorisation for Ronapreve (casirivimab and imdevimab combination) for treatment and prevention of COVID-19

On 11 October 2021 EMA announced that they have started evaluating the application for marketing authorisation made by Roche Registration GmbH for Ronapreve, the monoclonal antibody combination of casirivimab and imdevimab. The combination of antibodies is intended for the treatment of COVID-19 in adults and adolescents from 12 years of age who do not require supplemental oxygen therapy and who are at increased risk of progressing to severe COVID-19. It is also intended for the prevention of COVID-19 in adults and adolescents aged 12 years and older.

In focus

On October 15, ECDC is publishing a technical report on facilitating COVID-19 vaccination acceptance and uptake in the EU/EEA. A prerequisite for a successful COVID-19 vaccination programme, in addition to the supply of safe and effective vaccines and convenient access to a good delivery system, is for authorities to have a good understanding of individuals' and communities' beliefs, concerns and expectations regarding the vaccine and the disease, and responsiveness of authorities to these beliefs, concerns and expectations. To facilitate this, **the '5Cs' model** is presented in the report, which provides a framework for understanding people's concerns and for designing strategies to facilitate COVID-19 vaccination acceptance and uptake. The 5Cs include Confidence, Constraints, Complacency, Calculation, and Collective responsibility.

The report stresses the importance of vaccination efforts reaching pockets of unvaccinated people from older age groups and those in socially vulnerable populations, while also facilitating uptake among younger age groups, including children and adolescents who are eligible for vaccination. Health care workers also have a key role to play, both in terms of being vaccinated themselves and because they can have a major impact on the vaccination decisions of their patients. Facilitating vaccination acceptance and uptake requires diagnosis of which of the 5Cs are relevant for these different populations, followed by the design and implementation of appropriate interventions based on the findings. Tools for diagnosis are presented, as are examples of interventions that have been implemented from around the EU/EEA for each of the 5Cs. Interventions may need to be adapted to specific local contexts – there is no 'one-size-fits-all' approach. The report concludes with discussion of the importance of evaluating these implementations, with reference to some methodologies for this purpose.

Recent and upcoming ECDC publications on COVID-19

- Protocol for a focused after-action review on evidence-based decision-making for selected COVID-19 response measures, 22 September
- Sixth update, Overview of the implementation of COVID-19 vaccination strategies and vaccine deployment plans in the EU/EEA, 23 September
- Rapid Risk Assessment 16th update, Assessing SARS-CoV-2 circulation, variants of concern, non-pharmaceutical interventions and vaccine rollout in the EU/EEA, 30 September
- Interim results of COVID-18 vaccine effectiveness against Severe Respiratory Infection laboratory confirmed with SARS-Cov-2, 8 October
- Core protocol for ECDC studies of COVID-19 vaccine effectiveness against hospitalisation with Severe Acute Respiratory Infection, 8 October
- Surveillance of COVID-19 in the EU/EEA, update 2021, 18 October
- Facilitating COVID-19 vaccination acceptance and uptake in the EU/EEA, 15 October
- Contact tracing & public health management of persons, including healthcare workers, who have had contact with COVID-19 cases, in the EU, fourth update, end October
- Technical report, evidence on COVID-19 vaccination of children below 12 years of age, end October / early November
- Technical report 'COVID-19 outbreaks in long-term care facilities', end October / early November
- Update, Overview of the implementation of COVID-19 vaccination strategies and vaccine deployment plans in the EU/EEA, on / after 11 November

Publication dates for all upcoming ECDC reports are preliminary and subject to change.

