

Update 30 (28th of July 2020)



Information about Infection disease COVID-19 (novel coronavirus)

Force Health Protection Branch FHPB (former DHSC) NATO MILMED COE in Munich 28th of July 2020

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In December 2019, a novel coronavirus emerged in Wuhan City, China. Since then the virus spread to 65 countries including Europe and America. Since then the virus showed evidence for human-to-human transmission as well as evidence of asymptomatic transmission. At 30th January 2020 WHO declared a Public Health Emergency of International Concern. The disease was formally named COVID-19 on 11th of February. The virus itself has been named SARS-CoV-2. On 11th of March 2020 WHO characterized the disease as a pandemic.

HIGHLIGHTS/NEWS

- Today it will be six months since WHO declared COVID-19 a Public Health Emergency of International Concern. Therefor the director repeated the basic measures that are needed to suppress transmission and save lives to find, isolate, test and care for cases; and trace and quarantine their contacts. "Where these measures are followed, cases go down. Where they're not, cases go up".
- The International Monetary Fund: has given the green light for \$4.3 billion (€3.66 billion) worth of aid for South Africa in its battle against the pandemic.
- WHO: published a <u>draft landscape of COVID-19 candidate vaccines</u>.
 As of 24 July, twenty-five candidate vaccines are under clinical evaluation.
- WHO: released a <u>set of practical steps</u> for implementing the
 prescriptions of the WHO Manifesto for <u>a healthy recovery from</u>
 <u>COVID-19</u>. These prescriptions aim to create a healthier, fairer and
 greener world while investing to maintain and resuscitate the economy
 hit by the effects of the pandemic.
- WHO: has published an <u>interim guidance</u> on safe Eid al Adha practices in the context of COVID-19. The document highlights public health advice for social gatherings and religious practices that can be applied across different national contexts.
- Google: is preparing for another year of home office in the Corona crisis. The move should allow employees more flexibility for the next twelve months.

Find articles and other materials at the MilMed CoE homepage: click here

Please use our online observation form to report your lessons learned observations as soon as possible.

<u>Click here to submit your lessons learned observations online</u>

GLOBALLY

16 469 723 confirmed cases 9 600 537 recovered 654 441 deaths

EU/EEA and the UK

2 987 809 confirmed cases 1 830 703 recovered 207 512 deaths

USA → (new cases/day 66 526)

4 278 434 confirmed cases 1 325 234 recovered 147 838 deaths

Brazil → (new cases/day 45 815)

2 442 375 confirmed cases 1 846 641 recovered 87 618 deaths

India ↗ (new cases/day 45 321)

1 480 073 confirmed cases 951 166 recovered 33 408 deaths

Russia → (new cases/day 5 781)

822 060 confirmed cases 611 109 recovered 13 483 deaths

UK ≯ (new cases/day 677)

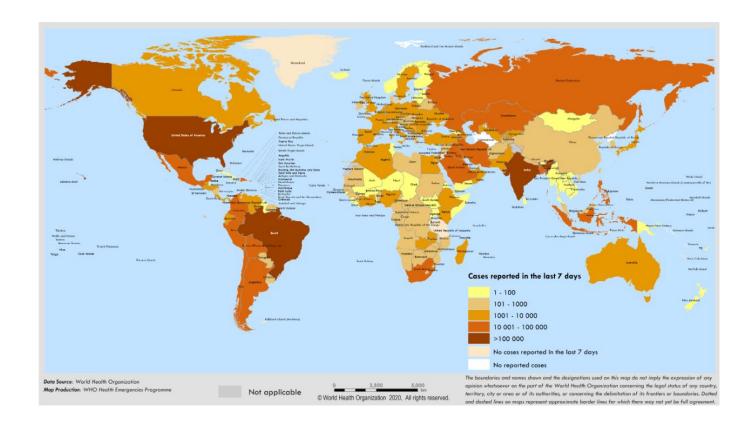
300 111 confirmed cases not reported recovered 45 759 deaths

Please click on the headlines to jump into the document

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Map of countries with reported COVID-19 cases (last 7 days)



Worldwide Situation

Global Situation

WHO

Today marks six months since WHO declared COVID-19 a public health emergency of international concern.

This was the sixth time a global health emergency has been declared under the International Health Regulations, but it is the most severe.

Almost 16 million cases have now been reported to WHO, and more than 700,000 deaths.

And the pandemic continues to accelerate.

In the past 6 weeks, the total number of cases has roughly doubled.

Although all countries have been affected, we continue to see intense transmission in a relatively small group of countries.

Almost 10 million cases, or two-thirds of all cases globally, are from 10 countries, and almost half of all cases reported so far are from just three countries.

Political leadership and community engagement are the two vital pillars of the response.

One of the tools governments can use is the law – not to coerce, but to protect health while protecting human rights.

It includes state of emergency declarations, quarantine measures, disease surveillance, legal measures relating to mask-wearing, physical distancing, and access to medication and vaccines. Well-designed laws can help to build strong health systems; evaluate and approve safe and effective drugs and vaccines; and enforce actions to create healthier and safer public spaces and workplaces. However, laws that are poorly designed, implemented or enforced can harm marginalized populations, entrench stigma and discrimination, and hinder efforts to end the pandemic.

WHO Africa:

On 23 July, the WHO Regional Office for Africa warned of the threat posed by COVID-19 to health workers across Africa. More than 10 000 health workers in the 40 countries are reported to be infected with COVID-19, a sign of the challenges medical staff on the frontlines of the outbreak face

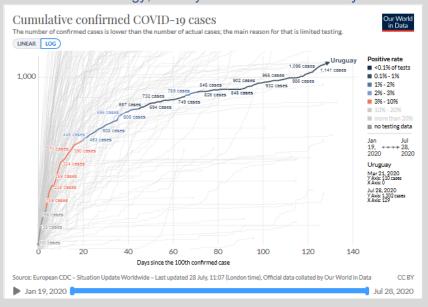
South America Part 3

Success stories in the fight against the coronavirus – URUGUAY

Uruguay's Social Awareness

Uruguay is the country in South America where SARS-CoV-2 was most recent. The country now counts 1 202 infections and 35 deaths. After the first 4 confirmed cases were communicated on March 13, Uruguay started a hitherto unique containment strategy, namely the so-called "voluntary"

