

COVID-19 Weekly Epidemiological Update

Edition 41, published 25 May 2021

In this edition:

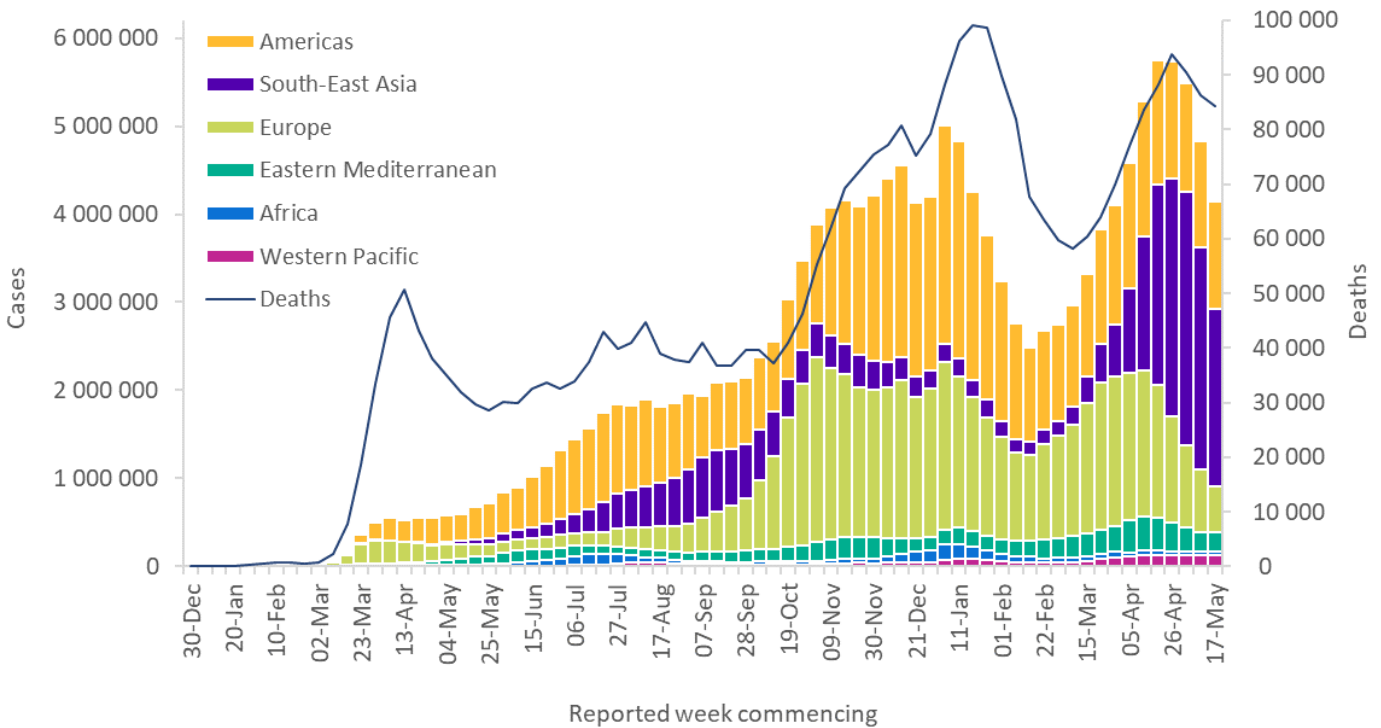
- [Global overview](#)
- [Special focus: Update on SARS-CoV-2 Variants of Interest \(VOIs\) and Variants of Concern \(VOCs\)](#)
- [WHO regional overviews](#)
- [Key weekly updates](#)

Global overview

Data as of 23 May 2021

Over the past week, the number of new cases and deaths continued to decrease, with over 4.1 million new cases and 84 000 new deaths reported; a 14% and 2% decrease, respectively, compared to the previous week (Figure 1). The European Region reported the largest decline in new cases and deaths in the past week, followed by the South-East Asia Region (Table 1). The numbers of cases reported by the Americas, Eastern Mediterranean, African, and Western Pacific Regions were similar to those reported in the previous week. The Western Pacific Region reported the largest increase in the number of deaths, while other regions reported decreases or similar numbers to the previous week. Despite a declining global trend over the past four weeks, incidence of COVID-19 cases and deaths remain high, and substantial increases have been observed in many countries throughout the world.

Figure 1. COVID-19 cases reported weekly by WHO Region, and global deaths, as of 23 May 2021**



**See Annex 3: Data, table and figure notes

The highest numbers of new cases in the last seven days were reported from India (1 846 055 new cases; 23% decrease), Brazil (451 424 new cases; 3% increase), Argentina (213 046 new cases; 41% increase), the United States of America (188 410 new cases; 20% decrease), and Colombia (107 590 new cases; 7% decrease).

Table 1. Newly reported and cumulative COVID-19 cases and deaths, by WHO Region, as of 23 May 2021**

WHO Region	New cases in last 7 days (%)	Change in new cases in last 7 days *	Cumulative cases (%)	New deaths in last 7 days (%)	Change in new deaths in last 7 days *	Cumulative deaths (%)
Americas	1 222 225 (29%)	2%	65 980 739 (40%)	31 759 (38%)	1%	1 615 127 (47%)
Europe	524 944 (13%)	-25%	54 110 276 (33%)	12 983 (15%)	-21%	1 134 786 (33%)
South-East Asia	2 006 085 (48%)	-21%	30 088 649 (18%)	32 199 (38%)	4%	372 277 (11%)
Eastern Mediterranean	215 536 (5%)	-2%	9 863 946 (6%)	4 203 (5%)	-11%	197 964 (6%)
Africa	44 207 (1%)	4%	3 446 089 (2%)	1 034 (1%)	2%	85 964 (2%)
Western Pacific	131 655 (3%)	-1%	2 861 544 (2%)	2 128 (3%)	22%	43 058 (1%)
Global	4 144 658 (100%)	-14%	166 352 007 (100%)	84 306 (100%)	-2%	3 449 189 (100%)

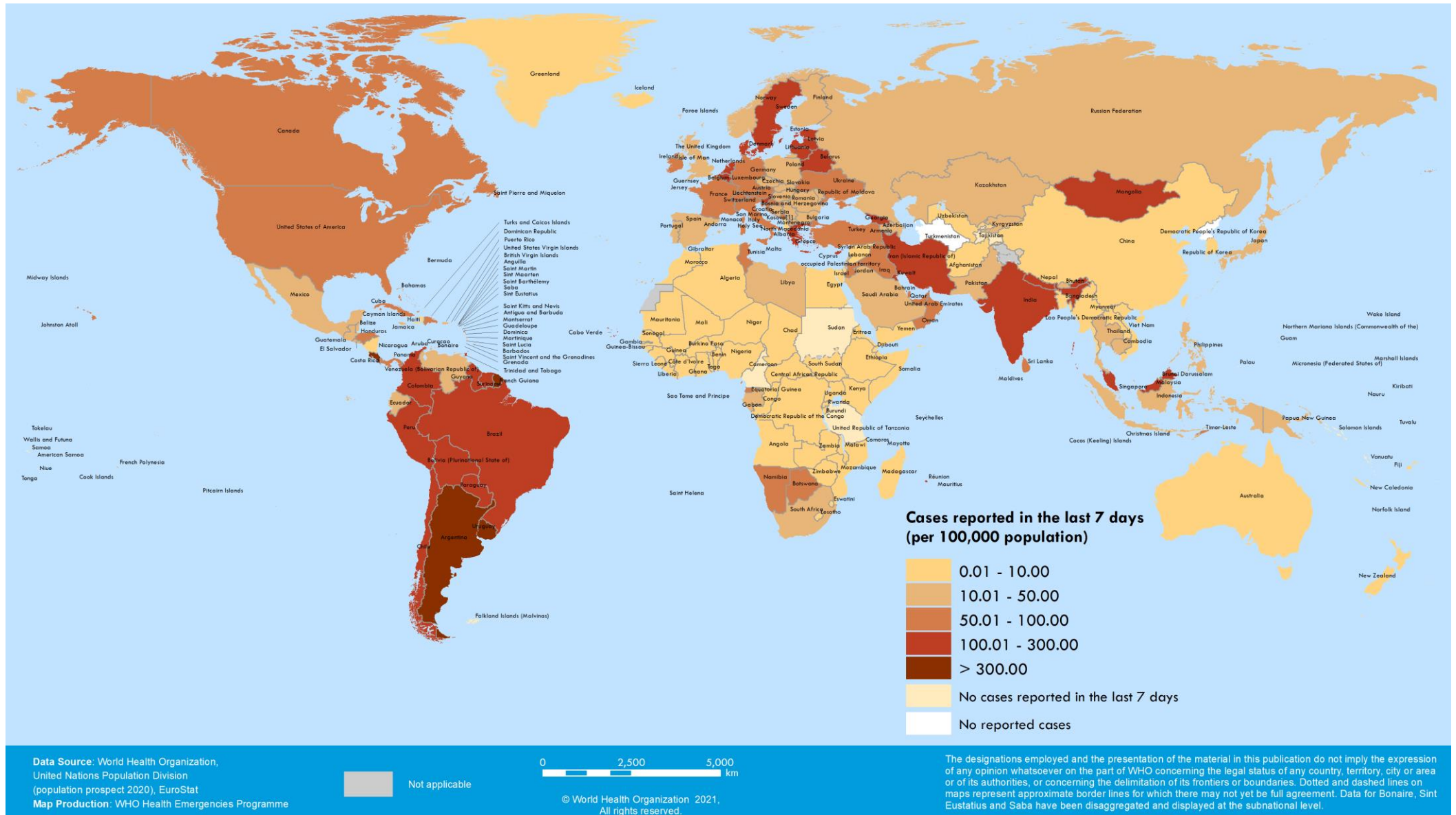
*Percent change in the number of newly confirmed cases/deaths in past seven days, compared to seven days prior

**See Annex 3: Data, table and figure notes

For the latest data and other updates on COVID-19, please see:

- [WHO COVID-19 Dashboard](#)
- [WHO COVID-19 Weekly Operational Update and previous editions of the Weekly Epidemiological Update](#)

Figure 2. COVID-19 cases per 100 000 population reported by countries, territories and areas, 17 May – 23 May 2021**



**See Annex 3: Data, table and figure notes

Special Focus: Update on SARS-CoV-2 Variants of Interest (VOIs) and Variants of Concern (VOCs)

WHO, in collaboration with national authorities, institutions and researchers, routinely assesses if variants of SARS-CoV-2 result in changes in transmissibility, clinical presentation and severity, or if they result in changes in public health and social measures (PHSM) implementation by national health authorities. Globally, systems have been established and are being strengthened to detect “signals” of potential Variants of Interest (VOIs) or Variants of Concern (VOCs) and assess these based on the risk posed to global public health. Table 2 lists currently designated global VOCs and VOIs. National authorities may choose to designate other variants of local interest/concern. Here we provide an update on emerging evidence surrounding phenotypic characteristics (Table 3) and the geographical distribution of designated VOCs.

Table 2: SARS-CoV-2 Variants of Concern (VOCs) and Variants of Interest (VOIs), as of 25 May 2021

PANGO lineage Nextstrain clade GISAID clade	Alternate name	First detected in	Earliest samples	Characteristic spike mutations
Variants of Concern (VOCs)				
B.1.1.7 20I/501Y.V1 GR/501Y.V1	VOC 202012/01	United Kingdom	Sep 2020	69/70del, 144del, N501Y, A570D, D614G, P681H, T716I, S982A, D1118H
B.1.351 20H/501Y.V2 ⁺ GH/501Y.V2	VOC 202012/02	South Africa	May 2020	D80A, D215G, 241/243del, K417N, E484K, N501Y, D614G, A701V
B.1.1.28.1, alias P.1 20J/501Y.V3 GR/501Y.V3	VOC 202101/02	Brazil	Nov 2020	L18F, T20N, P26S, D138Y, R190S, K417T, E484K, N501Y, D614G H655Y, T1027I, V1176F
B.1.617* - G/452R.V3	-	India	Oct 2020	L452R, D614G, P681R, ± (E484Q, Q107H, T19R, del157/158, T478K, D950N)
Variants of Interest (VOIs)				
B.1.525 20A/S.484K G/484K.V3	-	Multiple countries	Dec 2020	Q52R, A67V, 69/70del, 144del, E484K, D614G, Q677H, F888L
B.1.427/B.1.429 20C/S.452R GH/452R.V1	CAL.20C/L452R	United States of America	Mar 2020	S13I, W152C, L452R, D614G
B.1.1.28.2, alias P.2 20B/S.484K GR	-	Brazil	Apr 2020	E484K, D614G, V1176F
B.1.1.28.3, alias P.3 - -	PHL-B.1.1.28	Philippines	Jan 2021	141/143del, E484K, N501Y, D614G, P681H, E1092K, H1101Y, V1176F
B.1.526 (+E484K/S477N) 20C GH	-	United States of America	Nov 2020	L5F, T95I, D253G, D614G, A701V, + (E484K or S477N)
B.1.616 - GH	-	France	Feb 2021	H66D, G142V, 144del, D215G, V483A, D614G, H655Y, G669S, Q949R, N1187D

* B.1.617 viruses are divided in three lineages (B.1.617.1, B.1.617.2 and B.1.617.3). Findings for lineages B.1.617.1 and B.1.617.2 were mainly used to designate B.1.617 a global VOC. Once more information becomes available, specific lineages may be designated.

Phenotypic characteristics

Available evidence on phenotypic impacts of VOCs and vaccine performance against VOCs are summarised in Tables 3 and 4. Further discussion on impacts is also provided in previous editions of our [COVID-19 Weekly Epidemiological Update](#).

Table 3: Summary of phenotypic impacts* of Variants of Concern (VOCs), as of 25 May 2021

VOC (lineage)	B.1.1.7	B.1.351	P.1	B.1.617
Transmissibility	Increased transmissibility ¹ , Increased secondary attack rate ¹	Increased transmissibility ²	Increased transmissibility ¹	Increased transmissibility ^{3,4}
Disease severity	Not confirmed; possible increased risk of hospitalization ⁵ , severity and mortality ⁶	Not confirmed, possible increased risk of in-hospital mortality ^{7,8}	Not confirmed, possible increased risk of hospitalization ⁹	Under investigation
Risk of reinfection	Neutralizing activity retained ¹⁰ , risk of reinfection remain similar ^{11,12}	Reduction in neutralizing activity reported. T cell response elicited by D614G prototype virus remains effective against B.1.351 ¹³⁻¹⁵	Moderate reduction in neutralizing activity reported ^{16,17}	Under investigation, possible modest reduction in neutralization activity (B.1.617.1) ⁴
Impacts on diagnostics	Limited impact – S gene target failure (SGTF; no impact on overall result from multiple target RT-PCR, No impact on Ag RDTs observed. ¹⁸	No impact on RT-PCR or Ag RDTs observed ¹⁶	None reported to date	None reported to date

**Generalized findings as compared to wildtype/non-VOC viruses. Based on emerging evidence, including nonpeer-reviewed preprint articles and reports, all subject to ongoing investigation and revision.*

Further to our last detailed update published two weeks ago, new evidence is emerging that secondary attack rates for variant B.1.617.2 reported in the United Kingdom from 29 March to 28 April 2021 were higher than that of B.1.1.7, among travellers and non-travellers.¹⁹ Secondary attack rates for B.1.617.2 and B.1.1.7 were measured by the proportion of positive tests among contacts of confirmed or probable cases infected with variants.

