

# Weeks 52-1 COVID-19 Update

27 December 2020 – 9 January 2021

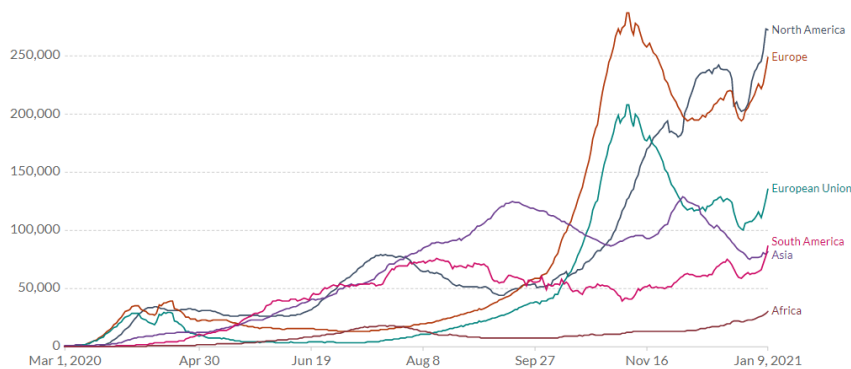
Over 88.3 million cases confirmed and reported, with over 1.9 million deaths reported to date (unofficially over 90.4 million cases and over 1.9 million deaths, over 23.8 million active cases (increase) and over 64.6 million recovered). **The US, Mexico, the UK, are reporting the highest daily incidences in death** in the last 24 hours. **The United States, The UK, Brazil, India, Russia, South Africa, France, Italy, Colombia, Germany, Mexico, Argentina, Indonesia reporting the highest daily increases**, all reporting above 10,000 newly confirmed cases in the past 24 hours.<sup>1</sup> For 3 weeks in a row over 4 million new cases have been reported per week globally. Last week saw a global increase in deaths by 3%. The Africa region and WHO Western Pacific region continue to see relatively high increases in incidence for both cases and deaths for the past two weeks.

## Daily new confirmed COVID-19 cases

Shown is the rolling 7-day average. The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing.



[LINEAR](#) [LOG](#)



Source: Johns Hopkins University CSSE COVID-19 Data - Last updated 10 January, 11:02 (London time)

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## Global Cumulative Incidence trends:

- 10 to 20 million- 44 days
- 20 to 30 million- 37 days
- 30 to 40 million- 31 days
- 40 to 50 million- 21 days
- 50 to 60 million- 17 days
- 60 to 70 million- 17 days
- 70 to 80 million- 16 days

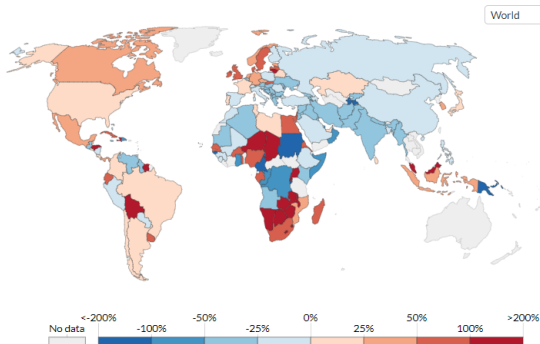
## Biweekly change in confirmed COVID-19 deaths, Jan 9, 2021

The biweekly growth rate on any given date measures the percentage change in the number of new confirmed deaths over the last 14 days relative to the number in the previous 14 days.



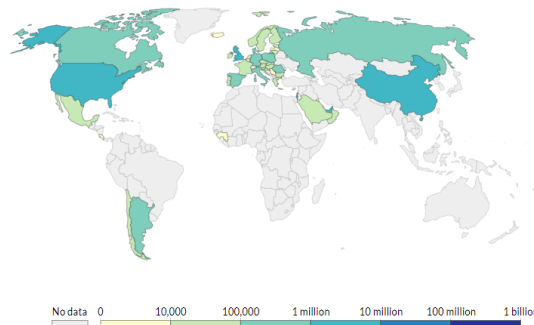
## Cumulative COVID-19 vaccination doses administered, Jan 10, 2021

This is counted as a single dose, and may not equal the total number of people vaccinated, depending on the specific dose regime (e.g. people receive multiple doses).