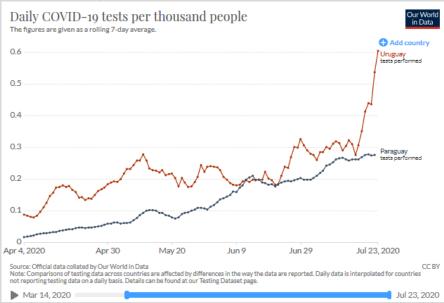
quarantine". In contrast to its South American neighbours, the Uruguayan government only recommended social distancing and only prohibited events with large crowds to be expected. Even vigil could be held, albeit under some conditions. This approach was accompanied by another recommendation to the population, namely that of socially considerate cooperation. Such a recommendation has never been made in any other South American country. The population followed this recommendation with a sense of responsibility that is unique in this form. Ultimately, it was the



business owners who decided on their own initiative to close their shops and stores. Uruguay is a country with a rather bourgeois-republican basic attitude in the population, for which a solid measure of basic social principles in social interaction is typical. Accordingly, the government left the individual

responsibility of the citizens, as was always to be found in Uruguay, in the hands of the population. In contrast, Paraguay is a country that has hardly any democratic episodes in its own history. Both countries therefore reflect on the socio-cultural development and evolution of their respective antiepidemic measures, said Simón Pachano from FLACSO. Uruguay's success is of course also based on the best social indices in South America. Virtually all Uruguayans have access to basic medical care and a nationwide hospital network. The national health system is solid, broad, and open to innovation, while also relying on the ability to visit the sick at home, so patients are not forced to go to clinics and risk becoming infected. Uruguay has been carrying out a substantial number of corona PCRs every day since March, in line with requirements. The country's population has also contributed to the favorable

course of the epidemic in the country. About half of Uruguay's 3.4 million inhabitants live in the Montevideo area. Pachano notes that the country's small population has made a significant contribution to reaching every resident through government campaigns. At the beginning of May, the inland schools were reopened, while the other schools started operating at the end of May. The teaching takes place in a combination of classroom instruction and virtual instruction. all also on a voluntary basis by all participants.



The numbers in comparison

With twice the population of Uruguay compared to only half the number of deaths, Paraguay's containment measures were even more successful than the Uruguayans. The mortality rate in Paraguay is only half that of Uruguay. The higher mortality rate in Uruguay can also be caused by the age profile of the Uruguayan population. The proportion of over 60s in the population in Uruguay is over 20% and represents the largest proportion of older people in South America. 10% of the older are even older than 85. Except for the higher one social awareness of the Uruguayan population means that this population is also more mature and mature, which implies a greater responsibility of the individual towards his own life. Because of the individual's free choice, there are significantly fewer opportunities to meet friends or take part in celebrations or even mass events. In the event of a second wave of infections, Uruguay's chances of avoiding a second epidemic have increased thanks to its more solid infrastructure. In comparison, Paraguay will again face harsh contact restrictions in a second wave, Pachano believes.

Source: https://noticias.uol.com.br/saude/ultimas-noticias/rfi/2020/05/28/paraguai-e-uruguai-os-dois-casos-de-sucesso-no-combate-ao-coronavirus-na-america-do-sul.htm

Costa Rica, America's success story

If you leave the South America region and look at Central America, you will find the country that was most successful in the pandemic in preventing epidemic collateral damage. Measured against its smaller population compared to Paraguay, Costa Rica had a cumulatively 15 841 cases with a significantly higher number of infected than Paraguay. With a total of only 115 deaths, however, the mortality rate is surprisingly low at only 0.39%. Costa Rica shares similar characteristics with Uruguay like e.g. its comparatively robust health system, an educated and reasonable population and the low population density of just 5 million people just mentioned. However, there were differences for Costa Rica in that the country was not so isolated: restaurants remained open, even if only with 50% of their possible occupancy. With strict security precautions, even cinemas and theaters were able to resume operations soon.

Source: https://en.wikipedia.org/wiki/COVID-19_pandemic_in_Costa_Rica

USA: Trials for a coronavirus vaccine in the US are underway, with 30,000 adults set to be tested. The trial, known as COVE, is assessing a coronavirus vaccine developed by US biotechnology firm Moderna Inc. The trial is the first to be implemented under the US government's Operation Warp Speed that aims to accelerate the development, manufacturing and distribution of cures and vaccines for COVID-19. The federal government is supporting Moderna's efforts with around \$1 billion. The vaccine is one the first chosen to enter large-scale human trials.

HKG: Given the worst wave of corona infections to date, Hong Kong has tightened restrictions. As of Wednesday, gatherings of more than two people in the Chinese Special Administrative Region are prohibited. In addition, eating is no longer permitted in restaurants. Within 24 hours, there were 145 new corona cases and two deaths in the metropolis with around 7.4 million inhabitants. The new measures will initially apply for a week. They also provide for the wearing of face masks in public - whether indoors or outdoors - as well as the closure of sports facilities and swimming pools. Schools and kindergartens had previously been closed a week before the summer vacation actually started.

So far, Hong Kong has been extremely successful in the fight against the virus: From January until the beginning of July, there were only slightly more than 1,000 people infected. Since then, however, the number of reported cases has risen rapidly to more than 2,700. Hong Kong has seen three-digit increases in new infections for the first time in a few days. So far, 20 infected people have died.

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AUS: Australia reported more corona deaths than ever before on Sunday. Ten people between the ages of 40 and 80 died within 24 hours from the consequences of coronavirus infections in Victoria. This is the highest number of new deaths in Australia since the pandemic began, according to a census. The authorities in Victoria also reported 459 new cases of infection - 357 new infections were recorded on Saturday. The state with the metropolis of Melbourne is largely sealed off from the rest of the country, exit restrictions and a mask requirement were imposed in Melbourne. Nevertheless, the infection numbers are still very high.

Australia initially successfully contained the spread of the coronavirus. The government gave the all-clear in April, and the corona rules were relaxed all over the country. The total number of coronavirus infections recorded in Australia is now around 15,000.

The Americas: The number of corona infections continues to rise significantly in Latin America and the Caribbean. For the first time, the region even briefly overtook North America on Sunday as the world region most affected by the corona pandemic.

BRA: Brazilian unions have reported President Jair Bolsonaro to the International Criminal Court in The Hague for human rights violations during the corona pandemic. They accuse him of failing to take protective measures for the population in the pandemic and thus being jointly responsible for the deaths of tens of thousands of people. This irresponsible behavior violates the guidelines of the international health authorities and is a crime against humanity.

Rio de Janeiro has cancelled its traditional New Year's Eve party at Copacabana due to the Corona pandemic.

CHN: China saw the highest increase in new corona infections since April. A total of 61 people were

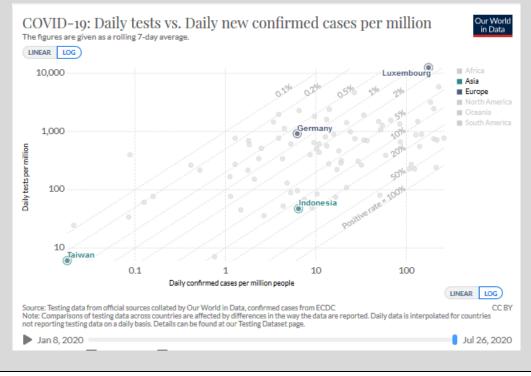
infected with the novel virus within 24 hours, according to the national health authority. The development is due to infection centers in three regions: 41 new infections were reported in the northwestern region of Xinjiang. In mid-July, a new focus of infection appeared in the regional capital, Urumqi. Another 14 cases were reported from the northeastern Liaoning region, most of them in the port city of Dalian. According to the authorities, two other cases were registered in the neighboring province of Jilin. Four other infected people had entered from abroad.