A pre-print study of three outbreaks among kindergarten-aged children in Germany suggested that children aged 1 to 5 years who were infected with variant B.1.1.7 were as susceptible and infectious as adults infected with B.1.1.7 (measured by secondary attack rates) in both kindergarten (23% vs. 30%; p=0.15) and household (32% vs. 39%; p=0.27) settings.²⁰

A study of seven European countries assessing disease severity of cases reported from 13 September 2020 to 13 March 2021 (n=23 343) reported that a significantly higher proportion of cases infected with one of the three VOCs: B.1.1.7, B.1.351 and P.1-were admitted to the hospital (11% for B.1.1.7/SGTF; 19% for B.1.351; 20% for P.1) compared to those infected with non-VOCs (7.5%, p < 0.01 for all VOCs). Similarly, a higher proportion of cases infected with these VOCs were admitted to the ICU (1.4% for B.1.1.7/SGTF, p < 0.01; 2.3% for B.1.351, p < 0.01; 2.1% for P.1, p < 0.01) compared to those infected with non-VOCs (0.6%).⁹

Table 4. Summary of vaccine performance against Variants of Concern (VOC) relative to previously circulating (non-VOC) variants

B.1.1.7	B.1.351	P.1	B.1.617
Efficacy/effectiveness against disease or infection			
Protection retained against disease	Reduced protection against disease, limited evidence	Protection likely against disease, very limited evidence on only one vaccine	Protection likely against disease (for B.1.617.2), very limited evidence on only two vaccines
Severe disease: No/minimal loss: Pfizer BioNTech-Comirnaty ²¹⁻²⁵	Severe disease: No/minimal loss: Janssen Ad26.COVID.2.5, Pfizer BioNTech-Comirnaty ^{23,37}	Symptomatic Disease: No/minimal loss: Sinovac-CoronaVac ^{40,41}	Symptomatic Disease: B.1.617.2: No/minimal loss: AstraZeneca-Vaxzevria after one dose and Pfizer BioNTech-Comirnaty after two doses ⁴²
Symptomatic Disease & Infection: No/minimal loss: AstraZeneca-Vaxzevria, Novavax-Covavax, Pfizer BioNTech-Comirnaty ⁶⁻¹⁵	Mild-moderate disease: Moderate loss: Janssen-Ad26.COVID.2.5, Novavax-Covavax ^{37,38} Inconclusive/substantial loss, limited sample size: AstraZeneca-Vaxzevria ³⁹	Infection: No/minimal loss: Sinovac-CoronaVac ⁴¹	Minimal/modest loss: AstraZeneca-Vaxzevria after two doses ⁴²
Asymptomatic infection: No/minimal loss: Pfizer BioNTech-Comirnaty ^{22,36} Inconclusive/Moderate-substantial loss, limited sample size: AstraZeneca-Vaxzevria ²⁷	Infection: Moderate loss: Pfizer BioNTech-Comirnaty ²³ Asymptomatic infection: No evidence		
Neutralization			
No/minimal loss: Bharat-Covaxin, Gamaleya-Sputnik V, Moderna-mRNA-1273, Novavax-Covavax, Pfizer BioNTech-Comirnaty, BeijingCNBG-BBIBP-CorV, Sinovac-CoronaVac ⁴³⁻⁶⁴	Minimal/modest loss: Beijing CNBG-BBIBP-CorV, Sinovac-CoronaVac, Anhui ZL-Recombinant ⁶⁵⁻⁶⁷	No/minimal loss: AstraZeneca-Vaxzevria, Sinovac-CoronaVac ^{58,74}	B.1.617 (sublineage unspecified) Minimal/modest loss: Bharat-Covaxin ⁷⁷
Minimal/moderate loss: AstraZeneca-Vaxzevria ^{27,58}	Minimal to substantial loss: Moderna-mRNA-1273, Pfizer BioNTech-Comirnaty ^{44,48,50-55,57-59,68-73} Moderate to substantial loss: AstraZeneca-Vaxzevria, Gamaleya-Sputnik V, Novavax-Covavax ^{50,60,70,70}	Minimal/moderate loss: Moderna-mRNA-1273, Pfizer BioNTech-Comirnaty ^{44,45,55,57,58,64,75,76}	B.1.617.1: Minimal/modest loss: SII-Covishield ⁷⁸ Modest/moderate loss: Moderna-mRNA-1273, Pfizer BioNTech-Comirnaty ^{73,79,80} B.1.617.2, B.1.617.3: No sublineage-specific evidence

Further to our last update on vaccine performance against VOCs, new Phase III efficacy results from the United Kingdom have been made available and provide evidence that Novavax-Covavax is highly efficacious at preventing COVID-19 disease due to B.1.1.7. Efficacy against B.1.1.7 symptomatic disease ≥ 7 days after the second dose was 86.3% (95% CI: 71.3%-93.5%), similar to that against non-B.1.1.7 disease: 96.4% (95% CI: 73.8%-99.5%).²⁶

In addition, two new preprint studies (not yet peer-reviewed) estimated vaccine effectiveness (VE) of Pfizer BioNTech-Comirnaty and AstraZeneca-Vaxzevria vaccines against COVID-19 mortality and hospitalization among older adults in the United Kingdom. Both studies were conducted between December 2020 and April 2021 when B.1.1.7 accounted for the vast majority of sequenced viruses in the United Kingdom. The first study evaluated VE against mortality within 28 days of a positive PCR test among individuals ≥ 70 years who

developed symptomatic disease and is the first peer-reviewed publication to estimate the effectiveness of AstraZeneca-Vaxzevria against mortality. Results show a single dose of AstraZeneca-Vaxzevria offers levels of protection against mortality among people who develop disease (VE: 55%, 95% CI: 41-66%) similar to a single dose of Pfizer BioNTech-Comirnaty (VE: 44%, 95% CI: 3-53%). VE of two doses of Pfizer BioNTech-Comirnaty against death among people who develop disease was 69% (95% CI: 31-86%). Data were insufficient to estimate effectiveness of two doses of AstraZeneca-Vaxzevria. This study estimates the protection of vaccination against death (in addition to protection against symptomatic disease), and, taken together with VE estimates against symptomatic disease in the same age group, suggest approximately 80% protection of a single dose of either vaccine and approximately 97% protection for two doses of Pfizer BioNTech-Comirnaty against mortality in older adults.²⁴ A second study estimated overall VE against hospitalization ≥ 28 post first dose to be 73% (95% CI: 60-81%) for the AstraZeneca-Vaxzevria and 81% (95% CI: 76-85%) for Pfizer BioNTech-Comirnaty among individuals ≥ 80 years; VE against hospitalization ≥ 14 days post second dose of Pfizer BioNTech-Comirnaty was 93% (89-95%).²⁵ These studies provide real-world evidence that AstraZeneca-Vaxzevria and Pfizer BioNTech-Comirnaty vaccine provide good protection against severe disease in settings where B.1.1.7 are prevalent.

A test-negative, case-control pre-print study in Sao Paulo state, Brazil, among adults ≥ 70 years of age from mid-January through April 2021 found a VE of 41.6% (95% CI: 26.9-53.3%) against symptomatic COVID-19 ≥ 14 days after the second dose of Sinovac-CoronaVac⁴¹ during a period of widespread P.1 circulation (P.1 comprised 83% of genotyped isolates in March and April 2021). VE was reported as 49.4% (95% CI: 26.9-65.0%) at ≥ 21 days after the second dose. These findings are consistent with clinical trial results conducted in health workers in Brazil when P.1 was not yet widespread.⁷⁴

A new pre-print study from the United Kingdom suggested slightly lower effectiveness for Pfizer BioNTech-Comirnaty and AstraZeneca-Vaxzevria vaccines against symptomatic disease caused by B.1.617.2 compared to symptomatic disease caused by B.1.1.7. VE of two doses of Pfizer BioNTech-Comirnaty was 93.4% (95% CI: 90.4-95.5%) against B.1.1.7 and 87.9% (95% CI: 78.2-93.2%) against B.1.617.2. VE of two doses of AstraZeneca-Vaxzevria was 66.1% (95% CI: 54.0-75.0%) against B.1.1.7 and 59.8% (95% CI: 28.9-77.3%) against B.1.617.2.⁴² In a clinical trial conducted in the United Kingdom between June and December 2020, efficacy of two doses of AstraZeneca-Vaxzevria against symptomatic disease was 81.5% (67.9-89.4%) for non-B.1.1.7 lineages and 70.4% (43.6-84.5%) for B.1.1.7, a comparable result to that of the effectiveness study.²⁷ Differences in point estimates for efficacy and effectiveness for AstraZeneca-Vaxzevria were not statistically significant, and therefore should not be over-interpreted.

Recent studies provide evidence of some loss of neutralization capacity of COVID-19 vaccines against B.1.617.1. One study found a two-fold reduction in neutralization capacity against B.1.617.1 after two doses of SII - Covishield compared to the prototype B.1 lineage (n=21).⁷⁸ These findings excluded ten samples that did not show neutralizing antibody titer against B.1 nor B.1.617.1, and 12 samples that showed neutralizing antibody titer only against B.1. Another study found a seven-fold reduction in neutralization of B.1.617.1 among sera from vaccinees receiving two doses of Moderna- mRNA-1273 (n=15) or Pfizer BioNTech-Comirnaty (n=10); however, a majority of sera were still able to neutralize the variant.⁸⁰ Two additional studies provided further evidence of modest to moderate loss of neutralization by Pfizer BioNTech-Comirnaty and Moderna- mRNA-1273 vaccines against the pseudotype virus bearing B.1.617.1 spike mutations that are shared with B.1.617.3.^{73,79} Finally, a fifth study showed a two-fold loss of neutralization against B.1.617 for Bharat – Covaxin vaccine, a loss comparable to that seen with VOC 202012/01 (B.1.1.7); however, no information was available on the B.1.617 sublineages included in this study.⁷⁷ Taken together, these early studies suggest some loss of neutralization capacity against B.1.617; however, it is unclear whether this loss translates into decreased vaccine efficacy/effectiveness. Vaccine efficacy and real-world effectiveness evidence for B.1.617.1, B.1.617.2 or B.1.617.3 is limited.

Geographic distribution

As surveillance activities to detect SARS-CoV-2 variants are strengthened at local and national levels, including by strategic genomic sequencing, the number of countries/areas/territories (hereafter countries) reporting VOCs has continued to increase (Figures 3 and 4, Annex 2). This distribution should be interpreted with due consideration of surveillance limitations, including differences in sequencing capacities, sharing of sequencing data to publicly available platforms and sampling strategies between countries.

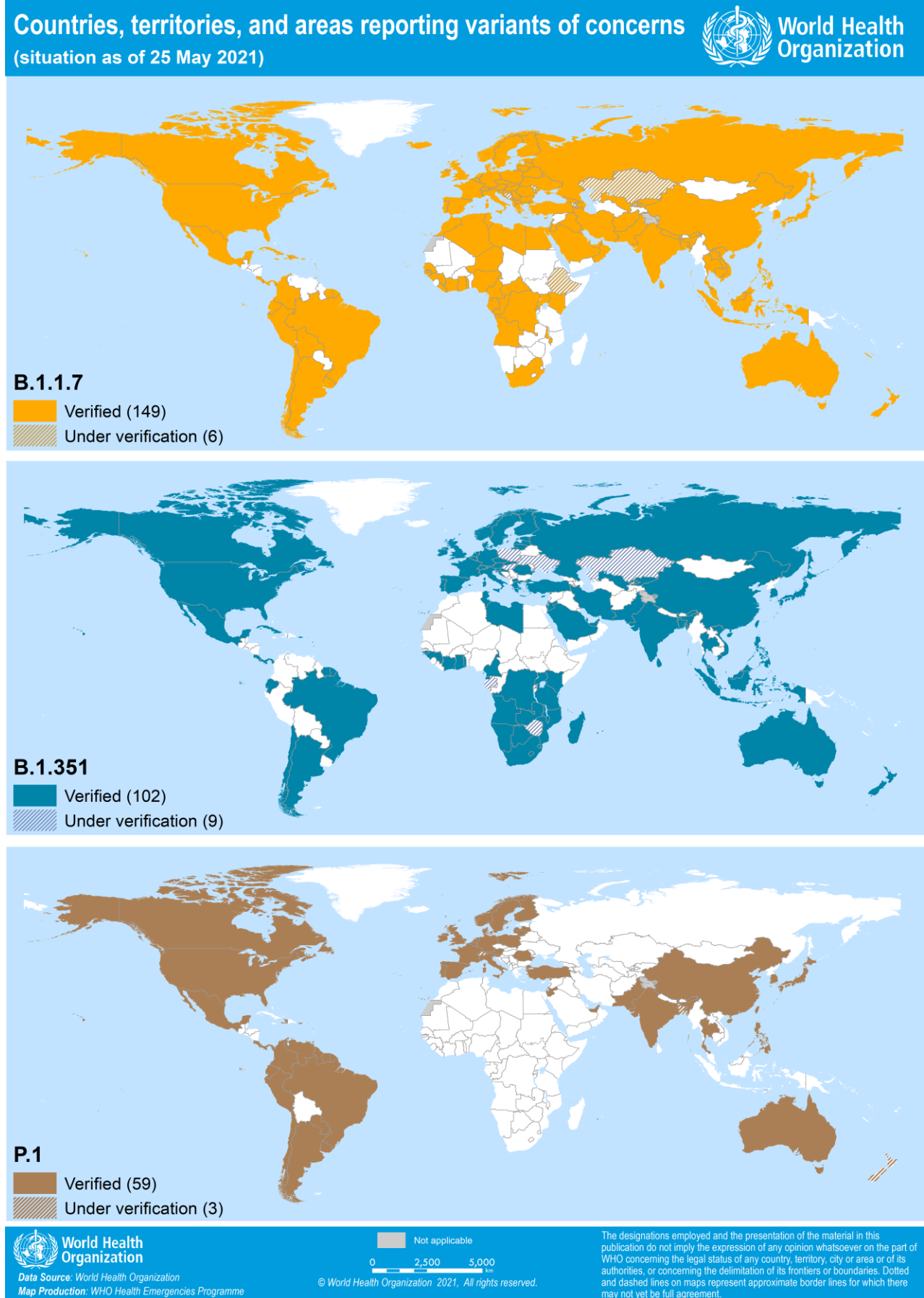
WHO recommendations

Virus evolution is expected, and the more SARS-CoV-2 circulates, the more opportunities it has to evolve. Reducing transmission through established and proven disease control methods, such as those outlined in the [COVID-19 Strategic Preparedness and Response Plan](#), as well as avoiding introductions into animal populations are crucial aspects of the global strategy to reduce the occurrence of mutations that have negative public health implications. PHSM remain critical to curb the spread of SARS-CoV-2 and its variants. Evidence from multiple countries with extensive transmission of VOCs has indicated that the PHSM, including infection prevention and control (IPC) measures in health facilities has been effective in reducing COVID-19 case incidence, which has led to a reduction in hospitalizations and deaths among COVID-19 patients. National and local authorities are encouraged to continue strengthening existing PHSM, IPC and disease control activities. Authorities are also encouraged to strengthen surveillance and sequencing capacities and apply a systematic approach to provide a representative indication of the extent of transmission of SARS-CoV-2 variants based on the local context, and to detect unusual events.