Source: Johns Hopkins University CSSE COVID-19 Data - Last updated 10 January, 11:02 (London time)

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Source: Official data collated by Our World in Data - Last updated 10 January, 20:00 (London time)

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Note: Upper left (ECDC) map changed scale for shading compared to the previous week to give more definition to the many countries reporting exceptionally high caseloads. Upper Right: Vaccination progress shown above (Source: [Our World in Data](#))

## News / Political Context

- Countries with **highest reported new cases per 1 million daily increases** (Jan 10<sup>th</sup>)<sup>2</sup>:
  1. Andorra: 1,255
  2. Czechia: 1,225
  3. Ireland: 981
  4. Israel: 933
  5. Portugal: 930
- Countries with **highest reported new deaths per 1 million** (Jan 10<sup>th</sup>)
  1. Liechtenstein: 26.2
  2. Lithuania: 19.1
  3. Czechia: 16.6
  4. UK: 15.2
  5. Andorra: 12.5
- Test positivity is highest in Austria (68%), Mexico (44%), Bolivia (41%), Ukraine (41%), Oman (36%).
- **Daily confirmed deaths doubling most rapidly in Comoros, Uruguay, Eswatini, Lithuania.**<sup>3</sup>
- Cases doubling rapidly in **Barbados, Lesotho, Thailand, Uruguay.**<sup>4</sup>
- **New variant of SARS-CoV-2** has been detected in **South Africa**, with initial analysis indicating the variant (501Y.V2) may be more transmissible between people/ increases viral load within those infected ([WHO](#)). Investigations are ongoing to determine if it is associated with any change in the severity of infection, antibody response or vaccine efficacy.

<sup>1</sup> Official numbers and WHO visualizations available [here](#)

<sup>2</sup> Our World in Data [Incidence](#)

<sup>3</sup> <https://ourworldindata.org/coronavirus>

<sup>4</sup> Reference to ECDC data using <https://ourworldindata.org/coronavirus>

- Spread of this variant was first recorded in October, and now is representing the dominant variant in parts of SA. Additional details [here](#).
- **New variant of COVID-19** has spread quickly across southern UK (SARS-CoV-2 VUI 202012/01). Initial evidence shows the variant may spread more readily between people, but no evidence to support it may cause more severe illness or issues with vaccine efficacy. Research is still ongoing.<sup>5</sup>
  - The variant has now also been located in Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Italy, the Netherlands, Norway, Portugal, Spain and Sweden, Australia, Canada, Hong Kong SAR, India, Israel, Japan, Jordan, Lebanon, South Korea, Switzerland, and Singapore. More details available [here](#) (ECDC).
  - While still under investigation, studies thus far show no statistical significant increase in severity, death or likelihood of reinfection from the variant ([PHE](#)).
- Majority of ongoing vaccination taking place in North America and Europe, China, Argentina, Chile, Costa Rica, Bahrain, Israel, Saudi Arabia, UAE, Kuwait. Indonesia's Ulema Council (Islamic body has determined the Sinovac vaccine is "fit for consumption by Muslims".
- **Africa Region**
  - Africa has seen increased incidences in both cases and deaths for 4 consecutive weeks. The first week the region experienced an increase in cases of 20% and increase in deaths of 37%, and the second week the region saw an increase in cases by 13% compared to the previous week and 4% increase in deaths.
  - Highest number of new cases were reported in South Africa, Nigeria, Mauritania, and Namibia
  - Nigeria officials reporting strains in hospitals and isolation centres throughout the country as they continue to see a spike in new cases.

