COVID-19 Update Epi Week 2-8 August 2020

Over 19.4 million cases confirmed and reported, with over 721 thousand deaths reported to date (unofficially over 19.8 million cases and over 730 thousand deaths, over 6.3 million active cases and over 12.7 million recovered). The US, India, Brazil and Mexico are reporting the highest daily increases in deaths. India, the United States, Brazil, Colombia are reporting the highest daily increases in new cases. Global incidence may be reaching peak or plateau.

Weekly cases per 1 million population (WHO), IFRC Membership Operational updates available on the Go platform

Figure 1: Distribution by age of confirmed COVID-19 cases per week, COVID-19 WHO surveillance, February to July 2020.

Source: COVID-19 global surveillance database

WHO SitRep #196 (above), ECDC Geographic distribution of 14-day cumulative number of reported COVID-19 cases per 100 000 population, worldwide, as of 5 August 2020

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1 Official numbers and WHO visualizations available here
News/ Political Context

- **4th meeting of IHR determined COVID-19 remains a public health emergency of international concern (PHEIC),** indicating a lengthy continuation of the pandemic.²

- Over the past seven days, the pandemic has continued to accelerate with almost 1.8 million new cases and 40 thousand new deaths reported – a daily average of 256 294 cases and 5675 deaths per day. **It took only 4 days for the number of cases to increase from 16 million to 17 million.**
  - The Americas contribute to over half of all newly confirmed cases (54%)

- Daily confirmed deaths increasing most rapidly in **Gambia, Vietnam, Uganda, Zimbabwe, Namibia, Costa Rica, Lesotho.**³

- Cases doubling rapidly in **Aruba (3 days), Belize (4 days), Gambia (5 days), Papua New Guinea (7 days), The Bahamas (12 days).**⁴

- **Africa** continent reaching nearly 1 million cases, with **South Africa** representing more than half of the cases

- **United States** daily deaths continue to be among the highest while incidence is not rapidly increasing, mortality has been increasing, but may be reaching its peak. Hotspots in the US continue to be in California, Florida, and Texas.
  - Call for reporting of COVID-19 cases to return to CDC (recently White House order to switch reporting directly to executive task force for COVID-19)
  - **Increased vaccine hesitancy** and recent poorly supported treatment recommendations have led to a call for increased transparency in the vaccine trials in the US to ensure the public would be interested in receiving the vaccine as a solution to COVID-19.

- Following several days of declining incidence in **India**, the country experienced 2 days of consecutive increases, and is likely continuing to rise (soon likely to pass the US)

- **Incidence has been increasing in Western Pacific region** over the past month, led by the **Philippines**, Japan and Australia. Additional cases have been increasing in Papua New Guinea.

- **Maldives** currently reporting the **highest daily incidence of cases per 1 million population** (250 per 1 million per day)

- After not reporting cases for 3 months, **Vietnam** has reported 200 cases since July 25th and established a field hospital

- **Melbourne, Australia** has seen a surge in cases and implemented a curfew from 8PM to 5AM

- PAHO Economic Commission report highlights the need to approach public health disparities along with the economy to address the COVID-19 pandemic.⁵

- Nearly 320k suffer from **malnutrition**, 10% of which may end up with severe complications – WHO and partners working in Yemen to improve the treatment of malnutrition- malnutrition compromises the immune system and ability to fight off infection⁶

- **GOARN** Activities and resources available to partners:
  - **Librarian Reserve Corps** to respond to information needs in public health emergencies
  - **Go.data** for contact tracing
  - **GOARN COVID-19 knowledge Hub**
  - **Global Information Management, Assessment & Analysis Center (GIMAC)** on COVID-19 provides technical support for field requests
  - **WHO Health Cluster COVID-19 Task Team**

- **In EU & the UK countries**⁷
  - Reporting COVID-19 through passive surveillance for influenza only a single case was identified

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² WHO
³ https://ourworldindata.org/coronavirus
⁴ Reference to ECDC data using https://ourworldindata.org/coronavirus
⁵ ECLAC and PAHO: Controlling the pandemic requires convergence and coordination between health, economic, social and productive policies
⁶ WHO
⁷ ECDC Country over-view
All countries that reported ILI and/or ARI syndromic surveillance data up to week 30 using the systems established for influenza, have observed consultation rates that remain similar to or lower than those reported during the same period in the last two years. 29% of reported cases in the region have been hospitalized and 14% required admission to the ICU, 24% of hospitalized cases in the hospital have died.

- **OIE**: The first dog has tested positive for COVID-19 in Louisiana, USA. Cats have tested positive in the past, but appear not to show symptoms. Companion animals do not appear to be a source of transmission. 8

- **Health systems in the Americas reported to be strained with COVID-19** and doctors have been instructed to prioritize COVID-19 cases over additional

- **WHO** working with countries to improve surveillance data along with the release of the new guidance on estimating mortality from COVID-19 and how to calculate the case fatality ratio (CFR), and infection fatality ratio (IFR)

Surveillance by age groups from WHO COVID-19 weekly reporting 9:

- 0-4: 1.2%
- 5-14: 2.5%
- 15-24: 9.6%
- 25-64: 64%
- 65-84: 19.4%
- 85+: 3.4%

Global Multidisciplinary Platform Discussion on SARS-CoV-2 Modes of Transmission conference held on August 3rd to **review evidence on transmission pathways for COVID-19**, results to be published shortly

- **WHO** established Help Desks for countries seeking guidance on how to set up new screening, quarantine and treatment centers for COVID-19 10

**Recent Research/Evidence**

- Investigation of an outbreak at a meat processing facility between March and April in the US has shown 25.6% (929) employees and 8.7% (210) of their contacts tested positive for SARS-CoV-2 with highest attack rates among those who worked less than 1.8 meters apart, having major implications for the need to ensure physical distancing and other NPI when returning to production jobs. 11

