Nearly 5.8 million cases confirmed and reported, with over 362,000 deaths reported to date (unofficially over 6.1 million cases and over 371,000 deaths, over 3 million active cases and over 2.7 million recovered). Countries with the highest number of cases include the USA, Brazil and Russia. South America emerging as the new hotspot for the pandemic, Brazil had the highest daily increase in reported cases in the past 48 hours.1

1 Official numbers and WHO visualizations available here, WHO Europe Epi Week of May 4th-10th (WHO Weekly Epi Report)
Weekly update (official) based on locations with highest case increases – last updated: WHO SitRep #131

### Americas Region Country

| Region Country | Daily change in new reported cases (decreasing shown in **blue**, increasing in **red**)
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Sunday 24-May</td>
</tr>
<tr>
<td>United States</td>
<td>20 475</td>
</tr>
<tr>
<td>Brazil</td>
<td>20 803</td>
</tr>
<tr>
<td>Peru</td>
<td>2 929</td>
</tr>
<tr>
<td>Canada</td>
<td>1 127</td>
</tr>
<tr>
<td>Chile</td>
<td>3 536</td>
</tr>
<tr>
<td>Mexico</td>
<td>2 960</td>
</tr>
</tbody>
</table>

Health system in Santiago, Chile close to collapse due to strain from COVID-19

### European Region Country

| Region Country | Daily change in new reported cases (decreasing shown in **blue**, increasing in **red**)
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>Sunday 24-May</td>
</tr>
<tr>
<td>Russia</td>
<td>8 599</td>
</tr>
<tr>
<td>UK</td>
<td>2 959</td>
</tr>
<tr>
<td>Spain</td>
<td>466</td>
</tr>
<tr>
<td>Italy</td>
<td>669</td>
</tr>
<tr>
<td>Germany</td>
<td>431</td>
</tr>
<tr>
<td>Turkey</td>
<td>1 186</td>
</tr>
</tbody>
</table>

### MENA Region Country

| Region Country | Daily change in new reported cases (decreasing shown in **blue**, increasing in **red**)
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>Sunday 24-May</td>
</tr>
<tr>
<td>Iran</td>
<td>1 869</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>2 442</td>
</tr>
<tr>
<td>Qatar</td>
<td>1 732</td>
</tr>
<tr>
<td>UAE</td>
<td>812</td>
</tr>
<tr>
<td>Kuwait</td>
<td>900</td>
</tr>
</tbody>
</table>

### Asia Pacific Region Country

| Region Country | Daily change in new reported cases (decreasing shown in **blue**, increasing in **red**)
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td></td>
<td>Sunday 24-May</td>
</tr>
<tr>
<td>India</td>
<td>6 767</td>
</tr>
<tr>
<td>Pakistan</td>
<td>2 164</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>1 873</td>
</tr>
<tr>
<td>Singapore</td>
<td>642</td>
</tr>
<tr>
<td>Indonesia</td>
<td>949</td>
</tr>
<tr>
<td>Philippines</td>
<td>180</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>716</td>
</tr>
</tbody>
</table>

Timeline for Western Pacific available [here](https://www.who.int). China NOT reporting on asymptomatic positive cases

### Africa Region Country

| Region Country | Daily change in new reported cases (decreasing shown in **blue**, increasing in **red**)
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sunday 24-May</td>
</tr>
<tr>
<td>South Africa</td>
<td>1 218</td>
</tr>
<tr>
<td>Nigeria</td>
<td>265</td>
</tr>
<tr>
<td>Ghana</td>
<td>131</td>
</tr>
<tr>
<td>Cameroon</td>
<td>0</td>
</tr>
<tr>
<td>Guinea</td>
<td>62</td>
</tr>
</tbody>
</table>
Daily vs. Total confirmed COVID-19 cases
Shown is the 7-day rolling average of confirmed COVID-19 cases. The number of confirmed cases is lower than the number of total cases. The main reason for this is limited testing.

