Weekly COVID-19 Update: 11-18 October 2020

Over 39.5 million cases confirmed and reported, with over 1.1 million deaths reported to date (unofficially over 40.1 million cases and over 1.1 million deaths, over 9 million active cases (increase from previous week) and over 29.9 million recovered). India, the US, Brazil and Mexico are reporting the highest daily incidences in death in the last 24 hours. The United States, India, France, Brazil, Argentina, the UK, Russia, and Italy reporting the highest daily increases, all reporting above 10,000 newly confirmed cases in the past 24 hours. In the last week there have been over 2.2 million new cases and 39,000 deaths of COVID-19 have been reported across the world – this is the highest number of new cases reported in a single week since the beginning of the pandemic.

1 Official numbers and WHO visualizations available here

2 WHO Epi Sit Rep 12 Oct
News / Political Context

• While case numbers continue to increase, locations seeing a marked increase in cases are not seeing the same rates of hospitalization and need for intensive care as the last wave.³

• Countries with highest reported new cases per 1 million daily increases ⁴:
  1. Czechia: 814
  2. Slovenia: 781
  3. Armenia: 520
  4. Belgium: 512
  5. France: 497

• Countries with highest reported new deaths per 1 million:
  1. Aruba: 18.7
  2. Guam: 17.8
  3. Tunisia: 9.6
  4. Argentina: 8.5
  5. Czechia: 6.4

• Daily confirmed deaths doubling most rapidly in Jordan, Georgia, Myanmar, Tunisia, French Polynesia, Czechia, (trends remained stable for 2 weeks).³

• Cases doubling rapidly in Vatican, Slovakia, Jordan, Czechia, Slovenia, Georgia, Myanmar.⁵

• Estimate that around 14% of COVID-19 cases reported to WHO are identified as occurring in health workers⁶ this is a high proportion given that HCWs only account for 3-8% of the population. There has been a declines in HCW infections since the beginning of the epidemic

• Asia Pacific Region:
  o The region represents one of the highest incidence of COVID-19, however there has been continued decline over the past week
  o Myanmar and Nepal reported an increase in the number of new deaths in the past week
  o Highest number of new deaths per million population are India and Myanmar, with 5 and 4 new deaths per million population respectively
  o Bangladesh and Indonesia currently reporting community transmission
  o Rapid increase in cases in Sri Lanka and Nepal

• European Region:
  o Europe’s epidemic is now twice the size that it was in April at it’s previous peak.
  o The region registered the highest weekly incidence since the beginning of the pandemic, weekly incidence in cases and deaths increased by 34% and 16% respectively in comparison to the previous week
  o Spain, with over 50 000 cases reported in the past week, is showing a noticeable decline in the weekly incidence of cases and deaths of 24% and 19% respectively.
  o An estimated 19% or EEA/EU & UK COVID-19 patients required hospitalization with an estimated 8% of those requiring ICU care (with a country range of 0-69%).
  o Poland increased this week by 93% and 104% respectively compared to the previous week, with almost 23 500 new cases and 370 deaths reported
  o The United Kingdom, France, the Russian Federation and Spain account for over half of all new cases reported in the region
  o Switzerland: Saw most new reported cases in a day since the beginning of the pandemic. 7-day incidence rates reported over 200 per 100,000

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³ NYT
⁴ Our World in Data Incidence
⁵ https://ourworldindata.org/coronavirus
⁶ Reference to ECDC data using https://ourworldindata.org/coronavirus
⁷ WHO SitRep 12 Oct
• **Americas Region**
  o There was a 6% increase in the number of new cases in the past week which is a bigger increase than the increase reported in the previous week.
  o The **United States of America, Brazil, Argentina, Mexico, and Colombia** registered the highest number of newly-reported cases.
    - Highest daily increase reported in the US since the pandemic started last week, with 20% of states reporting an increase (including in the South where hurricanes have been prevalent).
  o The number of newly-reported cases has been increasing in **Canada** since mid-September, with an increase of 26.7% cases and 14.3% deaths in the past week. Outbreaks in long-term care facilities account for most outbreaks.
  o Mexico’s daily incidence is down 38% from its peak, and Panama’s is down 40%.