- Recent study has shown a significant correlation between SARS-CoV-2 viral load and mortality 12

- A review of evidence from 149 countries show the implementation of any physical distancing intervention was associated with 13% reduction in COVID-19 cases. 13

- Continued research into the protection properties of antibodies for COVID-19. Several studies show antibodies decline rapidly following infection with those having mild to moderate symptoms are even less likely to have antibodies 2-3 months after infection. 14

- Study looking at antibodies for SARS-CoV-2 among firefighters in South Florida department in the USA, found a positive predictive value for antibody testing around 33.2% and negative predictive values of the serological test around 99.3% showing caution needs to be used when considering serological tests when considering returning workforce strategies. 15

- **Masks were found to provide some protection** for the wearer as well as a reduce the likelihood and number of particulates in the air, highlighting the argument for universal mask wearing 16

8 PubMed, https://doi.org/10.1101/2020.08.04.235002
9 WHO SitRep #198
10 WHO Sit Rep #192
11 CDC MMWR 7 Aug 2020
12 Lancet Respiratory Medicine 6 Aug 2020
13 BMJ 15 July 2020
14 Gavi, Nature Medicine, MedRx pre-print
15 BMJ 9 Aug 2020
16 Journal of General Internal Medicine

Clinical Trails
• A 2-dose candidate SARS-CoV-2 vaccine developed by Moderna, Inc. and the US National Institute of Allergy and Infectious Diseases (NIAID), mRNA-1273, will begin Phase 3 clinical trials this week.17

Modeling
• Simulation model to examine the effects of different quarantine strategies to reduce onwards transmission of COVID-19 from travelers (to UK based model):18
  o Quarantine period of 8 days on arrival with negative PCR on day 7 found to have a similar effect as 14 day quarantine period (reduction of introduction to community of COVID-19 by 94% compared to no actions).
  o All scenarios where people spent at least 5 days in quarantine with 1 negative PCR test show reduction in transmission potential (88%)
  o On arrival, transmission risk is highest among asymptomatic infections
• Recent modeling from University of Granada estimates that with current transmission rates, having 20 children in a classroom would involve 808 contacts in 2 days19
• Projections for the reproductive number and deaths (ICL weekly projections) Assuming the underlying CFR 1.38% forecasting for the upcoming week (from 3rd August) based on 53 countries are below:

![Graph showing effective reproductive number (R_0)](image)

Current estimates for the effective reproductive number (R_0) shown above.
• Modeling of the potential second wave in MA, USA shows enhanced testing and contact tracing can contain COVID-19 to stay within the health system capacity20
• Modeling by the London School of Economics and Political Science estimate that in reality around 35,500 people in Syria may be infected by COVID-19.21 Estimates from end of August range between 101,000 cases and 1.9 million. News reports and regional assessments of all-cause mortality by day show large increases, especially in Damascus and other urban centers. The writers suggest international Aide be a top priority (above traditional government interventions) given the political situation and that support should not be driven by the low official reports, but estimated much higher infection, and mortality rates.

17 Johns Hopkins Center for Global Health Security
18 BMJ 31 July 2020
20 Nature Human Behaviour 5 Aug 2020
21 4 Aug 2020 LSE
Humanitarian Impacts

- 3 health workers tested positive with COVID-19 in displaced persons camp in Northeastern Syria (Al-Hol camp), reports coming in that residents of the camp are beginning to test positive.\(^2\)
  - Worries that the situation will worsen given the likely large outbreak in Government controlled Syria where the majority of aid comes from
- Iraq Kurdistan region reporting high increases in COVID-19 cases and challenges to create public messaging and policies to reduce transmission. A large spike was observed following Eid celebrations\(^3\)
- Recent research suggest several approaches for the response to COVID-19 in resource-poor settings\(^4\):
  - Avoiding treatment interruptions for NCDs, TB and HIV through CHWs and multi-month medication supply
  - Shielding high-risk populations including those above 70, living with NCDs, and other immune-suppressing conditions (in some contexts this should particularly consider those above 60 years, and living with TB (if additional dedicated isolation can be achieved), HIV and malnourished adults.
  - Strong social mobilization, community engagement and coordination are essential
  - Suggests best approach would be a combination of self-isolation, moderate distancing and high uptake of shielding methods could mitigate bed demand and mortality to a considerable extent.
- Recent serological studies have estimated 10 million Afghans have been infected by COVID-19 (which is an estimated 31.5% of the population)\(^5\)
- Over half of the residents in slums of Mumbai, India have tested positive for antibodies to the coronavirus in a recent survey, with 16% of the surrounding population testing positive.\(^6\)
- Mapping of COVID in Humanitarian settings available here depicted below showing COVID-19 cases compared to where vaccination campaigns have been postponed

\(^2\) Aljazeera,
\(^3\) https://gov.krd/coronavirus-en/dashboard/,
\(^4\) Conflict and Health
Guidance Launched or Highlighted This week
Weekly update (official) based on locations with highest case increases – last updated: WHO SitRep #201

- Estimating Mortality from COVID-19 (WHO)
- Breastfeeding and COVID-19 guidance has been developed and being disseminated during breastfeeding awareness week
- Brief on the use of environmental surveillance testing waste water for detection of COVID-19 hotspots
- The COVAX facility Global Procurement for COVID-19 vaccines
- COVAX, the ACT-Accelerator vaccines pillar: Insuring accelerated vaccine development and manufacture

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
BMJ COVID-19 resources
European Centre for Disease Prevention and Control
End Coronavirus Visualizations
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