The authorities ordered mass tests for hundreds of thousands of Dalian residents. In Urumqi, residents were also tested for the corona virus in rows, as the state-run newspaper "Global Times" reported. Lockdowns were imposed on a few quarters of the two cities.

VNM: The Vietnamese government announced the evacuation of 80,000 Danang people after three residents there tested positive for the corona virus. Most of them are Vietnamese holidaymakers who are to be brought from the central Vietnamese city. The campaign will take at least four days.

IDN: The number of corona infections has risen to over 100,000. A total of 100,303 cases of infection were reported, 4838 people died as a result of an infection with the virus, the authorities said. The Red Cross, meanwhile, warned that the corona crisis in the fourth most populous country in the world could "get out of control". To stimulate the economy again, the government eased the corona restrictions in July. Restaurants, shopping centers and sights opened again, and people returned to the offices. As a result, the number of new infections rose to around 1000 per day. However, Indonesia has one of the lowest test rates in the world, so the actual numbers are likely to be much higher.

The country with just under 270 million inhabitants is one of the countries most affected by the pandemic in Asia. Infections have been reported from all 34 provinces, including the remote Maluku Islands.



Situation in Europe

ECDC COVID-19 surveillance report Week 29, as of 25 July 2020

Weekly surveillance summary

This summary presents highlights from two weekly ECDC surveillance outputs, which have been streamlined to avoid overlaps

- The COVID-19 country overview provides a concise overview of the evolving epidemiological situation for the COVID-19 pandemic by country, using weekly and daily data from a range of sources.
- The COVID-19 surveillance report presents epidemiological characteristics of COVID-19 cases reported to the European Surveillance System (TESSy) and assesses the quality of the data.

Trends in reported cases

- As of 22 July 2020, the 14-day case notification rate for the EU/EEA and the UK was 14.8 (country range: 1–183) per 100 000 population. The rate has been stable for four days.
- An increasing trend has been observed in the 14-day COVID-19 case notification rate in Belgium, Bulgaria, Czechia, France, Luxembourg, Romania, Spain and United Kingdom. These trends have been present for between one and 39 days.
- Notification rates are highly dependent on a number of other factors, one of which is the testing rate. Weekly testing in the EU/EEA and the UK vary between 110 and 1 656 tests per 100 000 population.

 Denmark has the highest testing rate for week 29, followed by United Kingdom, Malta, Ireland and Portugal. Luxembourg did not report testing data for week 29, however the testing rate report for week 28 was 11 236 tests per 100 000 population.

Primary care

- Among four countries that reported data up to week 29 from primary care sentinel surveillance for COVID-19 using the systems established for influenza, there was only one detections of SARS-CoV-2.
- All countries that reported ILI and/or ARI syndromic surveillance data up to week 29 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.

Hospitalisation

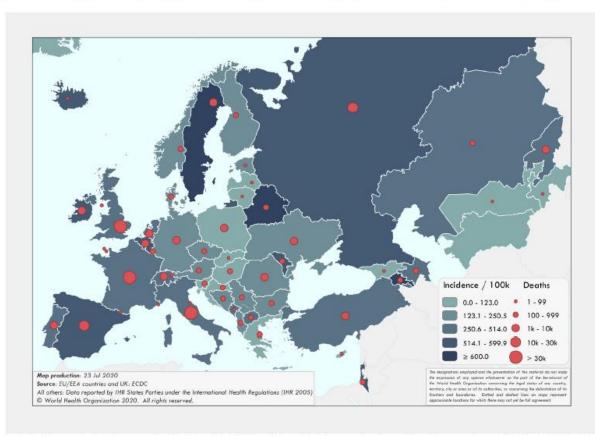
- Hospital and/or ICU occupancy due to COVID-19 are increasing in Bulgaria, Croatia, Czechia, Luxembourg, Romania and Slovenia. No other increases have been observed, although data availability varies.
- Overall, 32% of reported COVID-19 cases in the EU/EEA and the UK to date have been hospitalised; among hospitalised patients, 14% required ICU and/or respiratory support, although there is
 considerable variation among countries.

Mortality

- The 14-day COVID-19 death notification rate for the EU/EEA and the UK was 4.5 (country range: 0-19.5) per 1 000 000 population. The rate has been decreasing for 20 days.
- . A decreasing trend in the 14-day COVID-19 death notification rate in Portugal and United Kingdom has been evident for four and 41 days, respectively.
- We estimate that 25% (country range: 0.5–38.0%) of hospitalised COVID-19 cases reported in the EU/EEA and the UK have died.
- Pooled estimates of all-cause mortality reported by EuroMOMO have now returned to normal levels, following a period of substantially increased excess mortality that coincided with the COVID-19 pandemic peaks. However, in some countries there might be a tendency towards an increase in mortality which could be linked to heat waves. However this needs to be kept under close observation and further assessment is needed.

COVID-19 situation update for the WHO European Region (13 – 19 July 2020 Epi week 29)





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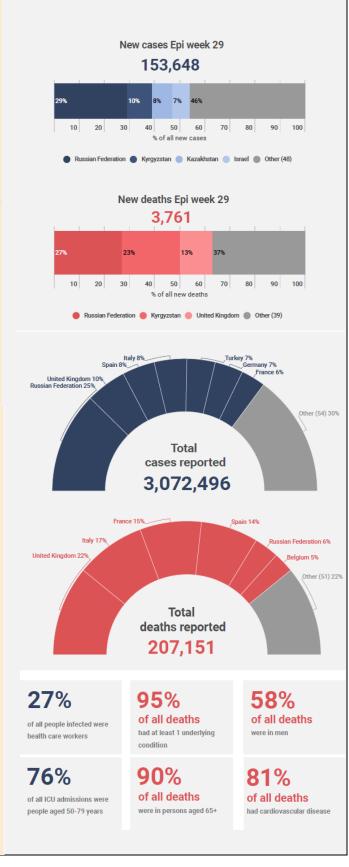
Key points

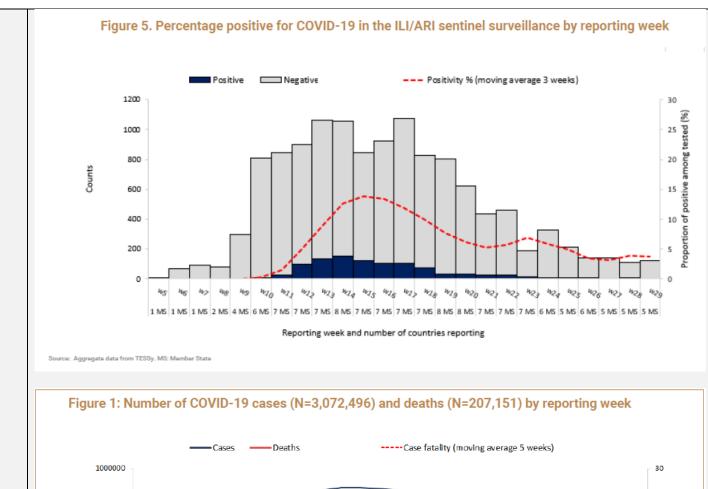
Week 29/2020 (13 - 19 Jul 2020)