Annex 1: Weekly epidemiological assessment of key indicators and weekly trends, 10 May to 10 October 2021, EU/EEA

Method for assessment in brief

The weekly epidemiological assessment is based on a scoring system that takes into account the following indicators and their current trends (stable, increasing, decreasing):

- 14-day case notification rates per 100k among people aged 65+ years
- 14-day COVID-19 death rate per million
- COVID-19 hospital/ICU indicator, current value as a proportion of the peak value in the country to date (%)
- 14-day COVID-19 case notification rate per 100k (all ages)
- Test positivity (%) from all national reported tests and cases

The scores are used to assess the weekly epidemiological situation in each country using the following categories:

- Epidemiological situation of very low concern: 1 to <2.8
- Epidemiological situation of low concern: 2.8 to <4.6
- Epidemiological situation of moderate concern: 4.6 to <6.4
- Epidemiological situation of high concern: 6.4 to <8.2
- Epidemiological situation of very high concern: 8.2 to 10

Weekly epidemiological assessment of key indicators and weekly trends, 10 May to 10 October 2021 by level of concern

Weekly COVID-19 epidemiological category by country, weeks 21 to 40 2021

Composite score (1 10) based on value and trend of five indicators. Categories are derived from score quintiles.

Level of concern: very low: (1 - 2.8] | low: (2.8 - 4.6] | moderate: (4.6 - 6.4] | high: (6.4 - 8.2] | very high: (8.2 - 10)