News/Political Context

- Daily confirmed deaths increasing most rapidly in Madagascar, Mauritania, Nicaragua, Djibouti, Nepal, Yemen, Qatar, Sudan, Guatemala.²
- Cases doubling rapidly in Western Sahara (1 day), Malawi (2 days), Zimbabwe (3 day), Nicaragua (4 days), Nepal (5 days), South Sudan (7 days), Mauritania (7 days), Syria (7 days), Ethiopia (7 days), Comoros (8 days), Haiti (8 days), Uganda (8 days), CAR (8 days).³
- At least 80 million children under one years of age at risk of disease such as diphtheria, measles and polio as COVID-19 disrupts routine vaccination efforts (Gavi, WHO, UNICEF)⁴
- Seeing COVID-19 emerge and wane in different parts of the US making state-by-state approach challenging and an “end” to the first wave more challenging to distinguish
- New toolkit launched by WHO and Vital strategies for rapid mortality surveillance and epidemic response
- Continue to see a significant proportion of cases among migrant workers in several countries
- Disproportionate numbers of deaths among indigenous communities throughout the Americas continue to be reported.⁵ Navajo Nation in the US currently has the highest per-capita rate of infection in the country.
- East Africa looking to implement mandatory screening of truck-drivers for COVID-19 after many have tested positive in Kenya, Uganda and Tanzania.
- Concern rising over lack of official data being reported from Tanzania, while PoE screenings show high rates of COVID-19 infection are likely
- 19% infections in Europe reported among health workers⁶
- Updates to WHO clinical guidelines (link also below) to highlight:

² https://ourworldindata.org/coronavirus
³ Reference to ECDC data using https://ourworldindata.org/coronavirus
⁴ WHO, Gavi, UNICEF
⁵ Reuters, AP, WIRED
⁶ WHO EURO weekly COVID-19 report
- Discontinue transmission-based precautions (and isolation) on release of COVID-19 patient care due to evidence showing viral shedding of up to 9 days following mild symptoms and 3 weeks following hospitalized care – preliminary evidence shows this is not infectious.
- Treatment for acute co-infections of with COVID-19 should not give antibiotics unless there is a bacterial infection confirmed
- Suggestion to use pharmacological prophylaxis in adults and adolescents to prevent thromboembolism when not contraindicated. Mechanical prophylaxis suggested for those with contraindications.
- WHO does not recommend the use of listed drugs such as antivirals, immunomodulators, and others outside of clinical trials.

• Framework developed with 5-step process to considering whether and how to implement mass-vaccination campaigns for VPDs.\(^7\)
  1. Assess the potential impact of the VPD/HID outbreak using key epidemiological criteria
  2. Assess the potential benefits of a mass vaccination campaign and the country capacity to implement it safely and effectively
  3. Consider the potential risk of increased COVID-19 transmission associated with the mass vaccination campaign
  4. Determine the most appropriate actions considering the COVID-19 epidemiological situation
  5. If a decision is made to proceed with a mass vaccination campaign, implement best practice

• Remote regions of Peru facing major strains in hospital capacity, oxygen supply and testing capacity.\(^8\)

Recent Research/ Evidence
- Disease progression: There is a general decline in viral RNA in respiratory samples with time, but positive PCR can be found for some weeks after initial infection. Antibodies also appear late in the infection.
- Key interventions and lessons learned from Ebola response listed in an opinion piece in American Journal of Hygiene and Tropical Medicine, including an emphasis on surveillance and case investigation as well as coordination, analysis capacity, RCCE, IPC, free care to case management, operational preparedness and a multi-sectoral approach.\(^9\)
- Additional research still needed to determine the role children and adolescents play in the transmission of COVID-19. Current evidence shows lower infection rates.\(^10\)
- Reports that COVID-19 has spread from minks to 2 humans in the Netherlands calls for closer investigation and safety precautions, but authorities list risk as small\(^11\)
- Additional evidence compiled for argument to use universal-mask coverage as part of the larger public health strategy to reduce COVID-19 transmission given that a large proportion of the spread of COVID-19 is through people who do not show symptoms breathing and speaking.\(^12\)
  - Evidence that there is a significant route of infection in indoor environments, evidence that respiratory droplets undergo evaporation also may lead to smaller droplets traveling further than the estimated 2 meters.\(^13\)
  - Additional evidence that respiratory droplets with SARS-CoV-2 may also travel farther when higher pollution particulates are present.\(^14\)

\(^7\) WHO SitRep #131
\(^8\) Lancet 30 May 2020
\(^9\) Am. J. Trop. Med. Hyg., 00(0), 2020
\(^11\) Veterinary interview ProMed
\(^12\) Science. Reducing transmission of SARS-CoV-2. 27 May 2020
\(^13\) Environmental International 10 April 2020
\(^14\) Environmental Research and public health 17 April 2020
Imaging of a sneeze showing smaller aerosol droplets can travel the entire distance of a room (6-8 meters).\textsuperscript{15} Images of coughing and aerosols\textsuperscript{16}