Additional resources

- [Working definitions of SARS-CoV-2 Variants of Interest and Variants of Concern](#)
- [COVID-19 new variants: Knowledge gaps and research](#)
- [Genomic sequencing of SARS-CoV-2: a guide to implementation for maximum impact on public health](#)
- [Considerations for implementing and adjusting PHSM in the context of COVID-19](#)
- COVID-19 Situation Reports from WHO Regional Offices and partners: [AFRO](#), [AMRO/PAHO](#), [EMRO](#), [EURO/ECDC](#), [SEARO](#), [WPRO](#)
- [ACT accelerator diagnostic pillar, FIND test directory](#)

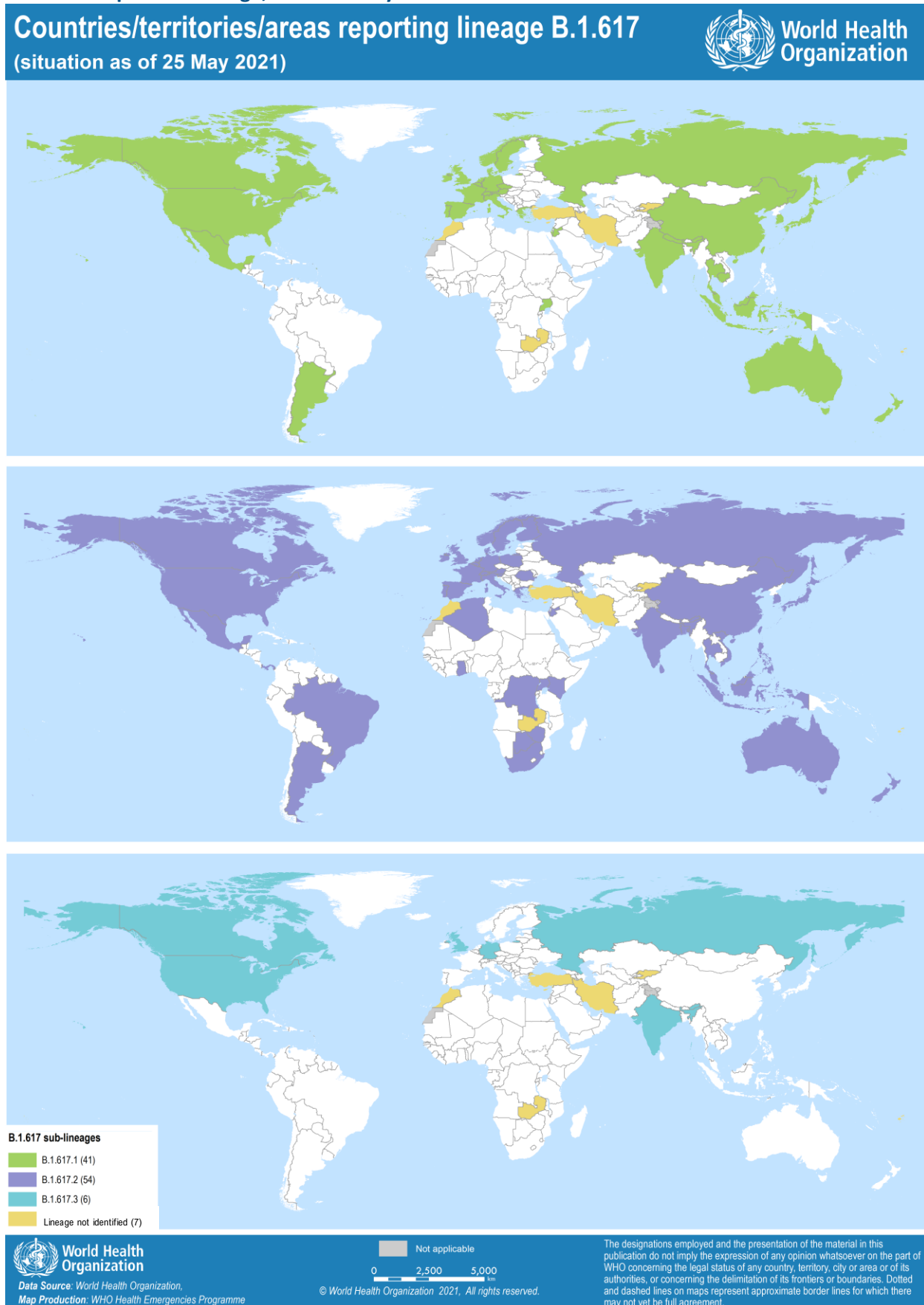
Figure 3. Countries, territories and areas reporting B.1.1.7, B.1.351 and P.1 lineages, as of 25 May 2021



*Countries/territories/areas listed include both official and unofficial reports of VOC detections pending verification. Please see [Annex 2](#) for details.

**Includes countries/territories/areas reporting the detection of VOCs among travelers (e.g., imported cases detected at points of entry), or local cases (detected in the community). Efforts are ongoing to differentiate these in future reports.

Figure 4. Countries, territories and areas reporting B.1.617.1, B.1.617.2 and B.1.617.3 lineages, or B.1.617 with an unspecified lineage, as of 25 May 2021*



*Countries/territories/areas listed in include both official and unofficial of VOC detection pending verification. Please see [Annex 2](#) for details.
**Includes countries/territories/areas reporting the detection of VOCs among travelers (e.g., imported cases detected at points of entry), or local cases (detected in the community). Efforts are ongoing to differentiate these in future reports.

References

1. Curran J, Dol J, Boulos L, et al. Transmission characteristics of SARS-CoV-2 variants of concern Rapid Scoping Review. *medRxiv*. Published online January 1, 2021:2021.04.23.21255515. doi:10.1101/2021.04.23.21255515
2. Tegally H, Wilkinson E, Giovanetti M, et al. Emergence of a SARS-CoV-2 variant of concern with mutations in spike glycoprotein. *Nature*. Published online 2021. <https://doi.org/10.1038/s41586-021-03402-9>
3. Cherian S, Potdar V, Jadhav S, et al. Convergent evolution of SARS-CoV-2 spike mutations, L452R, E484Q and P681R, in the second wave of COVID-19 in Maharashtra, India. *bioRxiv*. Published online January 1, 2021:2021.04.22.440932. doi:10.1101/2021.04.22.440932
4. Public Health England. *SARS-CoV-2 Variants of Concern and Variants under Investigation in England. Technical Briefing 10*. Public Health England; 2021. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/984274/Variants_of_Concern_VOC_Technical_Briefing_10_England.pdf
5. Bager P, Wohlfahrt J, Fonager J, Albertsen. Increased Risk of Hospitalisation Associated with Infection with SARS-CoV-2 Lineage B.1.1.7 in Denmark. doi:Bager, Peter and Wohlfahrt, Jan and Fonager, Jannik and Albertsen, Mads and Ysling Michaelsen, Thomas and Holten Møller, Camilla and Ethelberg, Steen and Legarth, Rebecca and Fischer Button, Mia Sara and Gubbels, Sophie Madeleine and Voldstedlund, Marianne and Mølbak, Kåre and Skov, Robert Leo and Fomsgaard, Anders and Grove Krause, Tyra, Increased Risk of Hospitalisation Associated with Infection with SARS-CoV-2 Lineage B.1.1.7 in Denmark. Available at SSRN: <https://ssrn.com/abstract=3792894> or <http://dx.doi.org/10.2139/ssrn.3792894>
6. NERVTAG paper on COVID-19 variant of concern B.1.1.7. *GOVUK*. Published online 2021. <https://www.gov.uk/government/publications/nervtag-paper-on-covid-19-variant-of-concern-b117>, <http://files/64/nervtag-paper-on-covid-19-variant-of-concern-b117.html> [%2021/02/08/18:37:19]
7. Pearson CA, Eggo. Estimates of severity and transmissibility of novel South Africa SARS-CoV-2 variant 501Y.V2. https://cmmid.github.io/topics/covid19/reports/sa-novel-variant/2021_01_11_Transmissibility_and_severity_of_501Y_V2_in_SA.pdf
8. Jassat W MC. *Increased Mortality among Individuals Hospitalised with COVID-19 during the Second Wave in South Africa*; 2021. <https://www.medrxiv.org/content/10.1101/2021.03.09.21253184v1>
9. Funk T, Pharris A, Spiteri G, et al. Characteristics of SARS-CoV-2 variants of concern B.1.1.7, B.1.351 or P.1: data from seven EU/EEA countries, weeks 38/2020 to 10/2021. *Eurosurveillance*. 2021;26(16). doi:<https://doi.org/10.2807/1560-7917.ES.2021.26.16.2100348>
10. Muik A, Wallisch A-K, Sängler B, et al. Neutralization of SARS-CoV-2 lineage B.1.1.7 pseudovirus by BNT162b2 vaccine-elicited human sera. *Science*. Published online 2021:eabg6105. <https://science.sciencemag.org/content/sa/early/2021/01/28/science.abg6105.full.pdf>
11. Gallais F, Gantner P, Bruel T, et al. Anti-SARS-CoV-2 Antibodies Persist for up to 13 Months and Reduce Risk of Reinfection. *medRxiv*. Published online January 1, 2021:2021.05.07.21256823. doi:10.1101/2021.05.07.21256823
12. Graham MS, Sudre CH, May A, et al. Changes in symptomatology, reinfection, and transmissibility associated with the SARS-CoV-2 variant B.1.1.7: an ecological study. *Lancet Public Health*. 2021;6(5):e335-e345. doi:10.1016/S2468-2667(21)00055-4
13. Wibmer CK, Ayres F, Hermanus T, et al. SARS-CoV-2 501Y.V2 escapes neutralization by South African COVID-19 donor plasma. *Nat Med*. Published online March 2021. <https://www.ncbi.nlm.nih.gov/pubmed/33654292>
14. Li R, Ma X, Deng J, et al. Differential efficiencies to neutralize the novel mutants B.1.1.7 and 501Y.V2 by collected sera from convalescent COVID-19 patients and RBD nanoparticle-vaccinated rhesus macaques. *Cell Mol Immunol*. Published online February 2021. <https://www.ncbi.nlm.nih.gov/pubmed/33580167>
15. Cele S, Gazy I, Jackson L, et al. Escape of SARS-CoV-2 501Y.V2 variants from neutralization by convalescent plasma. :19. <https://www.medrxiv.org/content/10.1101/2021.01.26.21250224v1>
16. Sabino EC, Buss LF, Carvalho MPS, et al. Resurgence of COVID-19 in Manaus, Brazil, despite high seroprevalence. *The Lancet*. 2021;397(10273):452-455. <https://linkinghub.elsevier.com/retrieve/pii/S0140673621001835>
17. Naveca F, Nascimento V, Souza V, et al. Phylogenetic relationship of SARS-CoV-2 sequences from Amazonas with emerging Brazilian variants harboring mutations E484K and N501Y in the Spike protein. *Virological*. Published online 2021. <https://virological.org/t/phylogenetic-relationship-of-sars-cov-2-sequences-from-amazonas-with-emerging-brazilian-variants-harboring-mutations-e484k-and-n501y-in-the-spike-protein/585>
18. SARS-CoV-2 lateral flow antigen tests: evaluation of VUI-202012/01. *GOVUK*. <https://www.gov.uk/government/publications/sars-cov-2-lateral-flow-antigen-tests-evaluation-of-vui-202012/01/sars-cov-2-lateral-flow-antigen-tests-evaluation-of-vui-20201201>, <http://files/62/sars-cov-2-lateral-flow-antigen-tests-evaluation-of-vui-20201201.html> [%2021/02/08/16:54:26]
19. *SARS-CoV-2 Variants of Concern and Variants under Investigation in England - Technical Briefing 12*. Public Health England; 2021. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/988619/Variants_of_Concern_VOC_Technical_Briefing_12_England.pdf
20. Loenenbach A, Markus I, Lehfeld A-S. Susceptibility and infectiousness of children and adults with SARS-CoV-2 variant B.1.1.7 deduced from three daycare centre outbreaks and related household situations; Germany, 2021. <https://www.medrxiv.org/content/10.1101/2021.05.12.21256608v1>
21. Goldberg Y, Mandel M, Woodbridge Y, et al. Protection of previous SARS-CoV-2 infection is similar to that of BNT162b2 vaccine protection: A three-month nationwide experience from Israel. *medRxiv*. Published online April 2021:2021.04.20.21255670-2021.04.20.21255670. doi:10.1101/2021.04.20.21255670
22. Haas EJ, Angulo FJ, McLaughlin JM, et al. Impact and effectiveness of mRNA BNT162b2 vaccine against SARS-CoV-2 infections and COVID-19 cases, hospitalisations, and deaths following a nationwide vaccination campaign in Israel: an observational study using national surveillance data. *The Lancet*. 2021;0(0). doi:10.1016/S0140-6736(21)00947-8
23. Abu-Raddad LJ, Chemeitelly H, Butt AA, National Study Group for COVID-19 Vaccination. Effectiveness of the BNT162b2 Covid-19 Vaccine against the B.1.1.7 and B.1.351 Variants. *The New England Journal of Medicine*. Published online May 2021. doi:10.1056/NEJMc2104974
24. Lopez Bernal J, Andrews N, Gower C, et al. *Effectiveness of BNT162b2 mRNA Vaccine and ChAdOx1 Adenovirus Vector Vaccine on Mortality Following COVID-19*. <https://khub.net/documents/135939561/430986542/Effectiveness+of+BNT162b2+mRNA+vaccine+and+ChAdOx1+adenovirus+vector+vaccine+on+mortality+following+COVID-19.pdf/9884d371-8cc8-913c-211c-c2d7ce4dd1c3>
25. Ismail SA, Vilaplana TG, Elgohari S, et al. Effectiveness of BNT162b2 mRNA and ChAdOx1 adenovirus vector COVID-19 vaccines on risk of hospitalisation among older adults in England: an observational study using surveillance data. :18.
26. Heath PT, Eva Galiza FP, David Neil Baxter M, et al. Efficacy of the NVX-CoV2373 Covid-19 Vaccine Against the B.1.1.7 Variant. *medRxiv*. Published online May 2021:2021.05.13.21256639-2021.05.13.21256639. doi:10.1101/2021.05.13.21256639
27. Emary KRW, Golubchik T, Aley PK, et al. Efficacy of ChAdOx1 nCoV-19 (AZD1222) vaccine against SARS-CoV-2 variant of concern 202012/01 (B.1.1.7): an exploratory analysis of a randomised controlled trial. *The Lancet*. 2021;397(10282):1351-1362. doi:10.1016/S0140-6736(21)00628-0
28. Lopez Bernal J, Andrews N, Gower C, et al. Effectiveness of the Pfizer-BioNTech and Oxford-AstraZeneca vaccines on covid-19 related symptoms, hospital admissions, and mortality in older adults in England: test negative case-control study. *BMJ (Clinical research ed)*. 2021;373:n1088-n1088. doi:10.1136/bmj.n1088
29. Hall VJ, Foulkes S, Saei A, et al. Effectiveness of BNT162b2 mRNA Vaccine Against Infection and COVID-19 Vaccine Coverage in Healthcare Workers in England, Multicentre Prospective Cohort Study (the SIREN Study). *SSRN Electronic Journal*. Published online February 2021. doi:10.2139/ssrn.3790399
30. Yelin I, Katz R, Herzel E, et al. Associations of the BNT162b2 COVID-19 vaccine effectiveness with patient age and comorbidities. *medRxiv*. Published online March 2021:2021.03.16.21253686-2021.03.16.21253686. doi:10.1101/2021.03.16.21253686
31. Hyams C, Marlow R, Maseko Z, et al. Assessing the Effectiveness of BNT162b2 and ChAdOx1nCoV-19 COVID-19 Vaccination in Prevention of Hospitalisations in Elderly and Frail Adults: A Single Centre Test Negative Case-Control Study. *SSRN Electronic Journal*. Published online March 2021. doi:10.2139/ssrn.3796835
32. Shrotri M, Krutikov M, Palmer T, et al. Vaccine effectiveness of the first dose of ChAdOx1 nCoV-19 and BNT162b2 against SARS-CoV-2 infection in residents of Long-Term Care Facilities (VIVALDI study). *medRxiv*. Published online March 2021:2021.03.26.21254391-2021.03.26.21254391. doi:10.1101/2021.03.26.21254391
33. Glampson B, Brittain J, Kaura A, et al. North West London Covid-19 Vaccination Programme: Real-world evidence for vaccine uptake and effectiveness. *medRxiv*. Published online April 2021:2021.04.08.21254580-2021.04.08.21254580. doi:10.1101/2021.04.08.21254580
34. Pritchard E, Matthews PC, Stoesser N, et al. Impact of vaccination on SARS-CoV-2 cases in the community: a population-based study using the UK's COVID-19 Infection Survey. *medRxiv*. Published online April 2021:2021.04.22.21255913-2021.04.22.21255913. doi:10.1101/2021.04.22.21255913
35. Mason T, Whitston M, Hodgson J, et al. Effects of BNT162b2 mRNA vaccine on Covid-19 infection and hospitalisation among older people: matched case control study for England. *medRxiv*. Published online 2021.
36. Jones NK, Rivett L, Seaman S, et al. Single-dose BNT162b2 vaccine protects against asymptomatic SARS-CoV-2 infection. *eLife*. 2021;10. doi:10.7554/elife.68808
37. Sadoff J, Gray G, Vandebosch A, et al. Safety and Efficacy of Single-Dose Ad26.COV2.S Vaccine against Covid-19. *New England Journal of Medicine*. Published online April 2021:NEJMoa2101544-NEJMoa2101544. doi:10.1056/NEJMoa2101544
38. Shinde V, Bhikha S, Hoosain Z, et al. Efficacy of NVX-CoV2373 Covid-19 Vaccine against the B.1.351 Variant. *New England Journal of Medicine*. Published online May 2021:NEJMoa2103055-NEJMoa2103055. doi:10.1056/NEJMoa2103055