2021-W21	2021-W22	2021-W23	2021-W24	2021-W25	2021-W26	2021-W27	2021-W28	2021-W29	2021-W30	2021-W31	2021-W32	2021-W33	2021-W34	2021-W35	2021-W36	2021-W37	2021-W38	2021-W39	2021-W40	
3.8	2.8	2.2	2.2	1.2	3.5	4.5	6.0	6.0	6.0	5.3	5.0	5.0	5.0	4.7	4.2	4.2	4.2	4.2	5.8	EU/EEA
2.2	2.2	2.0	1.7	1.7	2.0	2.0	2.7	3.3	3.7	3.7	4.7	5.0	5.0	5.7	5.7	6.3	4.0	3.7	5.0	Austria
3.7	3.7	2.7	2.2	2.0	3.2	4.7	4.7	5.3	5.3	5.7	5.7	6.3	5.0	5.3	4.8	4.7	4.5	5.0	5.7	Belgium
3.5	3.2	1.7	1.7	1.2	1.2	2.2	1.5	2.4	2.8	5.0	6.0	6.5	7.5	7.2	6.7	6.8	7.7	8.0	9.0	Bulgaria
5.5	3.5	3.5	3.2	2.4	2.5	3.4	3.4	4.1	4.8	4.3	4.8	6.0	6.0	6.2	8.0	7.7	7.3	7.7	5.8	Croatia
3.5	2.8	2.3	4.0	5.0	6.3	6.7	7.3	8.0	6.8	6.2	6.2	6.0	5.7	4.8	5.0	3.8	3.5	3.7	2.8	Cyprus
2.2	2.3	1.3	1.7	1.7	2.0	2.7	2.7	2.0	1.7	2.0	2.0	2.0	2.0	2.7	3.7	3.7	4.0	4.0	4.0	Czechia
3.8	3.0	3.0	2.2	2.2	3.3	4.0	4.7	4.3	4.0	4.7	5.3	4.7	4.3	3.5	3.8	2.8	2.5	4.3	5.0	Denmark
4.0	3.3	2.0	2.5	1.8	1.8	2.5	3.3	5.0	6.0	6.0	6.7	6.7	7.3	7.7	7.3	6.8	8.7	8.7	9.0	Estonia
2.3	1.8	1.5	1.5	2.8	2.7	3.7	3.7	4.0	5.0	5.3	5.0	4.2	3.5	4.7	4.7	4.0	4.7	5.0	6.0	Finland
4.0	4.0	2.7	2.0	2.0	2.3	3.2	5.7	6.3	7.3	7.3	6.8	6.7	5.7	5.0	3.5	3.5	3.2	3.2	2.8	France
3.0	3.0	1.7	1.2	1.5	1.5	1.8	3.0	3.3	3.7	4.7	5.3	5.3	6.3	6.0	5.7	4.7	4.5	5.0	5.2	Germany
4.5	4.5	3.5	2.8	2.2	3.0	4.2	5.2	6.3	6.0	5.7	8.0	7.7	6.7	6.5	5.3	5.0	5.0	5.2	5.7	Greece
3.0	1.7	1.3	1.3	1.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.7	3.3	3.3	3.7	4.7	5.0	5.3	6.0	Hungary
2.0	2.7	2.0	2.0	2.0	2.0	2.3	3.3	6.0	7.3	7.7	5.3	4.5	5.2	3.3	3.5	3.8	4.2	4.8	4.2	Iceland
3.4	3.7	2.7	2.4	4.0	5.3	5.3	6.0	6.5	7.2	6.0	7.0	8.0	6.3	6.2	5.7	5.2	6.2	7.0	6.7	Ireland
2.5	2.5	2.2	1.3	1.3	1.5	2.5	4.0	5.0	5.3	5.7	6.3	5.3	5.0	4.8	4.0	3.5	2.7	2.3	2.3	Italy
5.2	4.5	4.2	4.2	2.8	2.2	1.8	1.3	2.3	3.0	4.0	4.0	4.3	5.8	5.7	6.0	7.7	8.3	9.0	9.3	Latvia
2.5	3.0	3.5	2.5	3.0	4.0	4.0	3.0	2.3	2.7	4.0	4.5	6.2	5.0	5.7	6.7	5.3	4.3	4.5	3.0	Liechtenstein
5.5	3.3	3.5	2.2	1.5	1.3	2.5	2.7	4.0	5.0	6.3	6.3	6.7	6.7	8.3	9.0	8.2	8.0	8.7	9.3	Lithuania
3.3	2.7	2.8	2.2	2.0	4.0	6.0	4.3	3.8	3.5	3.3	4.3	4.3	6.3	4.0	3.8	4.7	4.8	4.8	5.8	Luxembourg
2.7	2.7	2.0	2.0	2.0	2.7	5.3	7.0	6.3	5.8	5.5	5.0	4.8	4.2	4.5	3.8	3.3	2.5	3.0	3.5	Malta
4.2	4.0	3.2	2.2	2.0	2.7	5.3	6.7	6.8	5.2	4.0	4.2	5.0	5.3	5.0	4.8	3.7	3.5	3.7	5.7	Netherlands
3.3	2.7	2.5	2.2	2.7	2.5	2.7	2.7	2.7	3.7	4.3	4.7	5.0	6.0	6.0	7.0	4.2	3.7	4.0	3.8	Norway
2.7	1.7	2.7	2.7	2.0	2.2	2.2	2.2	2.2	1.8	1.8	2.7	2.3	2.3	3.0	3.3	3.3	3.7	4.0	5.2	Poland
3.7	3.7	4.7	5.3	5.3	6.0	7.7	7.0	7.3	5.2	5.3	5.3	5.5	5.7	4.2	3.7	3.0	3.3	2.7	3.7	Portugal
2.0	2.7	2.3	2.3	2.5	2.7	2.5	1.8	2.0	2.0	3.0	3.3	4.3	5.3	5.7	7.3	8.3	9.3	10.0	9.7	Romania
2.5	3.3	2.2	1.7	1.3	1.7	2.0	2.0	2.7	2.7	2.7	2.7	3.0	3.3	5.0	6.3	7.0	6.7	8.3	7.5	Slovakia
3.5	3.7	3.0	2.2	1.5	1.7	2.7	2.7	2.7	3.7	4.0	4.7	5.7	6.3	6.5	7.7	8.0	6.3	6.7	5.5	Slovenia
3.8	4.2	4.5	3.2	4.2	6.0	7.3	8.0	8.0	6.5	6.0	6.2	6.0	4.8	4.2	4.2	3.8	3.0	2.7	2.7	Spain
3.7	4.2	3.8	2.0	2.3	1.7	1.7	2.7	4.0	4.3	5.0	5.7	5.3	4.8	4.8	5.5	4.5	3.0	2.7	3.3	Sweden

Annex 2: Variants of concern, variants of interest and variants under monitoring in EU/EEA, as of 14 October 2021

ECDC regularly assesses new evidence on variants detected through epidemic intelligence, rules-based genomic variant screening, or other scientific sources.

