

# COVID-19 Update: Weeks 51-52

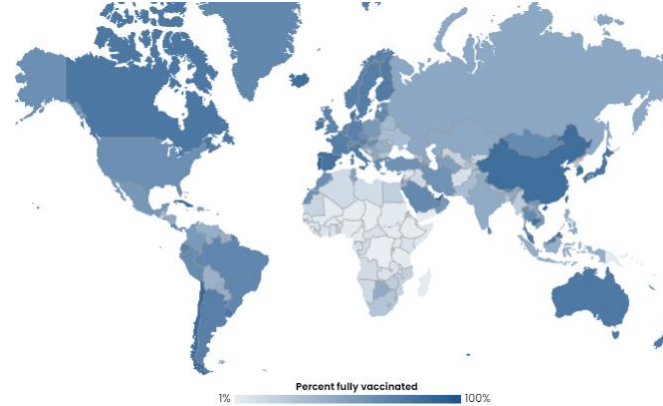
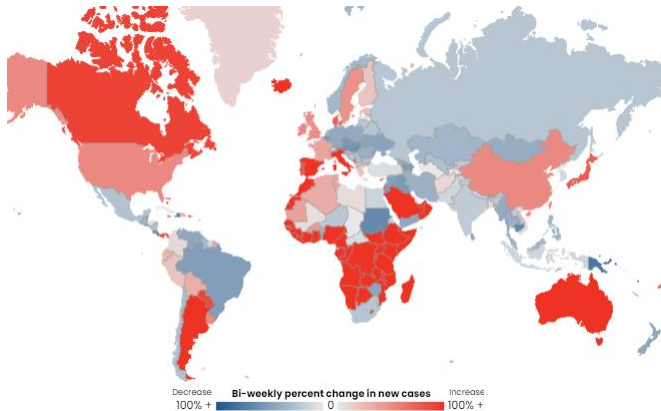


20 December 2021 – 2 January 2022

Bi-weekly COVID-19 updates from IFRC focusing on the epidemiological trends and updated evidence are shared through the [Health Help Desk](#). Additional external resources for deeper weekly or monthly subject-area analysis have also been added to the public access page on the Health Help Desk. Internal reports from the IFRC are available on [IFRC Go page for the COVID-19 pandemic](#) (including operational updates, immunization updates and updated figures by IFRC region). *The next update is scheduled for January 18<sup>th</sup>, 2022.*

## Bi-weekly percent change in new cases

## Percentage of population fully vaccinated

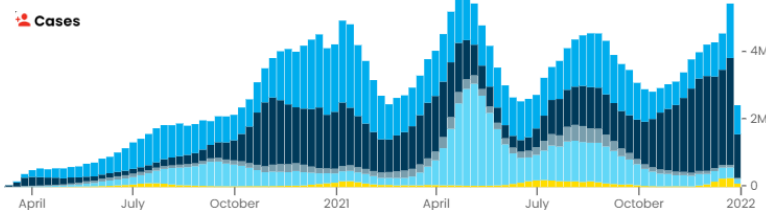


- **Globally there have been over 281 million cumulative cases and 5.4 million cumulative deaths of COVID-19 reported worldwide.**
- An estimated 58.3% of the global population has received at least one dose of the COVID-19 vaccine, with an estimated 47.9% fully vaccinated.
- **Only 8.5% of those living in low-income countries have had at least one dose of the COVID-19 vaccine**

## Situation update

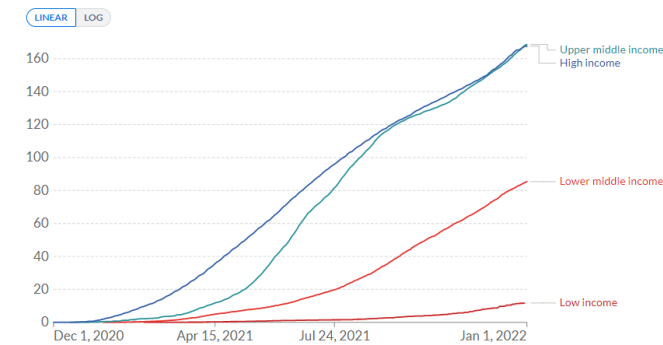
**In the past two weeks global incidence of COVID-19 plateaued before increasing by 11% compared to the previous week reporting. Globally deaths continued to decline over the two-week period by 9 and 4% respectively.** Notably, 2021 ended with more than 5 million COVID-19 cases reported globally per week – similar levels to what was seen in April 2021, but with significantly fewer deaths reported. The Significant difference in COVID-19 deaths marks the positive influence that health measures have had since the beginning of the pandemic including vaccinations, public health actions, and treatment options in many of the reporting countries.