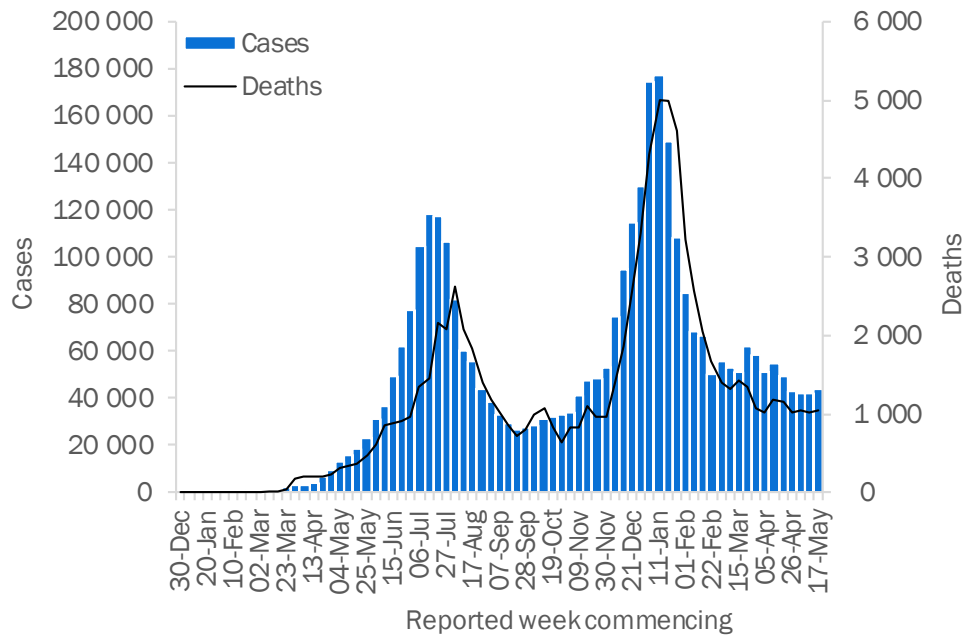
39. Madhi SA, Baillie V, Cutland CL, et al. Efficacy of the ChAdOx1 nCoV-19 Covid-19 Vaccine against the B.1.351 Variant. *New England Journal of Medicine*. Published online March 2021:NEJMoa2102214-NEJMoa2102214. doi:10.1056/NEJMoa2102214
40. Hitchings MD, Ranzani OT, Sergio Scaramuzzi Torres M, et al. Effectiveness of CoronaVac in the setting of high SARS-CoV-2 P.1 variant transmission in Brazil: A test-negative case-control study. *medRxiv*. Published online April 2021:2021.04.07.21255081-2021.04.07.21255081. doi:10.1101/2021.04.07.21255081
41. Ranzani OT, Hitchings M, Neto MD, et al. Effectiveness of the CoronaVac vaccine in the elderly population during a P.1 variant-associated epidemic of COVID-19 in Brazil: A test-negative case-control study. *medRxiv*. Published online May 21, 2021:2021.05.19.21257472. doi:10.1101/2021.05.19.21257472
42. Lopez Bernal J, Andrews N, Gower C, et al. Effectiveness of COVID-19 vaccines against the B.1.617.2 variant. doi:https://doi.org/10.1101/2021.05.22.21257658
43. Edara VV, Floyd K, Lai L, et al. Infection and mRNA-1273 vaccine antibodies neutralize SARS-CoV-2 UK variant. *medRxiv : the preprint server for health sciences*. Published online February 2021:2021.02.02.21250799-2021.02.02.21250799. doi:10.1101/2021.02.02.21250799
44. Garcia-Beltran WF, Lam EC, St. Denis K, et al. Multiple SARS-CoV-2 variants escape neutralization by vaccine-induced humoral immunity. *Cell*. 2021;0(0). doi:10.1016/j.cell.2021.03.013
45. Liu Y, Liu J, Xia H, et al. Neutralizing Activity of BNT162b2-Elicited Serum. *New England Journal of Medicine*. 2021;384(15):1466-1468. doi:10.1056/nejmc2102017
46. Muik A, Wallisch A-K, Sanger B, et al. Neutralization of SARS-CoV-2 lineage B.1.1.7 pseudovirus by BNT162b2 vaccine-elicited human sera. *bioRxiv*. Published online January 2021:2021.01.18.426984-2021.01.18.426984. doi:10.1101/2021.01.18.426984
47. Trinite B, Pradenas E, Marfil S, et al. Previous SARS-CoV-2 infection increases B.1.1.7 cross-neutralization by vaccinated individuals. Equal contribution. *bioRxiv*. Published online March 2021:2021.03.05.433800-2021.03.05.433800. doi:10.1101/2021.03.05.433800
48. Wang Z, Schmidt F, Weisblum Y, et al. mRNA vaccine-elicited antibodies to SARS-CoV-2 and circulating variants. *Nature*. 2021;592(7855):616-616. doi:10.1038/s41586-021-03324-6
49. Wang P, Nair MS, Liu L, et al. Antibody Resistance of SARS-CoV-2 Variants B.1.351 and B.1.1.7. *Nature*. Published online March 2021:1-6. doi:10.1038/s41586-021-03398-2
50. Shen X, Tang H, Pajon R, et al. Neutralization of SARS-CoV-2 Variants B.1.429 and B.1.351. *New England Journal of Medicine*. Published online April 2021:NEJMc2103740-NEJMc2103740. doi:10.1056/nejmc2103740
51. Tada T, Dcosta BM, Samanovic-Golden M, et al. Neutralization of viruses with European, South African, and United States SARS-CoV-2 variant spike proteins by convalescent sera and BNT162b2 mRNA vaccine-elicited antibodies. *bioRxiv : the preprint server for biology*. Published online February 2021:2021.02.05.430003-2021.02.05.430003. doi:10.1101/2021.02.05.430003
52. Wu K, Werner AP, Moliva JI, et al. mRNA-1273 vaccine induces neutralizing antibodies against spike mutants from global SARS-CoV-2 variants. *bioRxiv : the preprint server for biology*. Published online January 2021:2021.01.25.427948-2021.01.25.427948. doi:10.1101/2021.01.25.427948
53. Planas D, Bruel T, Grzelak L, et al. Sensitivity of infectious SARS-CoV-2 B.1.1.7 and B.1.351 variants to neutralizing antibodies. *Nature Medicine*. Published online March 2021:1-8. doi:10.1038/s41591-021-01318-5
54. Becker M, Dulovic A, Junker D, et al. Immune response to SARS-CoV-2 variants of concern in vaccinated individuals. *medRxiv*. Published online March 2021:2021.03.08.21252958-2021.03.08.21252958. doi:10.1101/2021.03.08.21252958
55. McCallum M, Bassi J, De Marco A, et al. SARS-CoV-2 immune evasion by variant B.1.427/B.1.429. *bioRxiv*. Published online April 2021:2021.03.31.437925-2021.03.31.437925. doi:10.1101/2021.03.31.437925
56. Skelly DT, Harding Sir William AC, Gilbert-Jaramillo Sir William J, et al. Vaccine-induced immunity provides more robust heterotypic immunity than natural infection to emerging SARS-CoV-2 variants of concern. Published online February 2021. doi:10.21203/rs.3.rs-226857/v1
57. Hoffmann M, Arora P, GroB R, et al. SARS-CoV-2 variants B.1.351 and B.1.1.248: Escape from therapeutic 1 antibodies and antibodies induced by infection and vaccination 2 3. *bioRxiv*. Published online February 2021:2021.02.11.430787-2021.02.11.430787. doi:10.1101/2021.02.11.430787
58. Dejnirattisai W, Zhou D, Supasa P, et al. Antibody evasion by the P.1 strain of SARS-CoV-2. *Cell*. 2021;0(0). doi:10.1016/j.cell.2021.03.055
59. Kuzmina A, Khalaila Y, Voloshin O, et al. SARS-CoV-2 spike variants exhibit differential infectivity and neutralization resistance to convalescent or post-vaccination sera. *Cell Host and Microbe*. 2021;29(4):522-528.e2. doi:10.1016/j.chom.2021.03.008
60. Ikegame S, A Siddiquey MN, Hung C-T, et al. Qualitatively distinct modes of Sputnik V vaccine-neutralization escape by SARS-CoV-2 Spike variants. *medRxiv*. Published online April 2021:2021.03.31.21254660-2021.03.31.21254660. doi:10.1101/2021.03.31.21254660
61. Gonzalez C, Saade C, Bal A, et al. Live virus neutralisation testing in convalescent patients and subjects vaccinated 1 against 19A, 20B, 20J/501Y.V1 and 20H/501Y.V2 isolates of SARS-CoV-2 2 3. *medRxiv*. Published online May 2021:2021.05.11.21256578-2021.05.11.21256578. doi:10.1101/2021.05.11.21256578
62. Liu Y, Liu J, Xia H, et al. BNT162b2-Elicited Neutralization against New SARS-CoV-2 Spike Variants. *New England Journal of Medicine*. Published online May 2021:NEJMc2106083-NEJMc2106083. doi:10.1056/NEJMc2106083
63. Collier AY, McMahan K, Yu J, et al. Immunogenicity of COVID-19 mRNA Vaccines in Pregnant and Lactating Women. Published online 2021. doi:10.1001/jama.2021.7563
64. Pegu A, O'Connell S, Schmidt SD, et al. Durability of mRNA-1273-induced antibodies against SARS-CoV-2 variants. *bioRxiv*. Published online May 2021:2021.05.13.444010-2021.05.13.444010. doi:10.1101/2021.05.13.444010
65. Huang B, Dai L, Wang H, et al. Neutralization of SARS-CoV-2 VOC501Y.V2 by human antisera elicited by both 1 inactivated BBIBP-CorV and recombinant dimeric RBD ZF2001 vaccines 2 3 Authors. *bioRxiv*. Published online February 2021:2021.02.01.429069-2021.02.01.429069. doi:10.1101/2021.02.01.429069
66. Wang G-L, Wang Z-Y, Duan L-J, et al. Susceptibility of Circulating SARS-CoV-2 Variants to Neutralization. *New England Journal of Medicine*. Published online April 2021:NEJMc2103022-NEJMc2103022. doi:10.1056/nejmc2103022
67. Cao Y, Yisimayi A, Bai Y, et al. Humoral immune response to circulating SARS-CoV-2 variants elicited by inactivated and RBD-subunit vaccines. *Cell Research*. Published online May 21, 2021:1-10. doi:10.1038/s41422-021-00514-9
68. Bates TA, Leier HC, Lyski ZL, et al. Neutralization of SARS-CoV-2 variants by convalescent and vaccinated serum. *medRxiv*. Published online April 2021:2021.04.04.21254881-2021.04.04.21254881. doi:10.1101/2021.04.04.21254881
69. Stamatos L, Czartoski J, Wan Y-H, et al. mRNA vaccination boosts cross-variant neutralizing antibodies elicited by SARS-CoV-2 infection. *Science*. Published online March 2021:eabg9175-eabg9175. doi:10.1126/science.abg9175
70. Zhou D, Dejnirattisai W, Supasa P, et al. Evidence of escape of SARS-CoV-2 variant B.1.351 from natural and vaccine-induced sera. *Cell*. 2021;189(0):1-14. doi:10.1016/j.cell.2021.02.037
71. Chang X, Sousa Augusto G, Liu X, et al. BNT162b2 mRNA COVID-19 vaccine induces antibodies of broader cross-reactivity than natural infection but recognition of mutant viruses is up to 10-fold reduced. *bioRxiv*. Published online March 2021:2021.03.13.435222-2021.03.13.435222. doi:10.1101/2021.03.13.435222
72. Edara VV, Norwood C, Floyd K, et al. Infection- and vaccine-induced antibody binding and neutralization of the B.1.351 SARS-CoV-2 variant. *Cell Host and Microbe*. 2021;29(4):516-521.e3. doi:10.1016/j.chom.2021.03.009
73. Ferreira I, Dattir R, Papa G, et al. SARS-CoV-2 B.1.617 emergence and sensitivity to vaccine-elicited antibodies. *bioRxiv*. Published online May 2021:2021.05.08.443253-2021.05.08.443253. doi:10.1101/2021.05.08.443253
74. Palacios R, Batista AP, Albuquerque CSN, et al. Efficacy and Safety of a COVID-19 Inactivated Vaccine in Healthcare Professionals in Brazil: The PROFISCOV Study. *SSRN Electronic Journal*. Published online April 2021. doi:10.2139/ssrn.3822780
75. Wu K, Werner AP, Koch M, et al. Serum Neutralizing Activity Elicited by mRNA-1273 Vaccine. *New England Journal of Medicine*. 2021;384(15):1468-1470. doi:10.1056/NEJMc2102179
76. Wang P, Casner RG, Nair MS, et al. Increased Resistance of SARS-CoV-2 Variant P.1 to Antibody Neutralization. *bioRxiv*. Published online April 9, 2021:2021.03.01.433466. doi:10.1101/2021.03.01.433466
77. Yadav P, Sapkal GN, Abraham P, et al. Neutralization of variant under investigation B.1.617 with sera of BBV152 vaccinees. *bioRxiv*. Published online April 2021:2021.04.23.441101-2021.04.23.441101. doi:10.1101/2021.04.23.441101
78. Yadav PD, Sapkal GN, Abraham P, et al. Neutralization potential of Covishield vaccinated individuals against B.1.617.1. *bioRxiv*. Published online May 2021:2021.05.12.443645-2021.05.12.443645. doi:10.1101/2021.05.12.443645
79. Tada T, Zhou H, Dcosta BM, Samanovic MI, Mulligan MJ, Landau NR. The Spike Proteins of SARS-CoV-2 B.1.617 and B.1.618 Variants Identified in India Provide Partial Resistance to Vaccine-elicited and Therapeutic Monoclonal Antibodies. *bioRxiv*. Published online May 2021:2021.05.14.444076-2021.05.14.444076. doi:10.1101/2021.05.14.444076
80. Edara V-V, Lai L, Sahoo MK, et al. Infection and vaccine-induced neutralizing antibody responses to the SARS-CoV-2 B.1.617.1 variant. *bioRxiv*. Published online 2021.