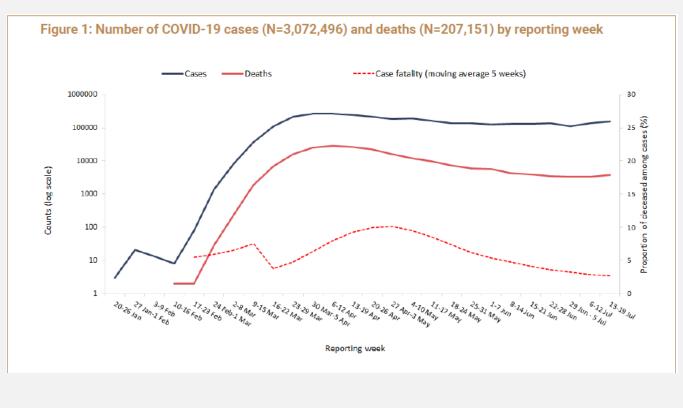
- The number of new cases reported in the Region has increased by 13% since week 28/2020; the number of new deaths has increased by 11% since week 28/2020
- 54% (83,593) of the cases reported in week 29/2020 were reported from four countries: the Russian Federation (29%; 44,384), Kyrgyzstan (10%, 15,903), Kazakhstan (8%; 12,086) and Israel (7%; 11,220).
 The remaining cases (46%; 70,055) were reported by 48 countries and territories; each accounted for <5% of the total cases reported in week 29/2020
- 12 countries had a crude incidence of ≥35 per 100,000 in week 29/2020: Armenia, Israel, Montenegro, Kazakhstan, Luxembourg, Kyrgyzstan, North Macedonia, Bosnia and Herzegovina, Serbia, Republic of Moldova, Azerbaijan and Sweden. The crude incidence continues to vary across the region with a range from 0.5 per 100,000 population in Malta to 144 per 100,000 population in Armenia
- The 14-day cumulative incidence increased by ≥10% in week 29/2020 in 27 countries and territories in the Region, however for some countries data was retro-adjusted by national authorities: Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Estonia, France, Georgia, Greece, Hungary, Iceland, Ireland, Israel, Kyrgyzstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Montenegro, Romania, Serbia, Slovakia, Slovenia, Spain, Switzerland and Uzbekistan (see <u>EURO COVID-19</u>
 <u>Dashboard</u> for recent trends)
- 63% (2,353) of the deaths reported in week 29/2020 were reported by the Russian Federation (27%; 1007), Kyrgyzstan (23%, 871) and the United Kingdom (13%; 475). The remaining deaths (37%; 1408) were reported from 39 countries and territories; each accounted for <5% of the total deaths reported in week 29/2020
- The proportion of reported cases that died decreased from 2.5% in week 28/2020 to 2.4% in week 29/2020, a change that is likely due to a range of factors
- Community-transmission was reported by 27 countries and territories, 24 countries and territories reported cluster transmission, while 5 countries and territories reported sporadic transmission in week 29/2020 (see <u>EURO COVID-19 Dashboard</u>)
- Since the emergence of COVID-19 virus in Europe at the end of January 2020, a wide range of public
 health and social measures (PHSM) have been implemented. See <u>EURO COVID-19 Dashboard</u> (NPI
 Explorer) for an interactive snapshot of the temporal relationship between case and death numbers
 and the introduction and easing of these measures in some countries in the Region. In response to an
 increase in cases, some countries have recently started reintroducing measures

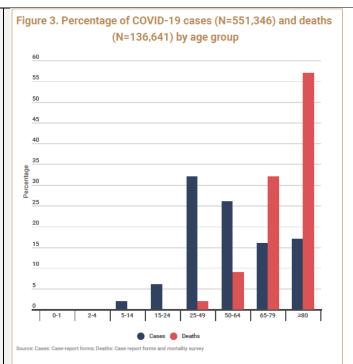
Summary overview

- The cumulative cumulative cases across the Region increased 5.3% to 3,072,496 cases (from 2,918,848 cases in week 28/2020) and cumulative deaths increased by 1.8% to 207,151 deaths (from 203,390 deaths in week 28/2020)
- As of 26 June 2020, eight countries in the European region had an effective reproductive number significantly over 1: Austria, Bosnia and Herzegovina, Israel, Kazakhstan, Kyrgyzstan, Montenegro, Serbia and Switzerland (See EpiForecasts and the CMMID COVID working group COVID-19 Global Summary for latest estimates (See EpiForecasts and the CMMID COVID working group COVID-19 Global Summary for latest estimates)
- Six countries in the Region each reported a cumulative incidence of ≥600 cases per 100,000 population: Andorra, Armenia, Belarus, Luxembourg, San Marino and Sweden
- As of week 29/2020, 70% (2,165,048) of cumulative cases were reported from the Russian Federation (25%; 771,546), United Kingdom (10%; 294,066), Spain (8%; 260,255), Italy (8%; 244,216), Turkey (7%; 218,717), Germany (7%; 201,574) and France (6%; 174,674). The remaining cases (30%; 907,448) were reported by 54 countries and territories; each accounted for <5% of the total cases reported until week 39/2020.
- 27% of all reported infections with information available were in a health care worker
- 76% of all ICU admissions were in persons aged 50-79 years of age, with 71% of all ICU admissions in men
- As of week 29/2020, 78% of cumulative deaths (161,029) were reported from the United Kingdom (22%; 45,273), Italy (17%; 35,042), France (15%; 30,152), Spain (14%; 28,420), the Russian Federation (6%; 12,342) and Belgium (5%; 9,800). The remaining deaths (22%; 46,122) were reported by 51 countries and territories; each accounted for <5% of the total cases reported until week 29/2020</p>
- $\bullet\,$ 90% of all deaths were in persons aged $\geq\!\!65$ years and 58% of all deaths were in men
- 95% of all deaths with information available had at least one underlying condition, with cardiovascular disease the leading comorbidity (81%)
- Following a period of a very substantial excess mortality observed in some countries coinciding with
 the COVID-19 pandemic, pooled estimates of all-cause mortality for the countries in the EuroMOMO
 network have now returned to normal levels. A few countries are still seeing some excess mortality.
 Excess mortality was observed primarily in the age group of ≥65 years, followed by the age group of
 45-64 years and 15-44 years
- In week 29/2020, five countries reported 129 tests and 5 COVID-19 detections in persons with influenza-like illness in primary care sentinel surveillance. The updated positivity rate in week 28/2020 was 5.4% (5 countries) compared to 2.1% (5 countries) in week 27/2020. The highest positivity was 14.6%, seen in week 15/2020