Variants of concern

For variants of concern, clear evidence is available indicating a significant impact on transmissibility, severity and/or immunity that is likely to have an impact on the epidemiological situation in the EU/EEA. For the immunity category, the evidence is annotated to indicate whether it is measured using laboratory methods (neutralisation) or in terms of vaccine effectiveness (escape).

WHO label	Lineage + additional mutations	Country first detected (community)	Year and month first detected	Evidence for impact on transmissibility	Evidence for impact on immunity	Evidence for impact on severity	Transmission in EU/EEA
Beta	**B.1.351**	South Africa	September 2020	Yes (v)	Yes (v)	Yes (v)	Community
Gamma	**P.1**	Brazil	December 2020	Yes (v)	Yes (v)	Yes (v)	Community
Delta	**B.1.617.2**	India	December 2020	Yes (v)	Yes (v)		Dominant

Variants of interest

For variants of interest, preliminary or uncertain evidence implies a significant impact on transmissibility, severity and/or immunity that may have an impact on the epidemiological situation in the EU/EEA.

WHO label	Lineage + additional mutations	Country first detected (community)	Year and month first detected	Evidence for impact on transmissibility	Evidence for impact on immunity	Evidence for impact on severity	Transmission in EU/EEA
Mu	**B.1.621**	Colombia	January 2021	Yes (m)	Yes (m)		Sporadic/Travel
Lambda	**C.37**	Peru	December 2020		Yes		Detected

Variants under monitoring

There is some indication that additional variants could have concerning properties, but the evidence is weak or has not yet been assessed. Variants under monitoring are present in at least one outbreak detected in a community within the EU/EEA, or there is evidence of community transmission of the variant elsewhere in the world.

WHO label	Lineage + additional mutations	Country first detected (community)	Year and month first detected	Evidence for impact on transmissibility	Evidence for impact on immunity	Evidence for impact on severity	Transmission in EU/EEA (a)
N/A	**C.36+L452R**	Egypt	December 2020		Yes (m)		Detected
N/A	**B.1.1.318**	Unclear (b)	January 2021		Yes (m)		Detected
N/A	**P.1+P681H**	Italy	February 2021		Unclear		Detected
N/A	**B.1.617.2+K417N**	United Kingdom	June 2021				Detected
N/A	**C.1.2**	South Africa	June 2021	Yes (m)	Yes (m)		Detected
N/A	**B.1.617.2+E484Q**	India	April 2021				Detected
N/A	**B.1.617.2+Q613H**	India	April 2021				Detected

(a) No assessment of transmission is available for variants in the monitoring category, only detected/not detected.
(b) The earliest detections from several different countries are close in time and there is no clearly demonstrated travel link to a specific country that explains the detections.
(c) The property of concern is reports of difficulties associated with detecting it as the virus is not present in sufficient quantities in the upper respiratory tract.
(m) Indicates that evidence is derived from mutations associated with the variant.
(v) Indicates that evidence is derived from the variant itself.

Annex 3: SARS-CoV-2 variants in third countries as of 12 October 2021

This information was generated on 12 October 2021 using information from GISAID EpiCoV database on variants that ECDC monitors in third countries.
The table includes sequence data from samples collected within the last 30 days since 12 September 2021.
Note that these data are not necessarily representative for the current situation sin the countries for several reasons:

- The underlying sampling strategy is unknown
- Sequencing introduces a reporting delay of at least 1 week and usually 2-3 weeks
- Parts of the data may come from screening of incoming travellers
- Selection of data for reporting may be incomplete or biased