WHO regional overviews

African Region

The African Region reported over 44 000 new cases and over 1000 new deaths, a 4% and a 2% increase respectively compared to the previous week. The incidences of cases and deaths remain at similar rates to the previous four weeks. The highest numbers of new cases were reported from South Africa (21 429 new cases; 36.1 new cases per 100 000 population; a 31% increase), Ethiopia (3069 new cases; 2.7 new cases per 100 000; a 15% decrease), and Kenya (2729 new cases; 5.1 new cases per 100 000; a 27% increase).

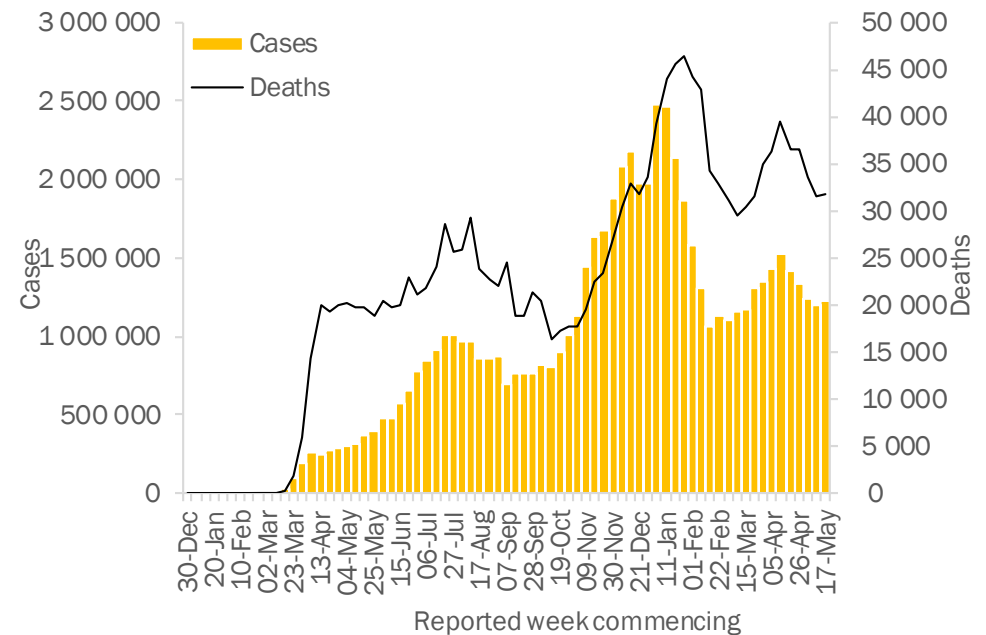
The highest numbers of new deaths were reported from South Africa (589 new deaths; 1.0 new deaths per 100 000 population; a 28% increase), Ethiopia (92 new deaths; 0.1 new deaths per 100 000; a 12% decrease), and Angola (60 new deaths; 0.2 new deaths per 100 000; a 140% increase).



Region of the Americas

The Region of the Americas reported over 1.2 million new cases and over 31 000 new deaths. Overall case and death incidence has remained stable in recent weeks; however, sizeable increases have been observed in several countries. The highest numbers of new cases were reported from Brazil (451 424 new cases; 212.4 new cases per 100 000; a 3% increase), Argentina (213 046 new cases; 471.4 new cases per 100 000; a 41% increase), and the United States of America (188 410 new cases; 56.9 new cases per 100 000; a 20% decrease).

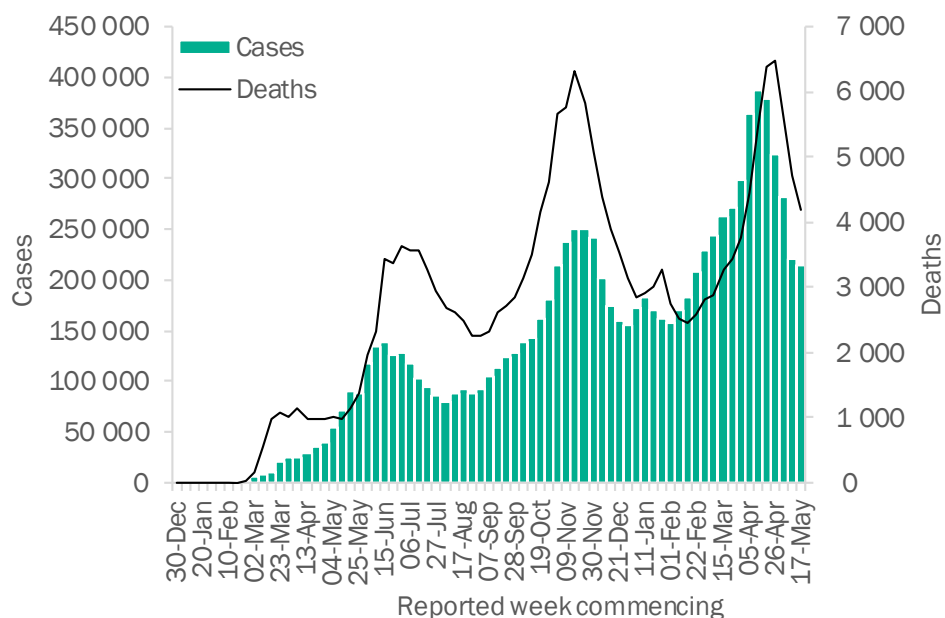
The highest numbers of new deaths were reported from Brazil (13 681 new deaths; 6.4 new deaths per 100 000; similar to the previous week), the United States of America (4032 new deaths; 1.2 new deaths per 100 000; a 3% decrease), and Argentina (3538 new deaths; 7.8 new deaths per 100 000; a 19% increase).



Eastern Mediterranean Region

The Eastern Mediterranean Region reported over 215 000 new cases and over 4200 new deaths, a 2% and an 11% decrease respectively compared to the previous week. Overall case incidence has remained stable following sizeable increases observed in several countries in the region. Death incidence has decreased steeply for the past four weeks. The highest numbers of new cases were reported from the Islamic Republic of Iran (84 012 new cases; 100.0 new cases per 100 000; a 15% decrease), Iraq (27 232 new cases; 67.7 new cases per 100 000; a 4% decrease), and Pakistan (22 717 new cases; 10.3 new cases per 100 000; an 11% increase).

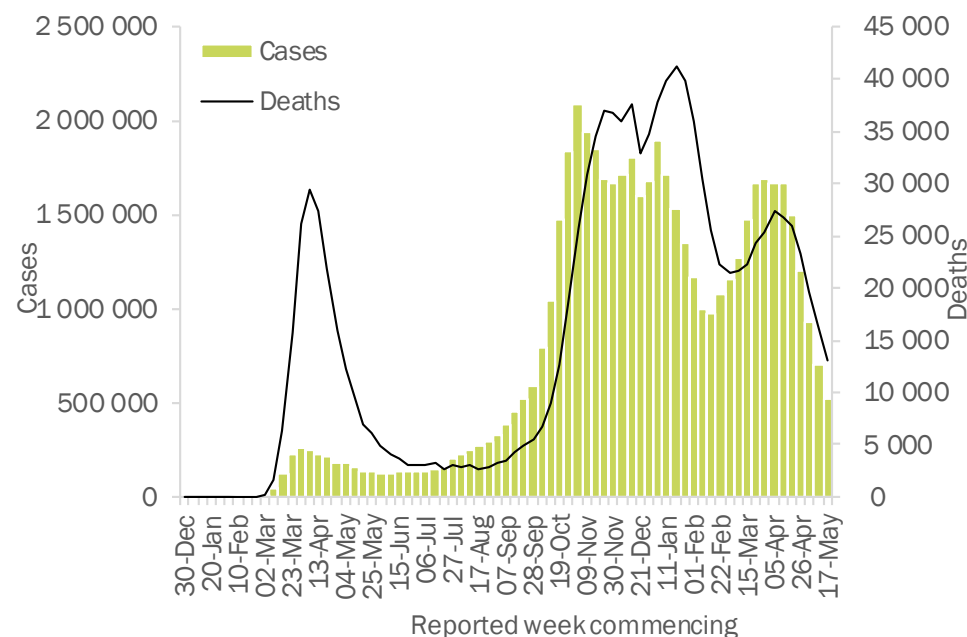
The highest numbers of new deaths were reported from the Islamic Republic of Iran (1748 new deaths; 2.1 new deaths per 100 000; a 17% decrease), Pakistan (710 new deaths; 0.3 new deaths per 100 000; a 6% increase), and Tunisia (403 new deaths; 3.4 new deaths per 100 000; a 6% decrease).



European Region

The European Region reported just under 525 000 new cases and just under 13 000 new deaths, a 25% and a 21% decrease respectively compared to the previous week. A sharp downward trend in cases and deaths has been observed over the last five weeks. The highest numbers of new cases were reported from Turkey (71 786 new cases; 85.1 new cases per 100 000; a 21% decrease), the Russian Federation (61 260 new cases; 42.0 new cases per 100 000; a 2% increase), and Germany (55 524 new cases; 66.8 new cases per 100 000; a 24% decrease).

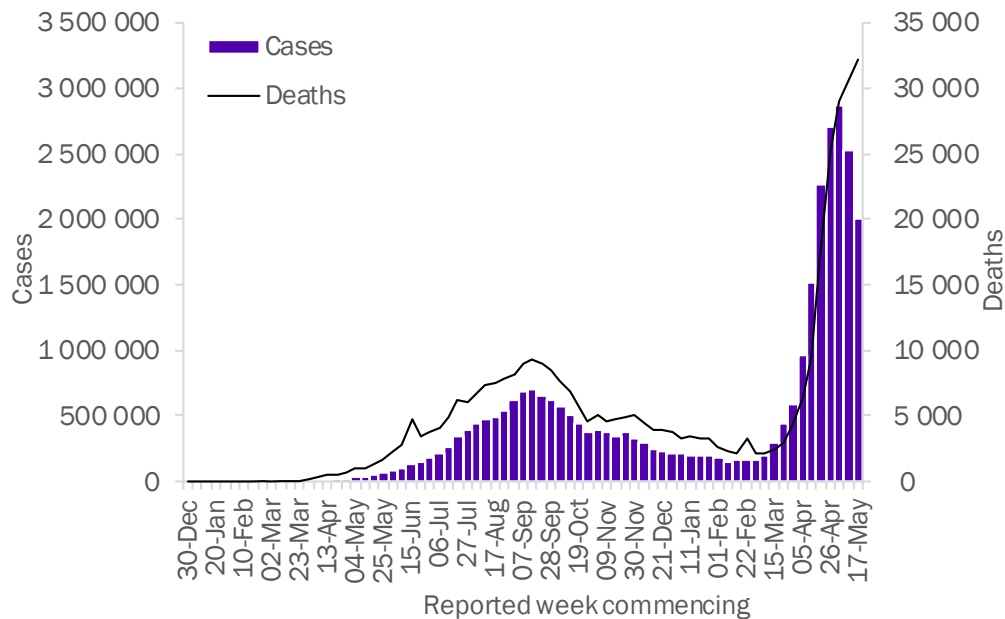
The highest numbers of new deaths were reported from the Russian Federation (2611 new deaths; 1.8 new deaths per 100 000; a 3% increase), Turkey (1534 new deaths; 1.8 new deaths per 100 000; a 14% decrease), and Ukraine (1293 new deaths; 3.0 new deaths per 100 000; a 23% decrease).