However, not all regions are equal. The Africa region reported a markable 72% increase in reported COVID-19 deaths compared to the previous week – the highest increase globally, followed by the WHO South East Asia Region at 9%. The increase in reported deaths in the Africa region is expected following several weeks of very high COVID-19 case numbers, however, the difference between the Africa region which has an estimated 14% of the population vaccinated with at least one dose, and the European region with over 65% of the population estimated to have received one vaccine against COVID-19 is an important distinction.



COVID-19 vaccine doses administered per 100 people, by income group

All doses, including boosters, are counted individually. As the same person may receive more than one dose, the number of doses can be higher than the number of people in the population.



Source: Official data collated by Our World in Data, World Bank  
Note: Country income groups are based on the World Bank classification.

OurWorldInData.org/covid-vaccinations • CC BY

## Risk Assessment & What to watch

The epidemiological situation is worrying globally as we enter into the New Year with over 25 countries reporting 300 COVID-19 cases per 100,000 population throughout the world. The majority of high incidence remains in the European Region (reporting over 304 weekly infections per 100,000 population) followed by the Americas. However, lower testing and reporting of test results from many other countries means that the true incidence is likely much higher.

Two thirds of countries in Africa were reporting significant increases in COVID-19 cases, with several countries reporting worrying trends including Democratic Republic of Congo reporting a spike in COVID-19 related deaths and Ethiopia reporting a 610% increase in new COVID-19 cases compared to previous weeks – both countries are likely under-reporting given existing contextual challenges.

As some countries such as Israel begin to roll out a 4<sup>th</sup> vaccine booster – vaccinations across the globe still remain wildly unequal and many, including WHO's Dr Tedros Adhanom Ghebreyesus, argue that given supply restraints, continued booster campaigns will only exacerbate inequalities with access to vaccines across the world, noting this year the world has failed completely in the effort to reach vaccine equality – marking the stark differences in high income countries compared to low income countries as vaccines became available in 2021. These inequalities – if they continue will only fuel the continuation of the COVID-19 pandemic ([UN news](#)). Additionally, growing trends in vaccine hesitancy in low- and middle-income countries is starting to worry researchers, with implications reaching far beyond COVID-19 ([Nature](#)).

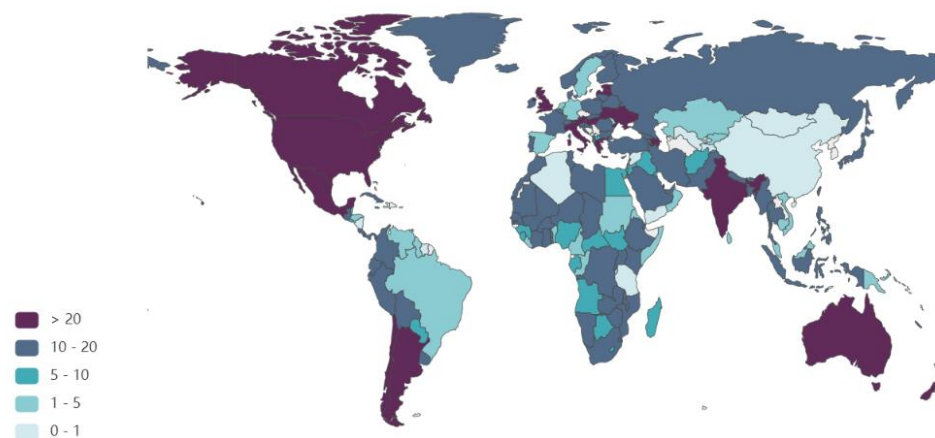
## Emerging Evidence Review

### Secondary Impacts

- Recent reports from the [United States](#) and [Honduras](#) once again highlight the importance for clinicians to remain vigilant for Mucormycosis in COVID-19 patients or recently recovered COVID-19 patients. Mucormycosis is a rare fungal disease that has a very high mortality rate (estimated around 53%) and is more likely to infect those who are immunocompromised, take immunosuppression drugs, or associated immunocompromising medical procedures (such as organ transplant) or untreated diabetes. Risk of Mucormycosis among COVID-19 patients was first noted in India during a surge in COVID-19 cases and have since been noted in many countries during the treatment of COVID-19 patients. Since Mucormycosis is not regularly a notifiable disease with consistent surveillance in many countries it is hard for researchers to note whether incidence overall has increased, but this link among COVID-19 patients, especially those with other underlying conditions is notable and important for physicians to remain vigilant (CDC MMWR).