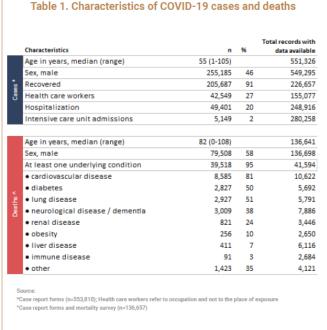
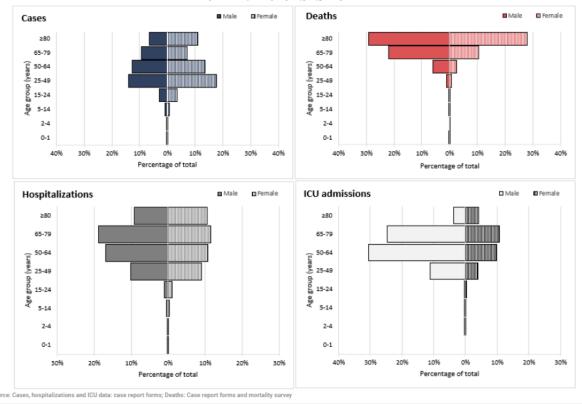


Figure 4. Percentage of COVID-19 cases (N=547,017), hospitalizations (N=48,956), ICU admissions (N=5,051) and deaths (N=136,388) by age group and sex



BEL: The Belgian government has tightened the corona restrictions again. As of Wednesday, Belgians are only allowed to meet a maximum of five people with whom they do not live together. In addition, "home office" is strongly recommended. The new regulations should apply for four weeks and prevent the imposition of a general curfew.

DEU: Because of the sharp rise in corona infections in Spain, the Federal Foreign Office is now advising against tourist trips to several regions. Catalonia is affected with the tourist metropolis Barcelona and the beaches of the Costa Brava, as well as the Aragón and Navarra regions to the west of it.

The Federal Association of Doctors of the Public Health Service (BVÖGD) does not consider it compulsory to test return travel from risk areas. One-off tests offer no security. On the contrary: they can lead to false carelessness. If the test result is negative, the vacationer may still be infected. Anyone who got infected on one of the last travel days, does not have to have a positive result on the day of the return journey. In order to determine whether someone brought the virus with them, the traveler would have to be tested again five days after the first tes. However, the question is who should control the execution of the second test.

A mandatory test for holidaymakers is currently being discussed in Germany.

Two women refused to wear a mask on the plane - and therefore paid a fine of 1,000 euros each. During the flight from Budapest to Munich, the on-board personnel repeatedly asked the 37-year-old twin sisters to put on a mouth-and-nose cover. According to the flight attendants, they instead showed the cabin manager the middle finger. After landing in Munich on Friday, the police met the sisters at the airport. After the women paid the fine, they were allowed to go. However, criminal proceedings for insulting are still awaiting them.

GBR: Additionally to the 14 day quarantine regulation after visiting Spain. The federal Office is advertising against tourist trips to the Balearic and Canary islands.

Prime Minister Boris Johnson has pledged 2 billion pounds (€2.2 billion, \$2.6 billion) to promote a healthier lifestyle for British citizens through walking and cycling projects in England. The move seeks to capitalize on the shift away from cars during the pandemic. From helping people get fit and healthy and lowering their risk of illness, to improving air quality and cutting congestion, cycling and walking have a huge role to play in tackling some of the biggest health and environmental challenges that we face he said.

The government plans to build protected bike routes and scale-up cycling infrastructure with the aim of creating at least one "zero-emission transport city center."

FRA: Due to a sharp increase in corona infections, the beaches around Quiberon in western France are closed again in the evening. Parks and gardens may no longer be visited in the evening after 9 p.m.. The region is very attracted to tourists.

ITA: In order to prevent further infections, the authorities of the southern Italian region of Campania have significantly tightened their penalties for not wearing a mouth-nose protection. Those who do not wear mouth-to-nose protection in closed rooms or in public transport risk a fine of 1000 euros. The first fines were imposed on Saturday, among other things, on the operators of a bar and a barber shop in the port city of Salerno.

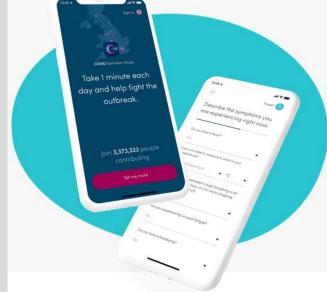
Subject in Focus

Long – term effects of COVID-19

One in 10 people infected with the coronavirus suffers from fatigue, muscle aches or neurological disorders for weeks after surviving an infection. What long-term damage does the virus do to the body?

People who have been seriously unwell and treated on intensive care units can expect to need some

months to recover fully, regardless of their ailment. However, with COVID-19, evidence is mounting that some people who have had relatively mild symptoms at home may also have a prolonged illness. Overwhelming fatigue, palpitations, muscle aches, pins and needles and many more symptoms are being reported as after-effects of the virus. Around 10% of the 3.9 million people contributing to the COVID Symptom Study app, initiated by King's College London, reported effects lasting for more than four weeks. Another British study, the PHOSP-COVID study, will investigate the long-term health impacts of COVID-19 on hospitalised patients over the next year trying to fill the gap we currently have at understanding long-term effects.



An Italian study was looking for persistent symptoms in patients who were discharged from the hospital after recovery. The study found that in patients who had recovered from COVID-19, 87.4% reported persistence of at least one symptom,

particularly fatigue and dyspnoea even 60

symptom(s).

Long-term* symptoms reported by COVID-19 patients 47% general fatigue 25% loss of smell 32% 18% 24% dizziness or prolonged drowsiness respiratory problems 11% diarrhea 8% skin rash Further possible long-term effects

Half a year since the pandemic began, doctors are now observing an increasing number of coronavirus patients.

days after onset of the first COVID-19-related

COVID-19 is very unpredictable, doctors announced. The first findings of the COVID Symptom Study App showed, that roughly one in ten people with the disease continue to suffer from unexplainable symptoms for more than a month, many for more than two months. The most common are exhaustion, headaches, a loss of smell, trouble breathing, dizziness, diarrhea and skin rashes and some of the participants still have a fever after three months.

Severe damage to the lungs, heart and nervous system in some people is also of concern. The disease can cause cardiac arrhythmia or even trigger diabetes mellitus. Some patients suffer from severe concentration and memory disorders, much like dementia. Even young people can be affected. More than 1,000 children around the world have contracted multisystem inflammatory syndrome in connection with a

- 1 trouble concentrating or thinking, all the way up to dementia
- 2 cardiac arrhythmia
- 3 diabetes
- * longer than 30 days; analysis of a study of COVID-19 symptoms from King's College London; 8,065 people who tested positive, of whom 857 had long-term symptoms

SARS-CoV-2 infection, which can lead to myocarditis and circulatory failure.

It's still a mystery to experts as to why the symptoms are so persistent and severe even after the patients have supposedly recovered from the disease. Doctors suspect it could be due to malfunctions in the immune system caused by an infection. It's also possible that once the virus succeeds in establishing itself somewhere in the body, it can strike repeatedly.