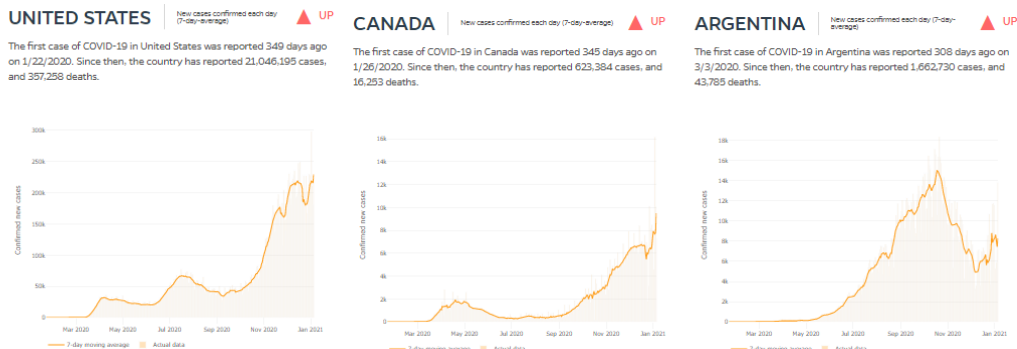
**SOUTH AFRICA** | New cases confirmed each day (7-day-average) ▲ UP

The first case of COVID-19 in South Africa was reported 306 days ago on 3/5/2020. Since then, the country has reported 1,127,799 cases, and 30,524 deaths.



[Charts looking at trends in confirmed cases shared to the left \(Johns Hopkins Coronavirus Resource Center\)](#)

- **Americas Region**
  - The region continues to report the highest incidence of cases in the world, reporting 47% of reported global cases. The majority of cases have been reported from the US, Brazil, Colombia, with the highest number of new deaths reported in the US, Brazil and Mexico.
  - The **US** reported a record daily increase in new cases on Thursday, January 7<sup>th</sup> with 299,904 cases reported (27% increase from the last holiday spike). The US is also reporting the highest few days of daily deaths, and California is reporting oxygen shortages.



[Some charts looking at trends in confirmed cases shared above \(Johns Hopkins Coronavirus Resource Center\)](#)

- **MENA Region**
  - Cases and deaths decreased for the 6<sup>th</sup> consecutive week, with 1% fewer cases and 9% fewer deaths reported than the week before. The Islamic Republic of Iran and Lebanon reported the highest number of cases over the past week

<sup>5</sup> [WHO Sit Rep 22 Dec 2020](#); [NYT 23 Dec 2020](#); [COVID-19 Genomics Consortium UK](#)

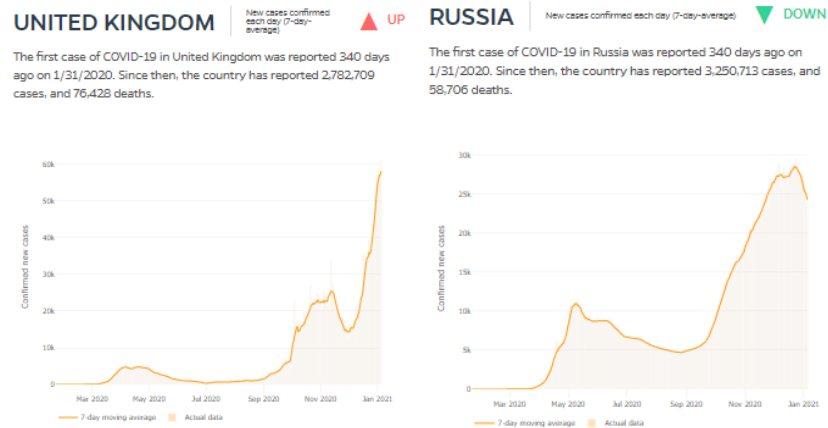
- *NOTE: Pakistan also reported high new cases and is reported in WHO EMRO region but falls in IFRC's Asia & Pacific Region.*

- Highest number of new deaths were reported in Iran, Pakistan and Egypt.