### World view on reporting frequency for COVID-19 tests

Average frequency of reporting testing data [days/month]



Above is from [FIND COVID-19 test tracker](#), which follows the frequency of reporting of COVID-19 tests by country per month.

- As expected by many, the COVID-19 pandemic has greatly impacted diagnosis of cancer, most notably through delays in identification and diagnosis. The UK estimates that the pandemic and affiliated delayed diagnosis will likely lead to an increase in lung cancer deaths by 4.8-5.3% over the next 5 years ([Lancet Oncology](#)), while the US veterans affairs office also points to delays in diagnosis and care for cancer patients during the pandemic ([Lancet Oncology](#)).
- An analysis of data from 170 countries found notable decreases in regular immunization services during the pandemic than previous years, with the most notable differences seen in April 2020 where 33% fewer diphtheria–pertussis–tetanus-containing vaccine (DTP3) doses were distributed worldwide. A larger proportion of reported disruptions were noted in outreach services (69%) compared to a 44% of those reporting disruptions reported from fixed post immunization services. The results of the study published in the [Lancet](#) highlights the dangers of future outbreaks of vaccine preventable diseases, especially among vulnerable or more remote communities.

### Vaccine Safety and Efficacy

- Novavax vaccine was found to show 100% efficacy in clinical trials in the US against moderate to severe disease, and 90.4% efficacy against symptomatic infection ([NEJM](#)), with Indonesia, the Philippines, EU, US and WHO now all granting emergency use authorization of the new vaccine.

### Vaccine Boosters

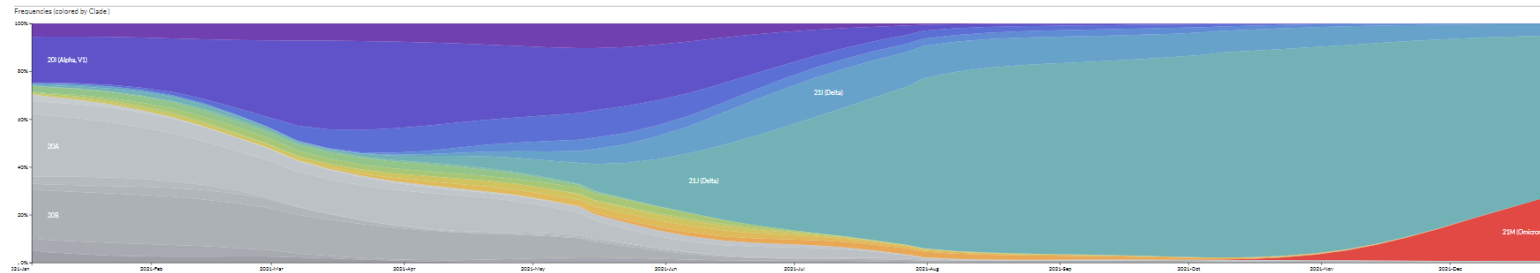
- Several preliminary studies have shown that a potential 3-dose regimen of COVID-19 vaccines may be necessary to maintain a strong immune response – especially in the context of Omicron ([Lancet Respiratory Medicine](#)). Additional studies have supported reducing the booster schedule from the initial 6 months to as soon as 3 months with no significant safety concerns noted, influencing some countries to begin booster campaigns at 3-5 months rather than 6 months ([Lancet](#)).
- [Moderna](#) announced that a 3<sup>rd</sup> booster dose (of 50 µg of mRNA-1273) increases antibodies effective against Omicron by 37-fold and a full booster dose (of 100 µg of mRNA-1273) increases neutralizing antibody levels by 83-fold (however the higher dose had more reports of side-effects).

### Vaccine Mixing

- Additional research has supported the efficacy and safety of mixing and matching vaccines, with the strongest effect when boosters or second doses are mRNA vaccines, but benefits found for most vaccines including the newly accepted under EUA Novavax ([Lancet](#)).