Or the lasting ailments could be a consequence of a lack of oxygen during the acute phase of the disease. Especially young COVID-19 patients often don't notice for a long time just how badly their body is doing.

Comparison to other Infections

Researcher see a parallel to another coronavirus disease. For example, after the SARS pandemic in 2003, doctors continued to notice many chronically sick people. Even more than one year post-infection, some patients were still fatigued, weak, had muscle pain, sleeping problems and could not think straight.

While our experience with COVID-19 has only just begun, long-term symptoms following severe viral illnesses are not a new phenomenon. Influenza has long been linked to persistent symptoms such as fatigue and muscle pain, including after both the 1890 and 1918-19 pandemics. Survival of a severe viral pneumonia or ARDS, particularly after intensive care, is known to have long-lasting implications. Some survivors suffer long-term breathlessness and fatigue as a result of the damage to their lungs or from other complications. Survivors can also suffer depression (26–33%), anxiety (38–44%), or post-traumatic stress disorder (22–24%).

Chronic fatigue

Classified as fatigue lasting more than six weeks – is recognised in many different clinical settings, from cancer treatment to inflammatory arthritis. Not only COVID-19 is the of cause chronic fatigue. Prolonged fatigue is well recognised after other viral infections such as the Epstein-Barr virus, which causes infectious mononucleosis. Post-viral fatigue was also seen in a quarter of those infected with the original SARS virus in Hong Kong in 2003.

It can be disabling and for example, if 1% of the current COVID-19 patients with a diagnosed Infection remain slightly unwell over three month it will mean thousands of people are unable to return to work. It is likely that they will have complex needs that the NHS of a lot of countries are ill-prepared to address at the moment.

When it comes to treating chronic fatigue, the emphasis previously has been on effective treatment of the underlying disease, in the belief that this would diminish the fatigue. However, for most viral infections there is no specific treatment, and because COVID-19 is so new, we don't yet know how to manage post-COVID fatigue.

Although we know that lasting fatigue can sometimes follow other viral infections, detailed mechanistic insight is mostly lacking. An ongoing viral infection in lung, brain, fat or other tissue may be one mechanism. A prolonged and inappropriate immune response after the infection has been cleared might be another.

Silent hypoxia

Classified as low levels of oxygen in the blood that could be dangerous, even while the patient may continue to show only mild symptoms.

It is also called "Happy hypoxia". The blood normally features "oxygen saturation" levels of around 98%. Anything below 85% should lead to a loss of consciousness, coma or even death. But a large number of COVID-19 patients have been found to have oxygen saturation levels below 70%, even below 60%, yet remained fully conscious and cognitively functional. They may not be aware they are very ill and yet significant organ damage is being done. Why that happens remains unclear.

Mental health and neurological problems

20 to 30 percent of patients who require hospitalization develop some neurological complication. In late June 2020, a study on the matter was published in the medical journal The Lancet Psychiatry. In this study 125 patients were examined who developed neurological problems as a result of COVID-19. Around 60 percent of the participants, mainly older people, suffered a stroke after being infected. Close to a third of them showed signs of other cognitive or psychiatric changes, including many younger patients. In all, 8 percent of the 125 people examined developed a psychosis in connection with their coronavirus infection. Just under 5 percent developed dementia.

At least in some cases it's easy to explain what caused the brain damage. Strokes can occur because COVID-19 often causes blood to clot. It's also known that the SARS-CoV-2 virus can sometimes lead to encephalitis.

In many other cases, however, the cause of the complications is still unclear. Most researchers believe the neurological effects of the virus are an indirect result of either oxygen starvation to the brain (the "happy hypoxia" exhibited by many patients), or the by-product of the body's inflammatory response (the famed "cytokine storm"). Others aren't so certain: evidence is starting to accumulate demonstrating that the virus can actually invade the brain itself.

In Japan, researchers reported the case of a 24-year-old man who was found unconscious on the floor in a pool of his own vomit. He experienced generalised seizures while being rushed to hospital. An MRI scan of his brain revealed acute signs of viral meningitis (inflammation of the brain), and a lumbar puncture detected SARS-CoV-2 in his cerebrospinal fluid. Chinese researchers also found traces of the virus in the cerebrospinal fluid of a 56-year-old male patient suffering from severe encephalitis. And in a post-mortem examination of a COVID-19 patient in Italy, researchers detected viral particles in the endothelial cells lining the blood vessels of the brain itself.

In fact, some scientists now suspect that the virus causes respiratory failure and death not through damage to the lungs but through damage to the brainstem, the command centre that ensures we continue to breathe even when unconscious.

Take home message

The COVID-19 pandemic is still in its early days. Survivors with persistent symptoms, the "long-haulers", are clearly not uncommon and their symptoms and concerns need to be heard, studied and understood. Clinical trials in the UK, Europe and the US are now recruiting to do this. As with many aspects of COVID-19, we have much to learn and there is much work still to do.

Source: https://jamanetwork.com/journals/jama/fullarticle/2768351

https://www.spiegel.de/international/world/covid-19-many-people-stay-sick-after-

recovering- from-coronavirus-a-d814c20b-fb3d-47b1-bd2b-d6fd65e0ef33

<u>https://theconversation.com/heres-what-we-know-so-far-about-the-long-term-symptoms-of-covid-19-142722</u>

https://www.bbc.com/future/article/20200622-the-long-term-effects-of-covid-19-infection

MilMed CoE VTC COVID-19 response

Topic

The NATO Centre of Excellence for Military Medicine is putting its expertise and manpower to aid in any way possible during the pandemic. The VTC is for interested participants (experts) to exchange experiences, management regulations and restrictions due to COVID-19. We would like to propose just one of the most important topics in the next iteration. We will have some experts giving a short briefing and then afterward we will have time for questions and experiences as well as a fruitful discussion.

Topics former VTCs:

- Regulations on the public, military and missions abroad. Medical Treatment Facilities: how equipped they are, is there pooling / isolation of COVID-19 patients in separate facilities.
- Testing strategies
- Aeromedical evacuation
- De-escalation strategy and measures
- Collateral damage of COVID-19 emphasing Mental Health Aspects and other non COVID related diseases
- Immunity map, national strategies to measure and evaluate the immunity level"
- Mental Health
- Treatment of mild symptomatic cases of COVID-19
- Transition home office back to the office
- COVID-19 Second Wave prediction and preparedness based on facts/experiences, modelling and simulation
- Perspectives of the current COVID-19 vaccine development

We transfer the VTC from July until end of August in an standby modus. If we will face a second wave we can resume the VTC immediately and come back to you. Otherwise we will inform you after the summer break how we proceed with the VTC's.