- **European Region:**

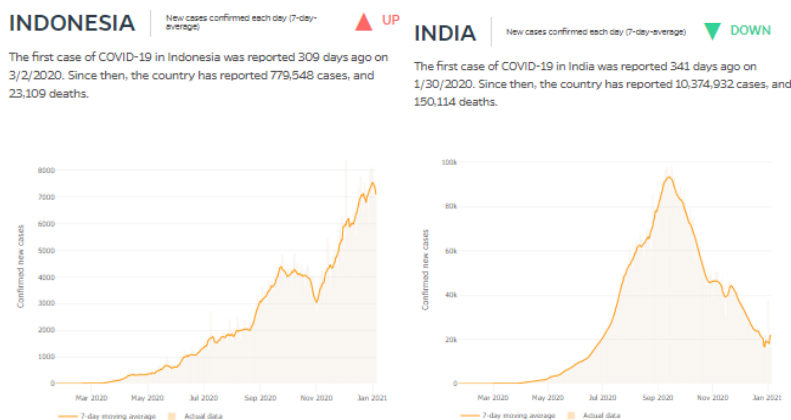
- Following a slight decrease in cases (3%) and small increase in deaths (by 2%), European region continues to represent the second highest incidence of cases and the highest incidence of deaths in the world (43% of all deaths globally). The highest number of cases and deaths were reported in the UK, Russia and Germany.
- Pooled data from 21 countries in the region show 1.3 patients per 100,000 population were in ICU due to COVID-19
- Mortality rate for EU/EEA & the UK was estimated at 103.2 per 1 million people across 31 countries
- **Switzerland** ([14-day incidence available here](#)) has a 7-day incidence of 5,031 new cases per 100,000 population, occupancy rate for ICU for COVID-19 estimated at 42%. Positive test rate 15.8% (PCR) and 12.3% (Antigen).

*Some charts looking at trends in confirmed cases shared below (Johns Hopkins Coronavirus Resource Center)*



- **Asia Pacific Region:**

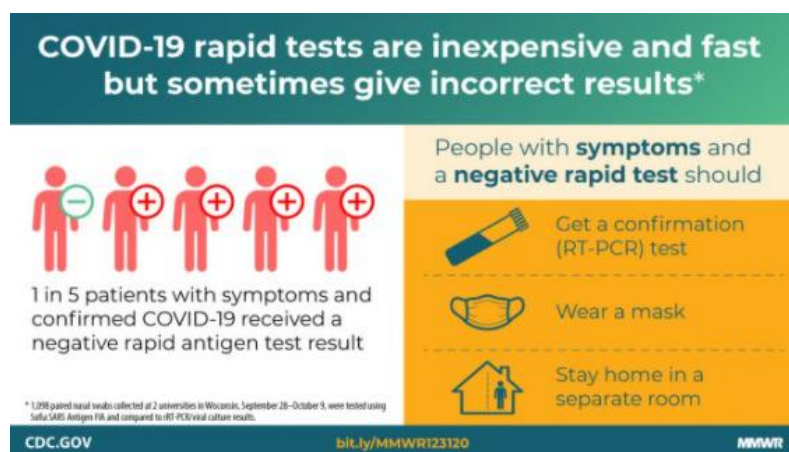
- The WHO South East Asia region continued to show declines in both cases and deaths compared to the previous two weeks. Countries with the highest number of new cases include India, Indonesia and Bangladesh.
- New cases in the Western Pacific Region have stabilized after 4 weeks on steady increases, however there was a 10% increase in deaths compared to the previous week. Japan, Malaysia & the Philippines continue to report the highest number of new cases in the region, highest deaths reported by Japan, the Philippines and Republic of Korea.
- **Pakistan** continues to report a high increase in both cases and deaths.
- Following a sharp increase in cases and provinces affected by COVID-19, **Thailand** has introduced new measures to curb COVID-19
- **New variant** of SARS-CoV-2 discovered in four passengers arriving in **Japan** in Brazil which is genetically distinct from the 501Y.V2 and VUI 202012/01. At this time the new variant does not appear to be more severe, or transmissible, but ongoing studies are underway.
- **Japan** experiencing one of the largest surges in COVID-19 cases, with a state of emergency declared in Tokyo.



*Some charts looking at trends in confirmed cases shared below (Johns Hopkins Coronavirus Resource Center)*