## Variants of Concern or of Interest & Implications

[The WHO classified “Omicron” \(B.1.1.529\)](#) a variant of concern on November 26<sup>th</sup> due to a number of mutations in the SARS-CoV-2 virus that are concerning and increase prevalence and incidence within COVID-19 genetically sequenced (and positive) tests in Southern Africa. The Omicron variant has been detected in all areas of South Africa. Studies are ongoing, but preliminary research suggests there may be a risk of re-infection.



- The chart above shows the proportion of SARS-CoV-2 infections by variant over time that are genetically sequenced globally. The red increase to the right of the chart shows the Omicron variant, currently representing 29% of the sequenced variants of SARS-CoV-2 worldwide. In comparison, the share of global delta variants sequenced globally has reduced to 65% of sequences shared ([NextStrain/GISAID data](#)).
- The Omicron variant continues to pose a very high risk due to its growth advantage compared to the Delta variant, with a doubling time around 2-3 days, causing it to become the dominant variant now in several countries including the United Kingdom and the United States. The rapid growth is likely do to a combination of increased transmissibility and immune escape ([WHO technical brief](#)).
- Preliminary data from several countries is showing less severe disease among Omicron patients compared to the Delta variant, however it is too soon to determine whether this is related directly to the variant mutations or a combination of vaccine/ previous infection immunity, treatment options now available and population infected ([WHO](#)). In either case, the rapid spread and pure number of infections of COVID-19 mean that even if a smaller proportion of those infected need emergency care – that proportion may be larger that health systems can handle due to the pure scale of people infected.
- [Imperial College of London](#) estimates that the potential risk or re-infection for symptomatic disease is 5.41 times higher for Omicron than for the Delta variant in recent analysis.
- A recent [pre-print](#) from South Africa shows evidence that nasal swabs may not be the same gold standards for testing as they have been for other variants. The study shows 100% positive percent agreement for nasal swabs for the Delta variant and 71% agreement for saliva swabs, while the Omicron variant showed 100% agreement for saliva and 86% for saliva swabs. The study is under peer-review but aligns with other research (including a [study from Hong Kong](#)) which suggests improved viral replication in the upper respiratory tract tissue in the Omicron variant compared to previous variants. At this time, traditional PCR and antigenic tests are still deemed to be effective but observations and additional research is needed to determine whether saliva testing options provide stronger positive percent agreement moving forward (researchers note some additional constraints to saliva sampling including the need to abstain from eating, drinking or smoking 30 minutes prior to testing).

*Summary impacts of Variants of Concern designated by WHO (referenced from [WHO Situation Report #72](#))*

<b>Name/ Label</b>	<b>Alpha</b>	<b>Beta</b>	<b>Gama</b>	<b>Delta</b> <i>Now accounting for over 65% of sequenced SARS-CoV-2 variants</i>	<b>Omicron</b> <i>Now representing 29% of sequenced SARS-CoV-2 variants</i>
<b>Transmissibility</b>	Increased transmissibility	Increased transmissibility	Increased transmissibility	Increased transmissibility	Still under investigation, likely increased transmissibility
<b>Disease Severity</b>	Possible increased risk of hospitalization, possible increased risk of severity and mortality	Possible increased risk of hospitalization, possible increased risk of in-hospital mortality	Possible increased risk of hospitalization and/or risk of severe disease	Possible increased risk of hospitalization	Under investigation ( <a href="#">technical brief</a> )
<b>Risk of reinfection</b>	Neutralizing activity retained, risk of reinfection remains similar	Reduction in neutralizing activity reported; T cell response elicited by D614G virus remains effective	Moderate reduction in neutralizing activity reported	Reduction in neutralizing activity reported	Preliminary evidence suggests a possible increased risk of reinfection
<b>Impact on Diagnostics</b>	Limited impact – S gene target failure (SGTF), no impact on overall result from multiple target RT-PCR; No impact on Ag RDTs observed	No impact observed	No impact reported	No impact reported	Preliminary evidence suggests PCR and Ag-RDTs can still detect Omicron
<b>Impact of vaccine efficacy (for those with WHO EUL)<sup>1</sup></b>	Protection retained against all outcomes	Protection maintained against severe disease, limited evidence for reduced efficacy against symptomatic disease (AstraZenica, Pfizer)	Unclear, limited evidence at this time	Protection retained against severe disease, limited evidence for possible reduced infection against symptomatic disease and infection	Under investigation, preliminary studies suggest reduced neutralization