- Patients with mild symptoms have SARS-CoV-2 RNA for an average of 14 days, while patients with severe illness have SARS-CoV-2 RNA in respiratory samples for an average of 21 days. Data collection ongoing.\textsuperscript{17}
- 88% drop in non-COVID-19 related illnesses in the ICU in NY from 15 February – 15 April 2020 suggesting the majority of these patients are putting off treatment, potentially dying at home, or are presenting with co-morbidities.\textsuperscript{18}
- Multi-center retrospective cohort study to examine the effect of cancer on severity of COVID-19 disease showed those that had cancer were statistically significantly more likely to experience severe COVID-19 than those without, and additional risk factors such as age, and severity of cancer stage had additional influence on severe COVID-19 experience.\textsuperscript{19}

Clinical Trials

- Solidarity trials: over 400 hospitals in 35 countries are actively recruiting patients and nearly 3500 patients have been enrolled from 17 countries to test 4 drugs for treatment of COVID-19.\textsuperscript{20}
- First human trial of COVID-19 vaccine finds it is safe and induces rapid immune response. Second phase trials planned.\textsuperscript{21}
- WHO has set a temporary pause in the use of hydroxychloroquine in trials due to higher death rates reported in recent lancet article (shared last week)
  - A multinational registry analysis of the use of hydroxychloroquine of chloroquine with or without a macrolide for treatment in 671 hospitals in 6 countries found that both hydroxychloroquine and chloroquine (with or without macrolide) were associated with increased mortality in the hospital after accounting for confounding variables. Mortality in control group (9.3%), hydroxychloroquine (18%), hydroxychloroquine with a macrolide (23.8%), chloroquine (16.4%), chloroquine with a macrolide (22.2%).\textsuperscript{22}
  - (Last week): Recent double-blind randomized study showed Remdesivir was superior to placebo in shortening the time to recovery in adults hospitalized with Covid-19 and evidence of lower respiratory tract infection.\textsuperscript{23}
    - Limitations: little benefit to patients who were on mechanical ventilation. While mortality was lower, it was not statistically significant
- Convalescent plasma transfusion is a potentially efficacious treatment option for patients hospitalized with COVID-19, but may offer greater benefit to non-intubated patients than intubated.\textsuperscript{24}
- In an age and sex-matched control trial, using multivariable analyses, use of ACE inhibitors or ARBs, compared with use of other antihypertensive drugs, was not associated with excess risk for being diagnosed and hospitalized with COVID-19.\textsuperscript{25}

\textsuperscript{15} NEJM 25 August 2016. A sneeze
\textsuperscript{16} NEJM 9 October 2008
\textsuperscript{17} NEJM Viral Load Dynamics in Patients Infected with SARS-CoV-2. 27 May 2020
\textsuperscript{18} NEJM 29 May 2020. COVID-19 X-curves
\textsuperscript{19} Lancet 29 May 2020. Clinical characteristics and risk factors associated with COVID-19
\textsuperscript{20} WHO Media briefing
\textsuperscript{21} Lancet 22 May 2020
\textsuperscript{22} The Lancet 22 May 2020. Hydroxychloroquine or chloroquine with or without a macrolide for treatment of COVID-19: a multinational registry analysis
\textsuperscript{24} Pre-print: Convalescent plasma treatment of severe COVID-19: A matched control study. 22 May 2020
\textsuperscript{25} NEJM. Renin-Angiotensin System Inhibitors and Susceptibility to COVID-19. 26 May 2020
• Ana-COVID study in Paris, France showed Anakinra reduced both need for invasive mechanical ventilation in the ICU and mortality among patients with severe forms of COVID-19, without serious side-effects. Additional clinical control studies needed.\(^{26}\)
  o Suggestions that treating COVID-19-associated cytokine storm syndrome may be the key in reducing general mortality in severe COVID-19 cases.\(^{27}\)

### Modeling

• **ICL modeling of the COVID-19 epidemic in the US estimates** that the epidemic is not experienced evenly throughout the US\(^{28}\) with an overall 4.1% of the population having been infected to date (and in locations hardest hit less than 25% of the population has been infected – including New York with an estimated 16.6% have been infected). As of May 17\(^{29}\), a **strong association is found between the initial reproductive number and population density and date of when 10 cumulative deaths occurred.**\(^{29}\)
  o If relationship between mobility and mortality remains constant, mortality is expected to double over the next 2 months as social restrictions become more relaxed.
  o Weekly mortality trends suggest the highest \(R\) are found in Afghanistan (2.72), Chile (2.67), Bulgaria (1.77%), Kuwait (1.74%), and Bangladesh (1.65%).\(^{30}\)