## Recent Research/ Evidence

- [Preliminary research](#) by Pfizer and University of Texas has found that the Pfizer vaccine currently in use should work effectively against the new variants discovered in South Africa and the UK.
- [Preprint](#) from the University of Washington shows the **variant discovered in South Africa (501Y.V2) may be less susceptible to antibody treatments**. The study suggests the variant discovered in the UK likely has the same susceptibility of previous variants.
- [Preprint](#) study from ETH found that the strongest reductions in human mobility in Switzerland by 1% equates to a 0.88-1.1% reduction in daily reported COVID-19 cases. During the March wave of COVID-19, **movement reductions** were most associated with:
  1. Bans on gatherings of more than 5 people (24.9% reduction)
  2. Closure of venues including bars, restaurants and stores
  3. School closures
- Recent study points that despite pre-departure testing for SARS-CoV-2, **in-flight transmission of SARS-CoV-2 is likely**. In a flight from Dubai to New Zealand (18 hour flight), 7 people were identified during quarantine period as positive for SARS-CoV-2 with genetically identical sequencing except for one mutation, meaning there was a high likelihood for transmission of at least 4 of these cases during the flight. More can be read in [CDC Emerging Infectious Diseases](#) (Vol. 27 N.3).
- [Lancet study in Scotland](#), found the **need for critical care or dying due to COVID-19 was significantly higher among those with diabetes**. The odds of needing critical care or dying were even higher for those with type 1 diabetes,
- Patterns of **sleep disruption** among COVID-19 patients and those recovered is still under investigation, but potentially linked to inflamed nerve cells throughout the body. Additional studies are underway to determine the effects sleep have on potential severity of COVID-19.<sup>6</sup>
- Review of infections among household members with **quarantined** with someone diagnosed with COVID-19 shows that while shorter quarantines many have easier compliance, caution should be used if releasing people from quarantine before 14 days to continue physical distancing as early release poses risk of onwards transmission. In a review of household contacts who originally were asymptomatic or tested negative, 19% had positive lab results or symptoms after the first week of quarantine ([MMWR 1 Jan 21](#)).
- [In MMWR report](#) examining the performance of **Sofia antigen test compared to RT-PCR testing**, researchers suggest confirmatory testing with PCR for anyone testing negative in the antigen test but symptomatic, or anyone testing positive with the antigen test but asymptomatic. In their study the Sofia antigen test was found to have 41.2% sensitivity and 98.4% specificity when compared to PCR (with 80% sensitivity and 98.9% specificity for symptomatic people tested).



- Recent study [published in JAMA](#) estimates transmission from asymptomatic individuals was estimated to account for more than half of all transmission.
- In a small study, authors found that that all participants were positive for the memory B cells for immune response at 5-8 months post symptoms. More and larger studies are needed on this, but the information may be promising as the T cell memory may become more stable after 8 months and if at a sufficient level provide a more long-lasting immune response ([Science 6 Jan](#)).

## Clinical Trails

- **Brazil reported 78% efficacy in China's Sinovac Biotech Phase 3 clinical trial** (due to low transmission of COVID-19 in China, the company partnered with other countries to conduct

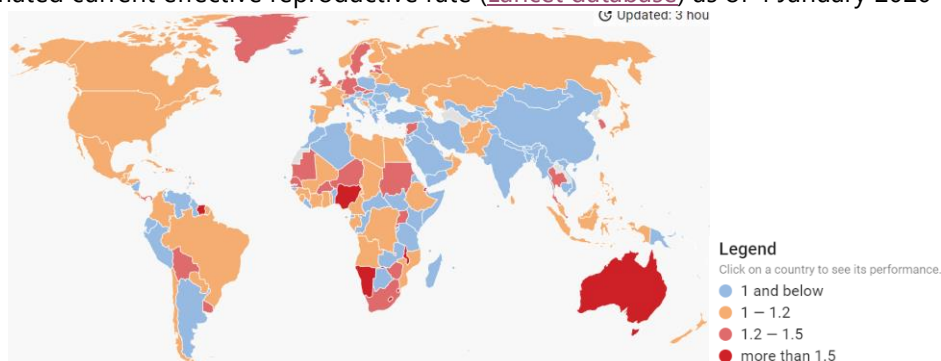
<sup>6</sup> [The Atlantic 21 Dec 2020](#)

clinical trials). The trial was smaller than other Phase 3 trials with around 30,000 participants. Thus far over 300 million doses have been sold, predominantly to low and middle income countries ([NYT 7 Jan 21](#)).