### Practical Tools/ implications for COVID-19 preparedness & Response strategies

- Higher than average rates of vaccination among non-Hispanic American Indian and Alaska Native (AI/AN) populations in the United States show potential important lessons to the communication, roll-out, distribution and support of vaccines among. Notably AI/AN communities have created “ecosystems of

<sup>1</sup> Resources and detailed list of vaccine efficacy studies can be found here: [VIEW-hub \(IVAC\)](#)

support” for the vaccination process, inclusive of community-based organizations to provide direct culturally appropriate messaging in addition to the efforts tribal governments and traditional health system strategies ([NEJM](#)). Specifically, some of the strategies incorporated into vaccine distribution included:

- Prioritizing elderly, with a focus on the preservation of culture and language and having elders act as role models to increase trust of the vaccine within their communities.
  - Utilizing community venues for vaccination and aligning vaccine campaigns with ceremonial seasons (or linking vaccination requirements for attendance).
  - Prior to the availability of vaccines, initial community involvement in other public health measures including contact tracing, quarantine and support to those in isolation and quarantine, as well as remote learning and cultural activities were also put in place leveraging community-based solutions and autonomy within the Nations leading to a similar approach when vaccines become available.
- The emergence and spread of the Omicron virus has only highlighted the urgency for governments and political leaders to use a wholistic public health approach to COVID-19 rather than putting all efforts into one “magic” solution (such as only focusing on vaccines) for COVID-19. An [editorial in BMJ](#) illustrates nicely the importance of layering approaches – from improved surveillance, testing and non-pharmaceutical interventions such as masking and physical distancing, to vaccination and treatment - are essential to the vitality of the global economy and public health.

### **Clinical Trials and Treatments**

- The [US FDA](#) has authorized the use of PAXLOVID for emergency use among those 12 years and older who are positive with COVID-19, are within the first 5 days of symptoms and are at high risk of severe disease for COVID-19. The drug will only be available with prescription initially and in limited supply. While research is still underway, the antiviral treatment appears to also be effective against Omicron, which is positive news given the increasing evidence that monoclonal antibody treatments appear to be less effective against the new variant.
- The US FDA has authorized the use of molnupiravir for COVID-19 patients 18 years or older who are within the first 5 days of symptoms and are at high risk for severe disease, noting that the medication should not be taken by those who are or trying to become pregnant and should be used with birth control by both males and females of childbearing age ([Merck](#), US FDA).

### **Implications for Public Health in the future**

- Social Science researchers are becoming concerned that vaccine hesitancy is growing in the global south and may have implications for other vaccines in addition to COVID-19 ([Nature](#)). Some concerns are shared internationally on the COVID-19 vaccine including the rapid development and distribution of vaccines. Distrust in the government, and misinformation also remain a concern as do local contexts and the long wait for vaccines with rapidly approaching expiration dates in many contexts. However, researchers stress that lessons learned from HIV to engage local communities should be integrated into vaccination roll-out in these contexts – both prior to and during the distribution phase to increase acceptance.

### **References**

#### **Internal**

[IFRC Go COVID-19 response](#)

- Dashboards and operational reports
- Monthly vaccine updates and highlights

#### [IFRC Health Help Desk](#)

- Webinars
- Operational Guidance related to the health response to COVID-19

#### **External**

#### [ALNAP COVID-19 Response Portal](#)

#### [British Medical Journal Coronavirus Hub](#)

#### [Centers for Disease Control \(CDC\) Morbidity and Mortality Weekly Report \(MMWR\)- COVID-19 Reports](#)

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

- Particularly the [COVID-19 Updates](#) (weekly)

Johns Hopkins Center for Communication Programs [COVID-19 Behavior Dashboards](#)

#### [Journal for American Medical Association COVID-19 focus](#) (JAMA)

#### [Nature SARS-COV-2 Review](#)

#### [New England Journal of Medicine COVID-19 page](#) (NEJM)

#### [Nextstrain](#) (genomic data tracking for mRNA viruses)

#### [Our World in Data](#)

#### [Prevent Epidemics In-Depth Science Reviews](#)

#### [UNDP Vaccine Affordability](#)

#### [WHO COVID-19 Dashboards](#)

#### [WHO Epidemiological Situation Reports](#)