• **IHME estimates deaths to reach 135,109 in the US by August.** The majority of states have also returned to baseline mobility except for NY which currently remains at 50% limited mobility. Of special concern are California and Arizona where mobility is increasing rapidly.\(^{31}\)

• Analysis of anonymized and aggregated **mobility data from mobile phone use in the UK** shows general compliance with social distancing measures compared to average mobility data (ICL).\(^{32}\)

• The high volume of testing and low number of deaths suggests that **South Korea** experienced a small epidemic of infections relative to other countries. Therefore, caution is needed in attempting to duplicate the South Korean response in settings with larger more generalized epidemics, where this strategy may be more difficult (ICL).\(^{33}\)

• **Projections for the reproductive number** ([ICL weekly projections](#ICL weekly projections))
  o **In Europe** show it is likely to remain stable or continue to decrease in the coming week with the major exception of Russia where it remains high as well as increasing. Ukraine, Sweden and the UK also remain high but are decreasing.
  o **In Asia**, Afghanistan, Bangladesh, India and Indonesia are expected to continue with the most rapid increases in reproductive numbers throughout the week with India by far with the highest reproductive number and expected increase.
  o **In MENA**, most countries expected to begin seeing a stabilized reproductive number with the exceptions of Saudi Arabia and Egypt where it is expected to increase.
  o **In Africa**, South Africa is expected to continue seeing an increase in reproductive number as well as Sudan.
  o **In the Americas**, Mexico is predicted to see a rapid increase in expected reproductive number along with Chile, Argentina, Brazil and Colombia, with Peru reaching a stabilized point in estimated reproductive number. Brazil likely to see the highest number of deaths along with the greatest increase.

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27 [Comment in Lancet 29 May 2020](#Comment in Lancet 29 May 2020)
29 [ICL Report #23](#ICL Report #23)
32 [ICL Report #24](#ICL Report #24)
33 [ICL Report #25](#ICL Report #25)
Humanitarian Impacts

- **Yemen raising major concerns** with a suspected full community transmission suspected in Aden, under-reporting from government officials and reports of health workers lacking PPE and social distancing not possible. An estimated 80% of the population is already in need of humanitarian aid, facing cholera, diphtheria and chikungunya outbreaks at the same time. **Reports of people dying in the 40-50 age group**. Based on applied models an **estimated 28 million are expected to be infected and 65,000 deaths.**³⁴

- Development of a **humanitarian platform for COVID-19** by Johns Hopkins, LSHTM & Geneva Center for Education and Research in Humanitarian Action – designed for collecting evidence and lessons learned from actors on the ground.

- Resources on the effects of COVID-19 on malnutrition
  - Nutrition Observatory for Development (NODE): [COVID-19 time for a nutrition-sensitive agenda](#)
  - Action Against Hunger: [Multi-sectoral surveillance system in COVID-19 context](#)
    - Provides cross-cutting multi-sectoral indicators, sampling methodology and guidelines on surveillance for early warning
  - [Review of existing and innovative information systems for nutrition](#) (and health). Action Against Hunger

- **Mapping of COVID in Humanitarian settings available here**

### Guidance Launched or Highlighted This week

- **Assessment of risk factors for coronavirus disease 2019 (COVID-19) in health workers: protocol for a case-control study** (WHO)
- WHO released updated [scientific brief on the impact of smoking on COVID-19 outcomes](#)
- Updates to the [COVID-19 WHO appeal](#) and [pieces of the strategic preparedness and response plan](#)
- **WHO Protocol developed for population-based age-stratified seroepidemiological investigation for COVID-19 virus infection**
- WHO Updated Guidance on the clinical management of COVID-19
- [Ethical considerations to guide the use of digital proximity tracking technologies for COVID-19 contact tracing](#)
- [Surveillance protocol for SARS-CoV-2 infection among health workers](#)
- WHO Europe: [Strengthening the health system response to COVID-19 technical guidance](#)
- [Handbook for public health capacity-building at ground crossings and cross-border collaboration](#)
- WHO developed guidance on planning for mass gatherings in context of COVID-19 outbreak
- [Framework for decision-making: implementation of mass vaccination campaigns in the context of COVID-19](#)

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³⁴ **Fears of “highly catastrophic” COVID-19 spread in Yemen. Lancet 30 May 2020**
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
Health Map
Imperial College of London
ISARIC COVID-19 resources
Johns Hopkins Center for Health Security and CSSE
The Lancet
LSHTM COVID-19 mapping tool
New England Journal of Medicine
Next Strain (Phylogeny of SARS-CoV-2)
Our world in Data
ProMed
WHO
MobLabs
MobLabs Domestic and international risk of importing a case
World Meters