Conflict and Health

COVID 19 Crisis in Brazil

BRAZIL

The COVID-19 pandemic is exposing Brazil to an unprecedented challenge. The spread of the virus toward poorer areas with lower health care capacity, especially in the North and Northeast of Brazil, poses a threat to the system's ability to respond to an increased demand for medical services. Brazil is the second most exposed country globally, only behind the United States in number of cases and deaths. The spread of the virus has not slowed down so far, with the number of cases doubling every ten days, on average. On June 25, 2020, Brazil had recorded 1,228.114 confirmed cases of COVID-19, and 54.971 deaths, while on July 26, 2020 the number of the confirmed exceeded 2.419.900 and 87.052 deaths were reported.

The pandemic is expected to plunge Brazil into another recession. Even before the crisis struck, Brazil's recovery from the 2015–16 recession was fragile, and its fiscal space was limited. The result of the shocks is Brazil's sharpest recession on record. World Bank estimates point to a –8 percent growth in 2020.

(Source: MSF.com)

Total area: 8.515.767 km2

Population: 210.147.125

Capital: Brasília

Age structure:

0-14 years: 21.89%

15-24 years: 16.29%

25-54 years: 43.86%

55-64 years: 9.35%

65 years and over: 8.61%

(Source: Indexmundi.com)



Preventive measures

On 13 March, the Ministry of Health recommended that those travelling to Brazil self-isolate for at least 7 days on arrival. Health Minister had urged closure of the border due to Venezuela's collapsing health system. The state of Santa Catarina declared a state of emergency, and ordered the closure of all non-essential businesses, and suspended public transport, inter-city and inter-state buses, public meetings, concerts, theatres, sporting events and religious services.

Between 18-20 March, the government of Rio Grande do Sul and Rio Grande do Norte also declared a public emergency situation. Among the measures adopted were the prohibition of interstate travel and the restriction of items purchased in the markets.

On 21 March, COVID 19 cases in São Paulo rose almost 40% in two hours. The state issued a lockdown order for non-essential businesses, lasting from 24 March through at least 7 April. On 9 May, the government of Rio Grande do Sul established a new social (physical) distancing plan. Given that some areas were more affected than others, the local government organized the state in 20 sectors. Each sector is ranked – according to the number of cases, hospital occupancy rates, and other factors – from low risk to high risk. The goal of this scale is to be able to respond better to the current pandemic and allow the population on lower risk areas to return to a somewhat normal life.

Presidential responses – responsibility of policymakers

Despite the global impact of COVID-19 and repeated warnings from health experts and organisations, President Bolsonaro has routinely downplayed the severity of infection. He has

described the threat of COVID-19 as being exaggerated, and as being a "fantasy" created by the media. On 15 March, Bolsonaro made an appearance during a pro-government rally in Brasília, interacting with his supporters; the President faced criticism for his participation without taking precautions (such as wearing a mask), as it came on the heels of his press secretary being infected following his presidential visit to the United States. Later that day, the president claimed that businesses were profiting off "hysteria", and he said the public should not react with neurosis. He has opposed proposals to suspend interstate travel between states with cases, and the closure of businesses (including malls and weekly outdoor markets), arguing in the case of the latter that they were "extreme measures" that would hurt the economy. Governor of São Paulo criticized President Bolsonaro for his inaction on COVID-19, which had required individual states to take on responsibilities that should have been taken on at the federal level.

In mid-March, protests began in major cities such as Rio and São Paulo, including protests in support of the president, and others calling for his resignation. According to one poll, 64% of Brazilians rejected the way the president had been handling the pandemic, while 44.8% supported his impeachment.

Bolsonaro described COVID-19 as being merely a "little flu". Next day, he argued that the lives of Brazilians needed to return to normality. Later the president continued to downplay the possibility that COVID-19 could spread rapidly nationwide, arguing that Brazilians "never catch anything", and that there was a possibility that portions of the population were already immune.

On 28 April, when a reporter pointed out that Brazil's death toll had surpassed China's, he replied, "So what? I'm sorry, but what do you want me to do?"

On 7 July, after announcing that he had tested positive, Bolsonaro remarked "There's no reason for fear. That's life", and continued to criticize lockdown measures, arguing that "the majority of Brazilians contract this virus and don't notice anything.

(Source: Wikipedia)

Out of control - COVID 19 crisis in Brazil

The pandemic's waves in the country have moved from rich to poor, and from the coastal cities to the interior, threatening the most vulnerable and neglected – residents of slums and favelas of Rio de Janeiro and São Paulo, homeless people, and indigenous and riverside communities. In the favelas the residents are suffering from a lack of fresh water, this made them more vulnerable to the proliferation of coronavirus. Without clean running water, the situation of fighting the epidemic would become catastrophic. The number of cases doubling every ten days, as of today exceeded 2.419.900. But these numbers are undoubtedly underestimating.

Brazil has a population of 200 million and has run only circa 14.000 tests for every 1.000.000 people. The capacity to respond to the needs in the country is being decimated.

Nurses in Brazil are dying of COVID-19 faster than in any other country in the world, with almost 100 nurses dying from the disease per month.

With Brazil the second most-badly hit country in the world after the US, both in terms of total cases and in total deaths, it is clear that the situation country-wide is catastrophic. When the number of people with suspected and confirmed cases has exploded, the astonishing death rates were due to the sheer numbers of very sick people needing intensive care treatment with oxygen and there not being enough intensive care unit (ICU) beds or staff. For several weeks, hundreds of people were falling increasingly ill in non-ICU hospital wards, waiting for an ICU bed to become available. In the past few weeks, lot of state governors and local leaders have decided to reopen the country. This may not be a good decision. More than 1.000 people are dying every day and the virus has migrated from capitals to the countryside. If the virus is not well controlled, lifting restrictions will result a further increase in the number of cases. Brazil must fight for health as well as the economy or both will suffer.

Nobody knows the future of the pandemic in Brazil, but most experts agree that the real picture is worse than official data suggest. The contradiction between local leaders begging people to stay at home and the president telling them to return to work has fuelled widespread confusion.

The main lesson what we can learn from Brazil, that in the absence of country-wide epidemiological prevention measures and unified political will, as well as a comprehensive information campaign the fight against novel coronavirus encounter enormous difficulties associated with irreplaceable health and financial losses and death tolls.