South-East Asia Region

The South-East Asia Region reported over 2 million new cases and over 32 000 new deaths, a 21% decrease and a 4% increase respectively compared to the previous week. While the overall incidence of cases continues to decrease (driven primarily by trends in India), death incidence continued to increase for a tenth consecutive week, and sizeable increases have been observed in other countries in the region. The highest numbers of new cases were reported from India (1 846 055 new cases; 133.8 new cases per 100 000; a 23% decrease), Nepal (57 939 new cases; 198.9 new cases per 100 000; a 6% decrease), and Indonesia (33 270 new cases; 12.2 new cases per 100 000; a 24% increase).

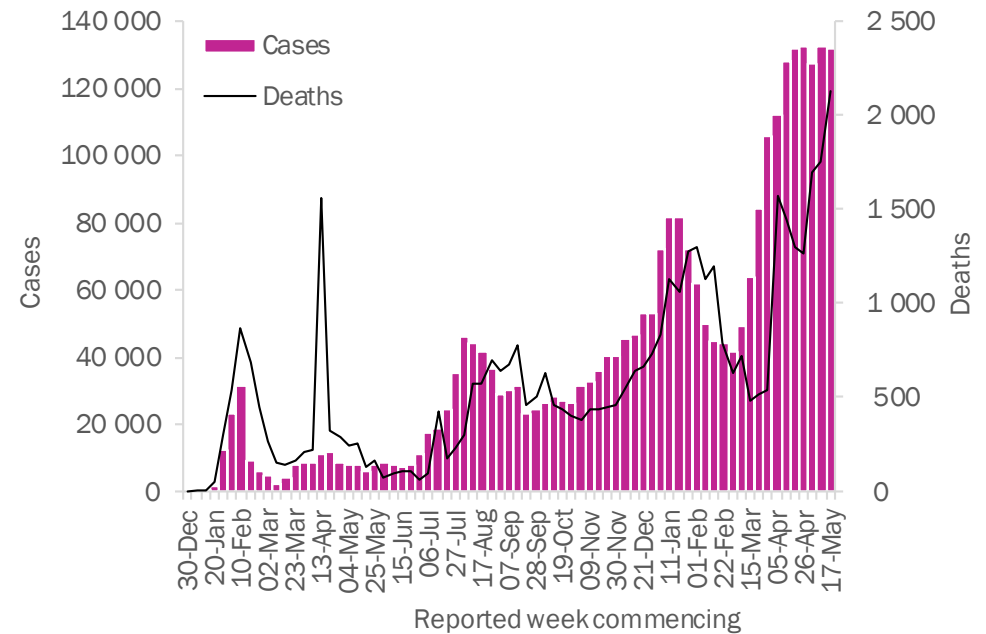
The highest numbers of new deaths were reported from India (28 982 new deaths; 2.1 new deaths per 100 000; a 4% increase), Nepal (1297 new deaths; 4.5 new deaths per 100 000; a 6% increase), and Indonesia (1238 new deaths; 0.5 new deaths per 100 000; a 10% increase).



Western Pacific Region

The Western Pacific Region reported over 131 000 new cases (similar to the previous week) and over 2100 new deaths (a 22% increase). The absolute numbers of cases and deaths remain the highest reported since the beginning of the pandemic. The highest numbers of new cases were reported from the Philippines (40 034 new cases; 36.5 new cases per 100 000; an 8% decrease), Malaysia (38 785 new cases; 119.8 new cases per 100 000; a 32% increase), and Japan (36 286 new cases; 28.7 new cases per 100 000; a 19% decrease).

The highest numbers of new deaths were reported from the Philippines (895 new deaths; 0.8 new deaths per 100 000; a 14% increase), Japan (773 new deaths; 0.6 new deaths per 100 000; a 21% increase), and Malaysia (333 new deaths; 1.0 new deaths per 100 000; a 59% increase).



Key weekly updates

WHO Director-General's key messages

[Opening remarks at the World Health Assembly – 24 May 2021:](#)

- Although we have lost so many health and care workers already, we will lose many more as long as the pandemic rages. Almost 18 months into the defining health crisis of our age, the world remains in a very fragile and dangerous situation.
- No country should assume it is out of the woods, no matter its vaccination rate.
- WHO's Strategic Preparedness and Response Plan sets out the ten pillars that every country must apply in a tailored and dynamic way to reduce exposure, prevent infections, limit the spread, and save lives. Every country can do more:
 - Increase surveillance, testing, sequencing, and sharing information;
 - Surge supplies needed to protect health workers;
 - Fight misinformation and disinformation;
 - Empower people and communities to play their part;
 - Support businesses and workplaces to take steps to open up safely, where appropriate;
 - Implement national vaccination strategies, vaccinate those most at risk, and donate vaccines to COVAX.
- We must be very clear: the pandemic is not over, and it will not be over until and unless transmission is controlled in every last country.

Additional updates

On 21 May, [World leaders met at the Global Health Summit](#), co-hosted by the European Commission and Italy as part of its G20 presidency, to [adopt an agenda to overcome the COVID-19 pandemic](#), and develop and endorse a [Rome Declaration](#) of Principles.

Upcoming events

- [Science in 5: WHO's series on science and COVID-19](#)

Updates and publications

- [Preventing and mitigating COVID-19 at work](#)
- [Statement of the COVID-19 subcommittee of the WHO Global Advisory Committee on Vaccine Safety \(GACVS\) on safety signals related to the Johnson & Johnson/Janssen COVID-19 vaccine](#)
- [Support to countries' equitable and resilient recovery from the pandemic towards the health SDGs: The 2021 SDG3 GAP progress report](#)
- [Programmatic innovations to address challenges in tuberculosis prevention and care during the COVID-19 pandemic](#)
- [The impact of COVID-19 on global health goals](#)
- [Fighting infection with information](#)
- [Preparing for the next human influenza pandemic: Celebrating 10 years of the Pandemic Influenza Preparedness Framework](#)
- [WHO and Switzerland launch global BioHub for pathogen storage, sharing and analysis](#)
- [New international expert panel to address the emergence and spread of zoonotic diseases](#)

Technical guidance and other resources

- [Technical guidance](#)
- [WHO Coronavirus Disease \(COVID-19\) Dashboard](#)
- [Weekly COVID-19 Operational Updates](#)
- [WHO COVID-19 case definitions](#)
- [COVID-19 Supply Chain Inter-Agency Coordination Cell Weekly Situational Update](#)
- [Research and Development](#)
- [Online courses on COVID-19](#) in official UN languages and in [additional national languages](#)
- [The Strategic Preparedness and Response Plan](#) (SPRP) outlining the support the international community can provide to all countries to prepare and respond to the virus
- Updates from WHO regions:
 - [African Region](#)
 - [Region of the Americas](#)
 - [Eastern Mediterranean Region](#)
 - [South-East Asia Region](#)
 - [European Region](#)
 - [Western Pacific Region](#)
- Recommendations and advice for the public:
 - [Protect yourself](#)
 - [Questions and answers](#)
 - [Travel advice](#)
- [EPI-WIN: tailored information for individuals, organizations and communities](#)
- [WHO Academy COVID-19 mobile learning app](#)

Annex

Annex 1. COVID-19 confirmed cases and deaths reported in the last seven days by countries, territories and areas, and WHO Region, as of 23 May 2021**

Reporting Country/Territory/Area ⁱ	New cases in last 7 days	Cumulative cases	Cumulative cases per 100 thousand population	New deaths in last 7 days	Cumulative deaths	Cumulative deaths per 100 thousand population	Transmission classification ⁱⁱ
Africa	44 207	3 446 089	307.2	1 034	85 964	7.7	
South Africa	21 429	1 632 572	2 752.7	589	55 772	94.0	Community transmission
Ethiopia	3 069	268 901	233.9	92	4 068	3.5	Community transmission
Kenya	2 729	168 108	312.6	48	3 049	5.7	Community transmission
Botswana	1 989	54 151	2 302.7	23	784	33.3	Community transmission
Angola	1 795	32 149	97.8	60	715	2.2	Community transmission
Namibia	1 599	52 712	2 074.5	53	763	30.0	Community transmission
Algeria	1 457	126 651	288.8	45	3 411	7.8	Community transmission
Cabo Verde	1 247	29 198	5 251.6	10	256	46.0	Community transmission
Uganda	833	43 507	95.1	3	350	0.8	Community transmission
Madagascar	775	40 780	147.3	39	793	2.9	Community transmission
Seychelles	772	10 433	10 608.4	8	38	38.6	Community transmission
Equatorial Guinea	742	8 436	601.3	1	113	8.1	Community transmission
Zambia	697	93 106	506.5	7	1 267	6.9	Community transmission
Rwanda	490	26 424	204.0	6	348	2.7	Community transmission
Ghana	340	93 583	301.2	0	783	2.5	Community transmission
Côte d'Ivoire	323	46 942	178.0	1	298	1.1	Community transmission
Democratic Republic of the Congo	317	30 863	34.5	3	779	0.9	Community transmission
Gabon	308	24 107	1 083.1	4	147	6.6	Community transmission
Mauritania	308	19 114	411.1	1	458	9.9	Community transmission
Nigeria	277	165 979	80.5	1	2 067	1.0	Community transmission
Guinea	254	22 988	175.0	7	158	1.2	Community transmission
Senegal	195	41 023	245.0	5	1 129	6.7	Community transmission

Reporting Country/Territory/Area ⁱ	New cases in last 7 days	Cumulative cases	Cumulative cases per 100 thousand population	New deaths in last 7 days	Cumulative deaths	Cumulative deaths per 100 thousand population	Transmission classification ⁱⁱ
Burundi	165	4 494	37.8	0	6	0.1	Community transmission
Mozambique	158	70 568	225.8	5	831	2.7	Community transmission
Central African Republic	144	7 010	145.1	1	96	2.0	Community transmission
Congo	133	11 476	208.0	2	150	2.7	Community transmission
Zimbabwe	125	38 679	260.2	4	1 586	10.7	Community transmission
Togo	108	13 352	161.3	0	125	1.5	Community transmission
Eritrea	88	3 932	110.9	2	14	0.4	Community transmission
Malawi	64	34 274	179.2	0	1 153	6.0	Community transmission
Mali	60	14 236	70.3	1	512	2.5	Community transmission
Benin	41	8 025	66.2	0	101	0.8	Community transmission
Mauritius	34	1 322	103.9	0	17	1.3	Clusters of cases
Niger	34	5 364	22.2	0	192	0.8	Community transmission
Gambia	32	5 978	247.4	3	178	7.4	Community transmission
Eswatini	31	18 550	1 598.9	0	672	57.9	Community transmission
Chad	22	4 923	30.0	0	173	1.1	Community transmission
Burkina Faso	19	13 414	64.2	1	165	0.8	Community transmission
South Sudan	18	10 670	95.3	0	115	1.0	Community transmission
Lesotho	16	10 806	504.4	0	320	14.9	Community transmission
Liberia	14	2 142	42.4	0	85	1.7	Community transmission
Sierra Leone	14	4 117	51.6	0	79	1.0	Community transmission
Comoros	10	3 940	453.1	0	146	16.8	Community transmission
Sao Tome and Principe	7	2 334	1 065.0	1	36	16.4	Community transmission
Guinea-Bissau	3	3 749	190.5	1	68	3.5	Community transmission
Cameroon	0	76 756	289.1	0	1 230	4.6	Community transmission
United Republic of Tanzania	0	509	0.9	0	21	0.0	Pending
Territoriesⁱⁱⁱ							
Réunion	922	23 566	2 632.2	7	176	19.7	Community transmission

Reporting Country/Territory/Area ⁱ	New cases in last 7 days	Cumulative cases	Cumulative cases per 100 thousand population	New deaths in last 7 days	Cumulative deaths	Cumulative deaths per 100 thousand population	Transmission classification ⁱⁱ
Mayotte	0	20 176	7 395.5	0	171	62.7	Community transmission
Americas	1 222 225	65 980 739	6 451.1	31 759	1 615 127	157.9	
Brazil	451 424	15 970 949	7 513.6	13 681	446 309	210.0	Community transmission
Argentina	213 046	3 482 512	7 705.4	3 538	73 391	162.4	Community transmission
United States of America	188 410	32 762 914	9 898.1	4 032	583 696	176.3	Community transmission
Colombia	107 590	3 192 050	6 273.3	3 469	83 719	164.5	Community transmission
Chile	43 161	1 323 413	6 923.0	652	28 386	148.5	Community transmission
Peru	36 517	1 915 566	5 809.7	1 961	67 569	204.9	Community transmission
Canada	33 722	1 352 121	3 582.5	293	25 162	66.7	Community transmission
Uruguay	23 334	258 540	7 442.7	391	3 760	108.2	Community transmission
Paraguay	17 591	327 229	4 587.8	633	8 115	113.8	Community transmission
Costa Rica	16 478	299 219	5 873.8	218	3 765	73.9	Community transmission
Bolivia (Plurinational State of)	16 337	346 070	2 964.7	406	13 857	118.7	Community transmission
Mexico	14 749	2 392 744	1 855.8	1 097	221 256	171.6	Community transmission
Cuba	8 611	131 832	1 163.9	67	863	7.6	Community transmission
Ecuador	8 320	417 840	2 368.3	488	20 180	114.4	Community transmission
Venezuela (Bolivarian Republic of)	8 044	221 042	777.3	117	2 483	8.7	Community transmission
Guatemala	6 936	247 106	1 379.3	151	7 996	44.6	Community transmission
Dominican Republic	6 413	282 685	2 605.9	37	3 606	33.2	Community transmission
Honduras	6 304	231 560	2 337.9	196	6 133	61.9	Community transmission
Trinidad and Tobago	3 556	18 935	1 353.0	83	348	24.9	Community transmission
Panama	3 265	373 308	8 651.9	29	6 321	146.5	Community transmission
El Salvador	1 305	72 220	1 113.4	29	2 211	34.1	Community transmission
Suriname	1 035	12 742	2 172.1	20	243	41.4	Community transmission
Guyana	1 026	16 014	2 036.0	20	355	45.1	Community transmission
Jamaica	666	47 899	1 617.6	69	912	30.8	Community transmission