• **MENA Region**
  o Weekly number of new cases and deaths have increased by 10% and 13% respectively in comparison to the previous week.
  o **Iran** accounts for 20% of cases in the region.
  o **Oman** has seen cases increase by 60% compared to the previous week.

![Figure 1: Number of COVID-19 cases and deaths reported weekly by the WHO Eastern Mediterranean Region, as of 11 October 2020](image)

• **Africa Region**
  o Number of new cases has risen in the first time in several weeks, mostly driven by increased reporting of cases throughout the region (11% more newly reported cases compared to the previous week).
  o **South Africa and Ethiopia** continue to report the highest numbers of new cases in Africa, followed by **Uganda** and **Kenya**.

**Recent Research/Evidence**

- Individuals with overweight and obesity were found to be at elevated risk of death and intubation\(^8\).
- Study by US defence on air circulation on 767 and 777 passenger planes found a **low exposure risk** of SARS-CoV-2 infection (from one individual) **during flight** and that the average time it took to circulate air within the aircraft was 6 minutes (compared to 90 mins in a household).\(^9\)
- Retrospective study from over 473,000 tested for COVID-19 in Denmark found that **blood type O may offer some protection against SARS-CoV-2 infection** (reduced infection).\(^10\)

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\(^8\) Int J Obes 2020 Sep;44(9):1832-1837. doi: 10.1038/s41366-020-0648-x. Epub 2020 Jul 25

\(^9\) USTRANSCOM releases results from study testing risk of COVID exposure on contracted aircraft

\(^10\) Blood Advances 14 Oct 2020. [https://doi.org/10.1182/bloodadvances.2020002657](https://doi.org/10.1182/bloodadvances.2020002657)
smaller study in Canada found type A and AB were more likely to require mechanical ventilation and had longer admissions times than type B or O. Other studies have been mixed. Key informant interviews following increased incidence of COVID-19 in 18-23 age group found that risk factors reported exposure to misinformation, conflicting messages, or opposing views about the need for and effectiveness of masks likely led to increased exposure among young adults.

Recent study looking at seroprevalence and among 60,000 in Wuhan, China found that seroprevalence among the population was low, around 2.39%. Growing evidence of the long-term health effects of COVID-19. National Institute of Health Research UK published a review of emerging evidence towards “long covid” and specifically at the 4 syndromes affiliated with it:

1. permanent damage to the lungs and heart,
2. post-intensive care syndrome,
3. post-viral fatigue syndrome,
4. continuing COVID-19 symptoms

Review of evidence in the Lancet suggests the the degree of cytokinaemia is markedly less in COVID-19 than that in other disorders associated with elevated cytokines.

Genomic evidence for reinfection of SARS-CoV-2 reported in Lancet Infectious Disease (25 year old from Nevada). The case was previously documented in a pre-print editorial. Implications for previously infected individuals to continue to follow precautions and potential implications for vaccine development.

Compared with other countries, the US experienced high COVID-19-associated mortality and excess all-cause mortality into September 2020. After the 1st peak in early spring, US death rates from COVID-19 and from all causes remained higher than even countries with high COVID-19 mortality. This may have been a result of several factors, including weak public health infrastructure and a decentralized, inconsistent response to the pandemic.

Pre-print article in the US demonstrates the how children and adolescents can spread COVID-19 to other household members, including those in higher risk groups and other children.

Clinical Trails

Institute of Genomics and Integrative Biology in New Delhi, India, developed a CRISPR-based testing assay called FELUDA that exhibits comparable sensitivity and specificity to the gold standard PCR-based diagnostic tests—96% and 98%. The test takes less than 1 hour.