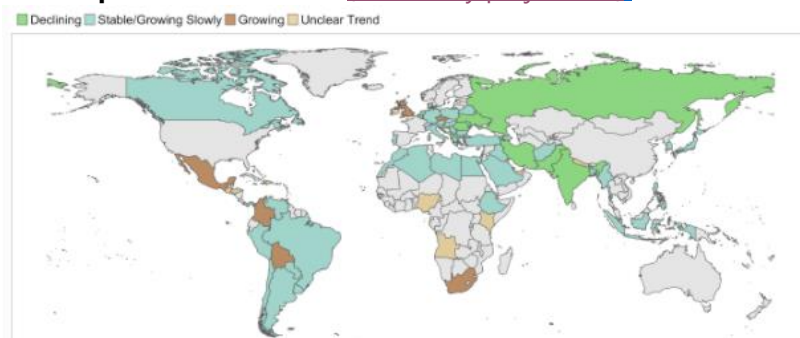
- [NEJM paper](#) on the Moderna (mRNA-1273) vaccine clinical trials of 30,420 participants has shown efficacy of 94.1% efficacy and severe reactions rare to the vaccine.
- Following several severe **allergic reactions** immediately following the Pfizer and Moderna mRNA vaccine it is advised to halt vaccination to anyone who has a history of anaphylaxis in the UK (including food allergies), and the US has suggested to halt vaccination for anyone who has a history of allergic reaction to any component of the vaccine. While risk of these reactions is likely to remain low, suggestions regarding more research into reactions to polyethylene glycol (PEG) – a component in the vaccine – and continued observation are needed ([NEJM 30 Dec](#))
- [MMWR report](#) of vaccination efforts thus far with the Pfizer/Biotech vaccine have led to 21 reports of anaphylactic shock (90% in females, however the majority of vaccinations thus far have been female). This is about **11.1 anaphylactic shock reactions per 1 million vaccination**, 71% of reactions occurred within the first 15 minutes.
  - Non-severe reactions including pruritus, rash, itchy and scratchy sensations in throat, and mild respiratory symptoms were identified in 83 cases, with 87% of them classified as non-serious, and 85% who experienced symptoms experienced them within 12 minutes of vaccination.
- Early administration of high-titer convalescent plasma against SARS-CoV-2 to mildly ill infected older adults reduced the progression of COVID-19, with a relative risk reduction of severe disease by 48% ([NEJM](#))
- India has approved the Oxford/Astra Zeneca vaccine for use with the goal of vaccinating over 300 million people in 2021. India has also approved the use of the local Bharat Biotech's Covaxin but has not yet published efficacy data on the second vaccine.
- Novavax recently entered Phase 3 clinical trials

## Modeling & Forecasting

- Estimated current effective reproductive rate ([Lancet database](#)) as of 4 January 2020



- **Projections for the reproductive number** ([ICL weekly projections](#))<sup>7</sup>



### As of January 4<sup>th</sup> estimates for the effective reproductive number:

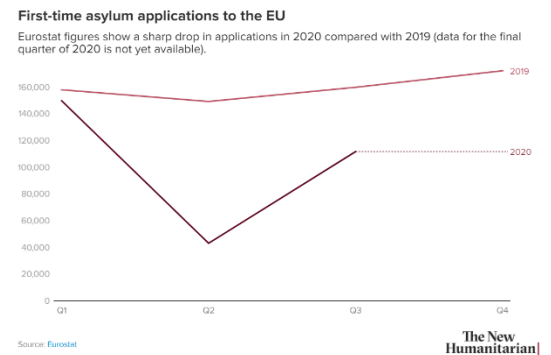
- **Europe:** Average of about 1, Highest: **Ireland:** estimated around 1.5
- **Asia:** Average of about 1, Highest: **South Korea** 1.1
- **Africa:** Average about 1, Highest: **South Africa & Nigeria** 1.5
- MENA (not included): Highest: **Egypt** (1.5)
- **North & Central America:** Average of about 1, Highest: **Honduras** 1.5-2

<sup>7</sup> **Map:** Estimates of transmissibility in countries with active transmission for the week. A country is defined to be in the declining phase if the 97.5<sup>th</sup> quantile of the effective reproduction number is below 1. It is defined to be in the growing phase if the 2.5<sup>th</sup> quantile of the effective reproduction number is above 1 and the width of the 95% CrI is less than 1. If the 2.5<sup>th</sup> quantile of the effective reproduction number is below 1 and the width of the 95% CrI is less than 1, we define the phase as stable/growing slowly. If the width of the 95% CrI is more than 1, the phase is defined as uncertain. Note that estimates of transmissibility rely on a constant rate of reporting of deaths. This assumption does not always hold. [ICL short term forecast](#)

- **South America:** Average of about 1, Highest: **Bolivia:** 1.5-2
- **IHME projections** show the US is expecting to see 539,000 deaths<sup>8</sup> even after vaccination roll-out from COVID-19 by April 10<sup>th</sup> due to an expected winter surge on an already very high incidence.