Reporting Country/Territory/Area ⁱ	New cases in last 7 days	Cumulative cases	Cumulative cases per 100 thousand population	New deaths in last 7 days	Cumulative deaths	Cumulative deaths per 100 thousand population	Transmission classification ⁱⁱ
Haiti	342	13 735	120.5	9	280	2.5	Community transmission
Bahamas	315	11 499	2 924.1	5	225	57.2	Clusters of cases
Saint Lucia	147	4 935	2 687.5	2	77	41.9	Community transmission
Nicaragua	82	5 731	86.5	1	185	2.8	Community transmission
Belize	50	12 764	3 210.0	0	323	81.2	Community transmission
Saint Vincent and the Grenadines	41	1 973	1 778.4	0	12	10.8	Community transmission
Barbados	24	3 985	1 386.7	1	47	16.4	Community transmission
Dominica	6	184	255.6	0	0	0.0	Clusters of cases
Antigua and Barbuda	4	1 255	1 281.5	0	42	42.9	Clusters of cases
Saint Kitts and Nevis	1	46	86.5	0	0	0.0	Sporadic cases
Grenada	0	161	143.1	0	1	0.9	Sporadic cases
Territoriesⁱⁱⁱ							
French Guiana	1 315	22 780	7 626.8	4	112	37.5	Community transmission
Puerto Rico	1 184	137 610	4 810.1	40	2 471	86.4	Community transmission
Guadeloupe	438	16 517	4 128.0	10	255	63.7	
Martinique	120	11 789	3 141.5	3	93	24.8	Community transmission
Sint Maarten	74	2 346	5 470.8	0	27	63.0	Community transmission
Aruba	66	10 892	10 201.7	2	106	99.3	Community transmission
Saint Martin	56	1 895	4 901.8	1	15	38.8	Community transmission
United States Virgin Islands	41	3 308	3 167.8	0	27	25.9	Community transmission
Bermuda	22	2 488	3 995.3	0	32	51.4	Community transmission
Curaçao	22	12 266	7 475.0	4	122	74.3	Community transmission
Bonaire	16	1 580	7 554.4	0	17	81.3	Community transmission
Cayman Islands	9	574	873.4	0	2	3.0	Sporadic cases
Saint Barthélemy	6	1 016	10 278.2	0	1	10.1	Clusters of cases
Turks and Caicos Islands	4	2 408	6 219.3	0	17	43.9	Clusters of cases

Reporting Country/Territory/Area ⁱ	New cases in last 7 days	Cumulative cases	Cumulative cases per 100 thousand population	New deaths in last 7 days	Cumulative deaths	Cumulative deaths per 100 thousand population	Transmission classification ⁱⁱ
Anguilla	0	109	726.6	0	0	0.0	Clusters of cases
British Virgin Islands	0	248	820.2	0	1	3.3	Clusters of cases
Falkland Islands (Malvinas)	0	63	1 808.8	0	0	0.0	Sporadic cases
Montserrat	0	20	400.1	0	1	20.0	No cases
Saba	0	7	362.1	0	0	0.0	Sporadic cases
Saint Pierre and Miquelon	0	25	431.4	0	0	0.0	No cases
Sint Eustatius	0	20	637.1	0	0	0.0	No cases
Eastern Mediterranean	215 536	9 863 946	1 349.7	4 203	197 964	27.1	
Iran (Islamic Republic of)	84 012	2 823 887	3 362.1	1 748	78 381	93.3	Community transmission
Iraq	27 232	1 164 149	2 894.3	228	16 158	40.2	Community transmission
Pakistan	22 717	897 468	406.3	710	20 177	9.1	Community transmission
Bahrain	15 777	214 870	12 627.7	72	809	47.5	Community transmission
United Arab Emirates	9 585	554 516	5 606.6	19	1 648	16.7	Clusters of cases
Tunisia	8 267	334 099	2 826.9	403	12 182	103.1	Community transmission
Egypt	8 170	252 690	246.9	401	14 670	14.3	Clusters of cases
Saudi Arabia	7 578	439 847	1 263.4	90	7 237	20.8	Community transmission
Kuwait	7 422	298 223	6 983.2	37	1 724	40.4	Community transmission
Jordan	6 361	729 706	7 151.8	114	9 357	91.7	Community transmission
Oman	5 011	209 924	4 110.8	72	2 256	44.2	Community transmission
Lebanon	2 985	538 218	7 885.5	85	7 670	112.4	Community transmission
Afghanistan	2 244	65 728	168.8	60	2 802	7.2	Community transmission
Qatar	2 233	215 160	7 468.1	17	543	18.8	Community transmission
Morocco	1 995	516 812	1 400.2	21	9 119	24.7	Community transmission
Libya	1 720	182 899	2 661.8	20	3 105	45.2	Community transmission
Syrian Arab Republic	359	24 052	137.4	36	1 729	9.9	Community transmission
Somalia	137	14 623	92.0	14	767	4.8	Community transmission

Reporting Country/Territory/Area ⁱ	New cases in last 7 days	Cumulative cases	Cumulative cases per 100 thousand population	New deaths in last 7 days	Cumulative deaths	Cumulative deaths per 100 thousand population	Transmission classification ⁱⁱ
Yemen	111	6 653	22.3	19	1 305	4.4	Community transmission
Djibouti	77	11 491	1 163.1	1	152	15.4	Community transmission
Sudan	0	34 889	79.6	0	2 446	5.6	Clusters of cases
Territoriesⁱⁱⁱ							
occupied Palestinian territory	1 543	334 042	6 548.0	36	3 727	73.1	Community transmission
Europe	524 944	54 110 276	5 799.2	12 983	1 134 786	121.6	
Kosovo ^[1]	370	107 170		16	2 229		Community transmission
Turkey	71 786	5 178 648	6 140.3	1 534	46 071	54.6	Community transmission
Russian Federation	61 260	5 001 505	3 427.2	2 611	118 482	81.2	Clusters of cases
Germany	55 524	3 648 958	4 387.5	1 284	87 380	105.1	Community transmission
France	51 986	5 820 918	8 949.8	637	107 403	165.1	Community transmission
Italy	34 816	4 188 190	7 022.3	1 090	125 153	209.8	Clusters of cases
Netherlands	29 215	1 622 761	9 322.1	100	17 536	100.7	Community transmission
Ukraine	28 657	2 182 521	4 990.5	1 293	49 368	112.9	Community transmission
Sweden	18 717	1 058 341	10 247.7	10	14 366	139.1	Community transmission
Spain	17 740	3 631 661	7 672.6	98	79 601	168.2	Community transmission
Belgium	16 164	1 048 880	9 102.9	131	24 841	215.6	Community transmission
Greece	13 098	388 929	3 628.6	369	11 734	109.5	Community transmission
The United Kingdom	12 466	4 460 450	6 570.5	41	127 716	188.1	Community transmission
Poland	11 543	2 865 622	7 549.4	1 264	72 928	192.1	Community transmission
Belarus	10 059	384 773	4 072.0	70	2 761	29.2	Community transmission
Kazakhstan	8 848	423 193	2 253.8	0	4 933	26.3	Clusters of cases
Georgia	7 198	337 573	8 462.2	180	4 622	115.9	Community transmission
Denmark	7 120	272 659	4 682.6	5	2 507	43.1	Community transmission
Switzerland	5 536	684 265	7 906.4	21	10 169	117.5	Community transmission
Lithuania	5 313	270 849	9 693.6	82	4 185	149.8	Community transmission
Czechia	5 053	1 657 893	15 503.1	119	30 020	280.7	Community transmission

Reporting Country/Territory/Area ⁱ	New cases in last 7 days	Cumulative cases	Cumulative cases per 100 thousand population	New deaths in last 7 days	Cumulative deaths	Cumulative deaths per 100 thousand population	Transmission classification ⁱⁱ
Austria	4 463	636 861	7 154.9	73	10 280	115.5	Community transmission
Romania	3 902	1 075 236	5 562.9	400	29 885	154.6	Community transmission
Serbia	3 783	709 673	10 245.5	102	6 766	97.7	Community transmission
Croatia	3 596	353 986	8 722.8	195	7 903	194.7	Community transmission
Hungary	3 525	801 672	8 205.8	300	29 475	301.7	Community transmission
Latvia	3 115	130 712	6 851.9	66	2 323	121.8	Community transmission
Ireland	3 033	258 258	5 202.2	0	4 941	99.5	Community transmission
Portugal	2 963	844 811	8 205.3	11	17 017	165.3	Clusters of cases
Azerbaijan	2 864	332 235	3 276.7	83	4 851	47.8	Clusters of cases
Bulgaria	2 524	416 565	5 992.5	237	17 487	251.6	Clusters of cases
Slovenia	2 513	251 531	12 001.3	19	4 675	223.1	Clusters of cases
Norway	2 479	120 754	2 249.7	7	781	14.6	Clusters of cases
Kyrgyzstan	2 038	102 511	1 571.2	48	1 751	26.8	Clusters of cases
Uzbekistan	1 781	98 451	294.2	12	680	2.0	Clusters of cases
Estonia	1 539	128 592	9 676.0	18	1 240	93.3	Clusters of cases
Slovakia	1 312	388 835	7 124.3	68	12 292	225.2	Clusters of cases
Finland	1 279	91 157	1 649.8	3	932	16.9	Community transmission
Armenia	1 088	221 948	7 490.1	69	4 392	148.2	Community transmission
Bosnia and Herzegovina	940	203 253	6 195.2	110	9 117	277.9	Community transmission
Cyprus	937	71 836	8 089.6	7	353	39.8	Clusters of cases
Republic of Moldova	865	254 601	6 311.4	56	6 072	150.5	Community transmission
Luxembourg	623	69 545	11 107.5	4	810	129.4	Community transmission
North Macedonia	392	155 028	7 441.2	99	5 296	254.2	Clusters of cases
Montenegro	350	99 240	15 801.0	11	1 572	250.3	Clusters of cases
Albania	198	132 176	4 593.0	13	2 442	84.9	Clusters of cases
Israel	198	839 316	9 696.9	17	6 398	73.9	Community transmission
Andorra	99	13 609	17 613.4	0	127	164.4	Community transmission

Reporting Country/Territory/Area ⁱ	New cases in last 7 days	Cumulative cases	Cumulative cases per 100 thousand population	New deaths in last 7 days	Cumulative deaths	Cumulative deaths per 100 thousand population	Transmission classification ⁱⁱ
Malta	26	30 504	5 928.1	0	417	81.0	Clusters of cases
Iceland	19	6 556	1 800.4	0	29	8.0	Community transmission
Liechtenstein	9	3 088	7 969.6	0	57	147.1	Sporadic cases
Monaco	8	2 501	6 372.9	0	32	81.5	Sporadic cases
San Marino	2	5 089	14 995.0	0	90	265.2	Community transmission
Holy See	0	26	3 213.8	0	0	0.0	Sporadic cases
Tajikistan	0	13 714	143.8	0	91	1.0	Pending
Territoriesⁱⁱⁱ							
Faroe Islands	6	676	1 383.4	0	1	2.0	Sporadic cases
Greenland	3	34	59.9	0	0	0.0	No cases
Jersey	2	3 238	3 003.8	0	69	64.0	Community transmission
Isle of Man	1	1 591	1 871.1	0	29	34.1	No cases
Gibraltar	0	4 286	12 721.5	0	94	279.0	Clusters of cases
Guernsey	0	822	1 275.1	0	14	21.7	Community transmission
South-East Asia	2 006 085	30 088 649	1 488.5	32 199	372 277	18.4	
India	1 846 055	26 530 132	1 922.5	28 982	299 266	21.7	Clusters of cases
Nepal	57 939	505 643	1 735.4	1 297	6 153	21.1	Community transmission
Indonesia	33 270	1 769 940	647.1	1 238	49 205	18.0	Community transmission
Thailand	28 053	129 500	185.5	187	776	1.1	Clusters of cases
Sri Lanka	20 771	161 242	753.0	237	1 178	5.5	Clusters of cases
Maldives	10 583	54 365	10 057.5	27	123	22.8	Clusters of cases
Bangladesh	7 930	787 726	478.3	224	12 348	7.5	Community transmission
Timor-Leste	1 202	5 481	415.7	3	11	0.8	Community transmission
Myanmar	169	143 228	263.2	4	3 216	5.9	Clusters of cases
Bhutan	113	1 392	180.4	0	1	0.1	Clusters of cases
Western Pacific	131 655	2 861 544	145.7	2 128	43 058	2.2	
Philippines	40 034	1 178 207	1 075.2	895	19 946	18.2	Community transmission

Reporting Country/Territory/Area ⁱ	New cases in last 7 days	Cumulative cases	Cumulative cases per 100 thousand population	New deaths in last 7 days	Cumulative deaths	Cumulative deaths per 100 thousand population	Transmission classification ⁱⁱ
Malaysia	38 785	505 115	1 560.6	333	2 199	6.8	Community transmission
Japan	36 286	714 274	564.7	773	12 236	9.7	Clusters of cases
Republic of Korea	4 259	135 929	265.1	31	1 931	3.8	Clusters of cases
Mongolia	3 830	51 931	1 584.1	39	244	7.4	Clusters of cases
Cambodia	3 021	25 205	150.8	26	176	1.1	Sporadic cases
China	2 524	106 715	7.3	5	4 863	0.3	Clusters of cases
Papua New Guinea	1 259	15 187	169.7	20	156	1.7	Community transmission
Viet Nam	1 007	5 119	5.3	5	41	0.0	Clusters of cases
Singapore	263	61 799	1 056.3	1	32	0.5	Sporadic cases
Lao People's Democratic Republic	212	1 782	24.5	0	2	0.0	Sporadic cases
Fiji	38	206	23.0	0	4	0.4	Sporadic cases
Australia	37	30 004	117.7	0	910	3.6	Clusters of cases
New Zealand	17	2 307	47.8	0	26	0.5	Sporadic cases
Brunei Darussalam	4	236	53.9	0	3	0.7	Sporadic cases
Solomon Islands	0	20	2.9	0	0	0.0	No cases
Territoriesⁱⁱⁱ							
Guam	41	7 896	4 678.4	0	139	82.4	Clusters of cases
French Polynesia	29	18 844	6 708.2	0	141	50.2	Sporadic cases
Northern Mariana Islands (Commonwealth of the)	8	181	314.5	0	2	3.5	Pending
New Caledonia	1	125	43.8	0	0	0.0	Sporadic cases
Marshall Islands	0	4	6.8	0	0	0.0	No cases
Samoa	0	1	0.5	0	0	0.0	No cases
Vanuatu	0	3	1.0	0	0	0.0	No cases
Wallis and Futuna	0	454	4 037.0	0	7	62.2	Sporadic cases
Global	4 144 658	166 352 007		84 306	3 449 189		