BioNTech and Pfizer: The safety and immunogenicity data from this U.S. phase 1 trial of two vaccine candidates in younger and older adults, suggest that BNT162b2 should advance to phase 2-3 safety and efficacy evaluation trials.

Safety and immunogenicity of an inactivated SARS-CoV-2 vaccine, BBIBP-CorV in a randomised, double-blind, placebo-controlled, phase 1/2 trial in China found no severe

11 Blood advances 14 Oct https://doi.org/10.1182/bloodadvances.2020002623
12 Mass General 16 Jul 2020; NIH preprint 11 Apr 2020
13 CDC MMWR 16 Oct 2020
14 CMI 6 Oct 2020
15 JAMA 12 Oct 2020
16 Pre-print 13 Oct 2020
17 NEJM 14 Oct 2020, DOI: 10.1056/NEJMoa2027906
adverse side effects (mild fever reported as the only side effect). A second dose – either after 21 or 28 days was found to increase efficacy in the small study.\(^\text{18}\)

- Emphasis that safety and efficacy of vaccinations should include a median 2-3 months post full vaccination regimen following phase 3 trials to adequately capture any negative effects following phase 3 trials (and ensure confidence in vaccines for large-scale distribution).\(^\text{19}\)

**Modeling & Forecasting**

- Sampling and Modeling from Imperial College of London on the outbreak in the UK, shows indication that the epidemic is slowing, but still showing an estimate of R=1.1 compared to the previous estimate of 1.7.\(^\text{20}\)
- **Projections for the reproductive number** (ICL weekly projections) \(^\text{21}\)

![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\(^{th}\) quantile of the effective reproduction number is below 1. It is defined to be in the growing phase if the 2.5\(^{th}\) quantile of the effective reproduction number is above 1 and the width of the 95% CrI is less than 1. If the 2.5\(^{th}\) 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](image)

**As of October 12\(^{th}\) estimates for the effective reproductive number:**

- **Europe:** Average of about 1, Highest: **Poland**; estimated around 1.5-2
- **Asia:** Average of about 1, Highest: **Philippines, Nepal, Myanmar** 1.5-2
- **Africa:** Average about 1, Highest: **South Africa, Angola** 1-1.5
- **MENA** (not included); Highest: **Jordan** (1.5-2)
- **North & Central America:** Average of about 1, Highest: **Canada** 1-1.5
- **South America:** Average of about 1, Highest: **Guiana, Paraguay** 1-1.5

**IHME projections** for daily infections using current trends, easing of mandates and increased mask use

**Humanitarian Impacts**

- Potential better outcomes than originally predicted following initial COVID-19 estimates of the effects of the pandemic and government-led NPIs may have on food security throughout

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\(^{18}\) [The Lancet 15 Oct 2020](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31609-6/fulltext)


\(^{21}\) 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\(^{th}\) quantile of the effective reproduction number is below 1. It is defined to be in the growing phase if the 2.5\(^{th}\) quantile of the effective reproduction number is above 1 and the width of the 95% CrI is less than 1. If the 2.5\(^{th}\) 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](https://www.imperial.ac.uk/schools-sciences/medicine-college-of-london)
the Africa region. High food insecurity still highlighted as an upcoming major challenge – however ongoing complex humanitarian settings remain the leading drivers in most locations

- 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 12 Oct, Operational 19 Oct)
- Guidance on risk assessments for Health Care workers (WHO)
- Multiple trainings available on https://openwho.org/
- The Lancet COVID-19 Data Portal provides useful maps
- Public consultation for review of draft Considerations for the Assessment of COVID-19 Vaccines for Listing by WHO

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
European Centre for Disease Prevention and Control
End Coronavirus Visualizations
Center for Humanitarian Health: COVID-19 Maternal and Child Health, Nutrition Literature Reviews
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

WHO

WHO Technical Guidance for COVID-19

MobLabs

MobLabs Domestic and international risk of importing a case

World Meters