## Humanitarian Impacts

- Concern has been raised regarding the decline in poliovirus surveillance globally during the COVID-19 pandemic. Poliovirus surveillance activities were modified as a result of the COVID-19 pandemic. Reported AFP cases declined 33% from January to September of 2020 compared with the same period in 2019, and the number of environmental samples per site declined. **The decline in polio surveillance coincided with the spread of COVID-19 (MMWR).**
- **Ethiopia's** Tigray Regional conflict has destroyed the local health system with worries that the spread of COVID-19 among other health concerns due to over-crowding in displaced persons camps.
- Continued **struggle reported by asylum seekers** on the border of the EU (and US) during the pandemic, with asylum applications dropping for the EU by as much as 87% compared to previous years ([New Humanitarian](#)).
- [Mapping of COVID in Humanitarian settings available here depicted below showing COVID-19 cases compared to where vaccination campaigns have been postponed](#)
- [Updated repository of Maternal and Child health and Nutrition relating to COVID-19 can be found here.](#)



## Guidance Launched or Highlighted This week

Weekly update [from WHO available here \(last updated Epi 29 Dec & 5 Jan\)](#)

- The International Recovery Platform (IRP): [Practical Lessons for Recovery from the COVID-19 Pandemic. Principles for Recovery](#)
- WHO: [Public health considerations for elections and related activities in the context of the COVID-19 pandemic](#)
- WHO: [Evidence to recommendations for COVID-19 vaccines: Evidence framework](#)
- WHO: [COVID-19 vaccine introduction and deployment costing tool](#)
- WHO: [Checklist to support schools re-opening and preparation for COVID-19 resurgences or similar public health crises](#)
- WHO: [Emergency Use Designation of COVID-19 candidate vaccines: Ethical considerations](#)
- WHO: Emergency Global Supply Chain System (COVID-19) catalogue
- WHO: [Therapeutics and COVID-19: living guideline](#)
- WHO: [COVID-19 diagnostic testing in the context of international travel](#)
- WHO: [Risk assessment tool to inform mitigation measures for international travel in the context of COVID-19](#)
- WHO: [Considerations for implementing a risk-based approach to international travel in the context of COVID19](#)

## Useful Sources

Some additional sources – such as specific journal articles are shared as a foot note and saved to the “Evidence” folder in Teams.

[ALNAP launched COVID-19 response portal](#)

[Atlantic COVID-19 Tracker](#) (US focus)

[BMJ COVID-19 resources](#)

[BMJ living Guidance on clinical treatment for COVID-19 \(from WHO, including visuals\)](#)

[European Centre for Disease Prevention and Control](#)

[End Coronavirus Visualizations](#)

[Evidence Aid COVID-19 Evidence](#)

[Center for Humanitarian Health: COVID-19 Maternal and Child Health, Nutrition Literature Reviews](#)

<sup>8</sup> [IHME](#) 3 December 2020

[The COVID tracking project \(US focus\)](#)

[Global Health 5050 Sex desegregated data](#)

[Health Map](#)

[Imperial College of London](#)

[ISARIC COVID-19 resources](#)

[Johns Hopkins Center for Health Security](#) and [CSSE](#)

[Humanitarian platform for COVID-19](#)

[The Lancet](#)

[LSHTM COVID-19 mapping tool](#)

[New England Journal of Medicine](#)

[Next Strain \(Phylogeny of SARS-CoV-2\)](#)

[Our world in Data](#)

[PLOS COVID-19](#)

[ProMed](#)

[Switzerland Specific data and charts](#)

[Transdisciplinary Insights e-journal: Living Paper: COVID-19](#)

[WHO](#)

[WHO Technical Guidance for COVID-19](#)

[MobLabs](#)

[MobLabs Domestic and international risk of importing a case](#)

[World Meters](#)