*See Annex 3: Data, table and figure notes

Annex 2. List of countries/territories/areas reporting variants of concern as of 25 May 2021**

Country/Territory/ Area	B.1.1.7	B.1.351	P.1	B.1.617.1	B.1.617.2	B.1.617.3	B.1.617x
Afghanistan	●	-	-	-	-	-	-
Albania	●	-	-	-	-	-	-
Algeria	●	-	-	-	●*	-	-
Angola	●	●	-	-	-	-	-
Argentina	●	●	●	●	●	-	-
Armenia	○	-	-	-	-	-	-
Aruba	●	●	●	-	●	-	-
Australia	●	●	●	○	○	-	-
Austria	●	●	●	●	●	-	-
Azerbaijan	●	-	-	-	-	-	-
Bahrain	●	●	-	●	●	-	-
Bangladesh	●	●	○	-	●	-	-
Barbados	●	-	-	-	-	-	-
Belarus	●	-	-	-	-	-	-
Belgium	●	●	●	●	●	-	-
Belize	●	-	-	-	-	-	-
Bolivia (Plurinational State of)	●	-	-	-	-	-	-
Bonaire	●	-	-	-	-	-	-
Bosnia and Herzegovina	○	-	-	-	-	-	-
Botswana	-	●	-	-	●*	-	-
Brazil	●	●	●	-	●*	-	-
Brunei Darussalam	●	●	-	-	-	-	-
Bulgaria	●	-	-	-	-	-	-
Cabo Verde	●	-	-	-	-	-	-
Cambodia	●	-	-	○	-	-	-
Cameroon	●	●	-	-	-	-	-

Country/Territory/ Area	B.1.1.7	B.1.351	P.1	B.1.617.1	B.1.617.2	B.1.617.3	B.1.617x
Canada	●	●	●	●	●	●	-
Cayman Islands	●	-	-	-	-	-	-
Central African Republic	●	-	-	-	-	-	-
Chile	●	●	●	-	-	-	-
China	●	●	●	○	○	-	-
Colombia	●	-	●	-	-	-	-
Comoros	-	●	-	-	-	-	-
Congo	●	-	-	-	-	-	-
Costa Rica	●	●	●	-	-	-	-
Croatia	●	●	-	-	-	-	-
Cuba	●	●	-	-	-	-	-
Curaçao	●	-	●*	●*	-	-	-
Cyprus	●	●*	-	-	-	-	-
Czechia	●	●	-	●	-	-	-
Côte d'Ivoire	●	●	-	-	-	-	-
Democratic Republic of the Congo	●	●	-	-	●	-	-
Denmark	●	●	●	●	●	-	-
Dominica	●	-	-	-	-	-	-
Dominican Republic	●	-	-	-	-	-	-
Ecuador	●	●*	●	-	-	-	-
Egypt	●	-	-	-	-	-	-
Equatorial Guinea	●	●	-	-	-	-	-
Estonia	●	●	-	-	-	-	-
Eswatini	-	●	-	-	-	-	-
Ethiopia	○	-	-	-	-	-	-
Faroe Islands	-	-	●	-	-	-	-

Country/Territory/ Area	B.1.1.7	B.1.351	P.1	B.1.617.1	B.1.617.2	B.1.617.3	B.1.617x
Fiji	-	-	-	-	-	-	-
Finland	●	●	●	-	●*	-	-
France	●	●	●	●	●	-	-
French Guiana	●	●	●	-	-	-	-
French Polynesia	●	-	●	-	-	-	-
Gabon	●	○	-	-	-	-	-
Gambia	●	-	-	-	-	-	-
Georgia	●	-	-	-	-	-	-
Germany	●	●	●	●	●	●*	-
Ghana	●	●	-	-	●*	-	-
Gibraltar	●	-	-	-	-	-	-
Greece	●	●	-	●	●	-	-
Grenada	●	-	-	-	-	-	-
Guadeloupe	●	●	-	●	-	-	-
Guam	●	-	-	-	-	-	-
Guinea	●	●*	-	-	-	-	-
Guinea-Bissau	●*	●*	-	-	-	-	-
Guyana	-	-	●	-	-	-	-
Haiti	●	-	●	-	-	-	-
Hungary	●	○	-	-	-	-	-
Iceland	●	-	-	-	-	-	-
India	●	●	●	●	●	●	-
Indonesia	●	●	-	●	●	-	-
Iran (Islamic Republic of)	●	●	-	-	-	-	-
Iraq	●	-	-	-	-	-	-
Ireland	●	●	●	●	●	-	-
Israel	●	●	●	●	●	-	-

Country/Territory/ Area	B.1.1.7	B.1.351	P.1	B.1.617.1	B.1.617.2	B.1.617.3	B.1.617x
Italy	●	●	●	●	●	-	-
Jamaica	●	-	-	-	-	-	-
Japan	●	●	●	●	●	-	-
Jordan	●	●	●	●	●	-	-
Kazakhstan	○	○	-	-	-	-	-
Kenya	●	●	-	-	●*	-	-
Kosovo ^[1]	●	-	-	-	-	-	-
Kuwait	●	-	-	-	-	-	-
Kyrgyzstan	●	●	-	-	-	-	-
Lao People's Democratic Republic	●	-	-	-	-	-	-
Latvia	●	●	●	-	-	-	-
Lebanon	●	-	-	-	-	-	-
Lesotho	-	●	-	-	-	-	-
Liberia	●*	-	-	-	-	-	-
Libya	●	●	-	-	-	-	-
Liechtenstein	●	-	-	-	-	-	-
Lithuania	●	●	●	-	-	-	-
Luxembourg	●	●	●	●	●	-	-
Madagascar	-	●	-	-	-	-	-
Malawi	●	●	-	-	-	-	-
Malaysia	●	●	-	●	○	-	-
Malta	●	○	●	-	-	-	-
Martinique	●	●	-	-	-	-	-
Mauritius	○	●	-	-	-	-	-
Mayotte	●	●	-	-	-	-	-
Mexico	●	●	●	●	●	-	-
Monaco	●	○	-	-	-	-	-
Montenegro	●	-	-	-	-	-	-
Morocco	●	-	-	-	-	-	-

Country/Territory/ Area	B.1.1.7	B.1.351	P.1	B.1.617.1	B.1.617.2	B.1.617.3	B.1.617x
Mozambique	-	●	-	-	-	-	-
Namibia	-	●	-	-	-	-	-
Nepal	●	-	-	●	-	-	-
Netherlands	●	●	●	●	●	-	-
New Caledonia	●	-	-	-	-	-	-
New Zealand	●	●	○	○	○	-	-
Niger	●	-	-	-	-	-	-
Nigeria	●	-	-	-	-	-	-
North Macedonia	●	●	-	-	-	-	-
Norway	●	●	●	●	●	-	-
Occupied Palestinian Territory	●	●	-	-	-	-	-
Oman	●	-	-	-	-	-	-
Pakistan	●	●	●	-	-	-	-
Panama	●	●	●	-	●	-	-
Paraguay	-	-	●	-	-	-	-
Peru	●	-	●	-	-	-	-
Philippines	●	●	●	-	○	-	-
Poland	●	○	●	-	●	-	-
Portugal	●	●	●	●	○	-	-
Puerto Rico	●	●	●	-	-	-	-
Qatar	●	●	-	-	-	-	-
Republic of Korea	●	●	●	○	○	-	-
Republic of Moldova	○	-	-	-	-	-	-
Romania	●	●	●	-	●	-	-
Russian Federation	●	●	-	●	●*	●	-
Rwanda	●	○	-	-	-	-	-
Réunion	●	●	●	-	○	-	-
Saint Barthélemy	●	-	-	-	-	-	-
Saint Lucia	●	-	-	-	-	-	-

Country/Territory/ Area	B.1.1.7	B.1.351	P.1	B.1.617.1	B.1.617.2	B.1.617.3	B.1.617x
Saint Martin	●	●	-	-	-	-	-
Saudi Arabia	●	●*	-	-	-	-	-
Senegal	●	-	-	-	-	-	-
Serbia	●	-	-	-	-	-	-
Seychelles	-	●	-	-	-	-	-
Singapore	●	●	●	●	●	-	-
Sint Maarten	●	●	-	●	-	-	-
Slovakia	●	●	-	-	-	-	-
Slovenia	●	●	●	-	●	-	-
South Africa	●	●	-	-	●	-	-
Spain	●	●	●	●	●	-	-
Sri Lanka	●	●	-	-	●	-	-
Suriname	●	●	●	-	-	-	-
Sweden	●	●	●	●	●	-	-
Switzerland	●	●	○	●	●	-	-
Thailand	●	●	●	●	○*	-	-
Togo	●	●	-	-	-	-	-
Trinidad and Tobago	●	-	●	-	-	-	-
Tunisia	●	●	-	-	-	-	-
Turkey	●	●	●	-	-	-	-
Turks and Caicos Islands	●	-	-	-	-	-	-
Uganda	●	●	-	○	●	-	-
Ukraine	●	○	-	-	-	-	-
United Arab Emirates	●	●	●	-	-	-	-
United Kingdom	●	●	●	●	●	●	-
United Republic of Tanzania	-	●	-	-	-	-	-

Country/Territory/ Area	B.1.1.7	B.1.351	P.1	B.1.617.1	B.1.617.2	B.1.617.3	B.1.617x
United States of America	●	●	●	●	●	●	-
Uruguay	●	-	●	-	-	-	-
Uzbekistan	●	●	-	-	-	-	-

Country/Territory/ Area	B.1.1.7	B.1.351	P.1	B.1.617.1	B.1.617.2	B.1.617.3	B.1.617x
Venezuela (Bolivarian Republic of)	-	-	●	-	-	-	-
Viet Nam	●	●	-	-	●	-	-

Country/Territory/ Area	B.1.1.7	B.1.351	P.1	B.1.617.1	B.1.617.2	B.1.617.3	B.1.617x
Wallis and Futuna	●	-	-	-	-	-	-
Zambia	-	●	-	-	-	-	-
Zimbabwe	-	○	-	-	●*	-	-

*Newly reported in this update.

“●” indicates that information for this variant was received by WHO from official sources.

“○” indicates that information for this variant was received by WHO from unofficial sources and will be reviewed as more information become available.

Variant B.1.617.1 for Angola was excluded this week based on further information received.

**Includes countries/territories/areas reporting the detection of VOCs among travelers (e.g., imported cases detected at points of entry), or local cases (detected in the community). Efforts are ongoing to differentiate these in future reports.

**See also [Annex 3: Data, table and figure notes](#)

Annex 3. Data, table and figure notes

Data presented are based on official laboratory-confirmed COVID-19 case and deaths reported to WHO by country/territories/areas, largely based upon WHO [case definitions](#) and [surveillance guidance](#). While steps are taken to ensure accuracy and reliability, all data are subject to continuous verification and change, and caution must be taken when interpreting these data as several factors influence the counts presented, with variable underestimation of true case and death incidence, and variable delays to reflecting these data at global level. Case detection, inclusion criteria, testing strategies, reporting practices, and data cut-off and lag times differ between countries/territories/areas. A small number of countries/territories/areas report combined probable and laboratory-confirmed cases. Differences are to be expected between information products published by WHO, national public health authorities, and other sources. Due to public health authorities conducting data reconciliation exercises which remove large numbers of cases or deaths from their total counts, negative numbers may be displayed in the new cases/deaths columns as appropriate. When additional details become available that allow the subtractions to be suitably apportioned to previous days, graphics will be updated accordingly. A record of historic data adjustment made is available upon request by emailing epi-data-support@who.int. Please specify the country(ies) of interest, time period(s), and purpose of the request/intended usage. Prior situation reports will not be edited; see covid19.who.int for the most up-to-date data. Global totals include 758 cases and 13 deaths reported from international conveyances.

The designations employed, and the presentation of these materials do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement. Countries, territories and areas are arranged under the administering WHO region. The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by WHO in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

^[1] All references to Kosovo should be understood to be in the context of the United Nations Security Council resolution 1244 (1999). In the map, number of cases of Serbia and Kosovo (UNSCR 1244, 1999) have been aggregated for visualization purposes.

ⁱ Excludes countries, territories, and areas that have never reported a confirmed COVID-19 case (Annex 1), or the detection of a variant of concern (Annex 2).

ⁱⁱ Transmission classification is based on a process of country/territory/area self-reporting. Classifications are reviewed on a weekly basis and may be revised as new information becomes available. Differing degrees of transmission may be present within countries/territories/areas. For further information, please see: [Considerations for implementing and adjusting public health and social measures in the context of COVID-19](#):

- No (active) cases: No new cases detected for at least 28 days (two times the maximum incubation period), in the presence of a robust surveillance system. This implies a near-zero risk of infection for the general population.
- Imported / Sporadic cases: Cases detected in the past 14 days are all imported, sporadic (e.g., laboratory acquired or zoonotic) or are all linked to imported/sporadic cases, and there are no clear signals of further locally acquired transmission. This implies minimal risk of infection for the general population.

- Clusters of cases: Cases detected in the past 14 days are predominantly limited to well-defined clusters that are not directly linked to imported cases, but which are all linked by time, geographic location and common exposures. It is assumed that there are a number of unidentified cases in the area. This implies a low risk of infection to others in the wider community if exposure to these clusters is avoided.
- Community transmission: Which encompasses a range of levels from low to very high incidence, as described below and informed by a series of indicators described in the aforementioned guidance. As these subcategorizations are not currently collated at the global level, but rather intended for use by national and sub-national public health authorities for local decision-making, community transmission has not been disaggregated in this information product.
 - CT1: Low incidence of locally acquired, widely dispersed cases detected in the past 14 days, with many of the cases not linked to specific clusters; transmission may be focused in certain population sub-groups. Low risk of infection for the general population.
 - CT2: Moderate incidence of locally acquired, widely dispersed cases detected in the past 14 days; transmission less focused in certain population sub-groups. Moderate risk of infection for the general population.
 - CT3: High incidence of locally acquired, widely dispersed cases in the past 14 days; transmission widespread and not focused in population sub-groups. High risk of infection for the general population.
 - CT4: Very high incidence of locally acquired, widely dispersed cases in the past 14 days. Very high risk of infection for the general population.
- Pending: transmission classification has not been reported to WHO.

iii “Territories” include territories, areas, overseas dependencies and other jurisdictions of similar status.