Country/territory	B.1.1.7	B.1.351	B.1.617.2	B.1.621	C.1.2	C.37	P.1	Unassigned[2]	Other[3]	Number of sequences
WHO label	Alpha	Beta	Delta	Mu		Lambda	Gamma			
Aruba	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	162
Australia	0.0%	0.0%	99.4%	0.0%	0.0%	0.0%	0.0%	0.6%	0.0%	1517
Bangladesh	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	23
Bonaire	0.0%	0.0%	96.2%	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	52
Brazil	0.0%	0.0%	88.9%	0.0%	0.0%	0.0%	8.9%	1.1%	1.0%	1263
Cambodia	48.8%	0.0%	51.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	123
Canada	2.2%	0.0%	97.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	89
Chile	0.0%	0.0%	80.6%	11.1%	0.0%	1.5%	5.9%	0.5%	0.4%	731
Colombia	0.0%	0.0%	27.3%	45.5%	0.0%	0.0%	18.2%	0.0%	9.1%	11
Curacao	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	29
Ecuador	0.0%	0.0%	83.3%	16.7%	0.0%	0.0%	0.0%	0.0%	0.0%	6
Gabon	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6
Georgia	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14

[2] Unassigned: Sequences for which no variant assignment is available.
[3] Other: Variants currently not classified as VOC, VOI or VUM by ECDC.

Country/territory	B.1.1.7	B.1.351	B.1.617.2	B.1.621	C.1.2	C.37	P.1	Unassigned[2]	Other[3]	Number of sequences
WHO label	Alpha	Beta	Delta	Mu		Lambda	Gamma			
Ghana	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3
Guadeloupe	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	36
Hong Kong	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16
India	0.0%	0.0%	98.0%	0.0%	0.0%	0.0%	0.0%	0.7%	1.3%	153
Indonesia	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50
Japan	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	98
Jordan	0.0%	0.0%	88.9%	0.0%	0.0%	0.0%	0.0%	11.1%	0.0%	45
Kenya	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11
Kuwait	0.0%	0.0%	90.9%	0.0%	0.0%	0.0%	0.0%	4.5%	4.5%	22
Malaysia	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	39
Martinique	6.3%	0.0%	93.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	32
Mexico	0.0%	0.0%	99.5%	0.2%	0.0%	0.0%	0.3%	0.1%	0.0%	1163
Monaco	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2
Mongolia	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1
Nepal	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25
New Zealand	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	197
Nigeria	0.0%	0.0%	66.7%	0.0%	0.0%	0.0%	0.0%	14.3%	19.0%	21
Oman	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	23
Pakistan	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	18
Peru	0.0%	0.0%	75.0%	0.0%	0.0%	25.0%	0.0%	0.0%	0.0%	4

Country/territory	B.1.1.7	B.1.351	B.1.617.2	B.1.621	C.1.2	C.37	P.1	Unassigned[2]	Other[3]	Number of sequences
WHO label	Alpha	Beta	Delta	Mu		Lambda	Gamma			
Republic Of The Congo	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	13
Reunion	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24
Singapore	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	940
Sint Maarten	0.4%	0.0%	99.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	224
South Africa	0.0%	0.7%	96.4%	0.0%	1.4%	0.0%	0.0%	0.7%	0.7%	139
South Korea	0.0%	0.0%	99.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	265
Sri Lanka	1.6%	0.0%	98.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	122
Suriname	0.0%	0.0%	85.7%	0.0%	0.0%	0.0%	14.3%	0.0%	0.0%	7
Switzerland	0.0%	0.0%	99.8%	0.0%	0.0%	0.0%	0.0%	0.2%	0.0%	3072
Thailand	0.0%	2.9%	97.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	34
Turkey	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	644
USA	0.1%	0.0%	99.4%	0.0%	0.0%	0.0%	0.1%	0.3%	0.2%	43124
United Kingdom	0.0%	0.0%	99.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	98834
Vietnam	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	21

[1] Unassigned: Sequences for which no variant assignment is available.
[2] Other: Variants currently not classified as VOC, VOI or VUM by ECDC.