	COUNTRY SCORE	AVERAGE SCORE*
PREVENTION	59.2	34.8
Antimicrobial resistance (AMR)	83.3	42.4
Zoonotic disease	56.3	27.1
Biosecurity	48	16.0
Biosafety	25	22.8
Dual-use research and culture of responsible science	33.3	1.7
Immunization	98.2	85.0
DETECTION AND REPORTING	82.4	41.9
Laboratory systems	100	54.4
Real-time surveillance and reporting	81.7	39.1
Epidemiology workforce	50	42.3
Data integration between human/ animal/environmental health sectors	100	29.7
RAPID RESPONSE	67.1	38.4
Emergency preparedness and response planning	87.5	16.9
Exercising response plans	0	16.2
Emergency response operation	33.3	23.6
Linking public health and security authorities	100	22.6
Risk communication	75	39.4
Access to communications infrastructure	87	72.7
Trade and travel restrictions	100	97.4

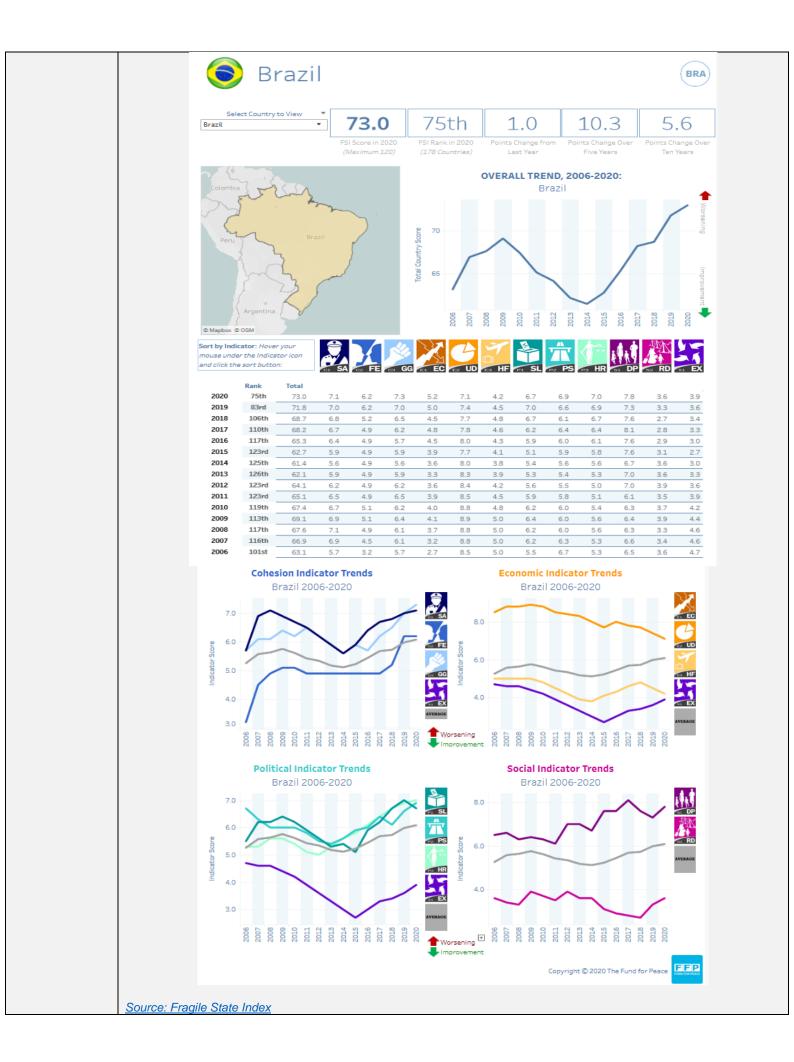
*Average: all 195 countries

Scores are normalized (0-100, where 100 = most favorable)

Aw	Average: all 195 countries		
	COUNTRY SCORE	AVERAGE SCORE*	
HEALTH SYSTEM	45.0	26.4	
Health capacity in clinics, hospitals and community care centers	55.6	24.4	
Medical countermeasures and personnel deployment	33.3	21.2	
Healthcare access	44.3	38.4	
Communications with healthcare workers during a public health emergency	0	15.1	
Infection control practices and availability of equipment	50	20.8	
Capacity to test and approve new medical countermeasures	100	42.2	
COMPLIANCE WITH INTERNATIONAL NORMS	41.9	48.5	
IHR reporting compliance and disaster risk reduction	50	62.3	
Cross-border agreements on public and animal health emergency response	50	54.4	
International commitments	46.9	53.4	
JEE and PVS	25	17.7	
Financing	16.7	36.4	
Commitment to sharing of genetic θ biological data θ specimens	66.7	68.1	
RISK ENVIRONMENT	56.2	55.0	
Political and security risks	71.4	60.4	
Socio-economic resilience	68.1	66.1	
Infrastructure adequacy	33.3	49.0	
Environmental risks	54.8	52.9	
Public health vulnerabilities	52.7	46.9	

www.ghsindex.org

Source: Global Health Index



Recommendations

Recommendation for international business travellers

Travel has been shown to facilitate the spread of COVID-19 from affected to unaffected areas. Travel and trade restrictions during a public health event of international concern (PHEIC) are regulated under the International Health Regulations (IHR), part III.

The majority of measures taken by WHO Member States relate to the denial of entry of passengers from countries experiencing outbreaks, followed by flight suspensions, visa restrictions, border closures, and quarantine measures. Currently there are exceptions foreseen for travellers with an essential function or need.

In the case of non-deferrable trips, please note the following

- Many airlines have suspended inbound and outbound flights to affected countries.
 Contact the relevant airline for up-to-date information on flight schedules.
- Check your national foreign office advices for regulations of the countries you're traveling or regulations concerning your country.
- Information's about the latest travel regulations and De-escalation strategy measures you can find at <u>IATA</u> and <u>International SOS</u>. For Europe you will find more information here.

Most countries implemented strikt rules of contact reduction:

- Everyone is urged to reduce contacts with other people outside the members of their own household to an absolutely necessary minimum.
- In public, a minimum distance of 1.5 m must be maintained wherever possible.
- Staying in the public space is only permitted alone, with another person not living in the household or in the company of members of the own household (for most countries, please check bevor traveling).
- Follow the instructions of the local authorities.

Risk of infection when travelling by plane:

The risk of being infected on an airplane cannot be excluded, but is currently considered to be low for an individual traveller. The risk of being infected in an airport is similar to that of any other place where many people gather. If it is established that a COVID-19 case has been on an airplane, other passengers who were at risk (as defined by how near they were seated to the infected passenger) will be contacted by public health authorities. Should you have questions about a flight you have taken, please contact your local health authority for advice.

<u>General recommendations for personal hygiene</u>, cough etiquette and keeping a distance of at least one metre from persons showing symptoms remain particularly important for all travellers. These include:

- Perform hand hygiene frequently. Hand hygiene includes either cleaning hands with soap and water or with an alcohol-based hand rub. Alcohol-based hand rubs are preferred if hands are not visibly soiled; wash hands with soap and water when they are visibly soiled;
- Cover your nose and mouth with a flexed elbow or paper tissue when coughing or sneezing and disposing immediately of the tissue and performing hand hygiene;
- Refrain from touching mouth and nose; See also: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public
- A medical mask is not required if exhibiting no symptoms, as there is no evidence that wearing a mask of any type protects non-sick persons. If masks are to be worn, it is critical to follow best practices on how to wear, remove and dispose of them and on hand hygiene after removal.
- WHO information for people who are in or have recently visited (past 14 days) areas where COVID-19 is spreading, you will find here.

Travellers who develop any symptoms during or after travel should self-isolate; those developing acute respiratory symptoms within 14 days upon return should be advised to seek immediate medical advice, ideally by phone first to their national healthcare provider.

Source: WHO and ECDC

European Commission:

The coronavirus outbreak is a serious threat to public health. Lockdowns and other coordinated restrictive measures are necessary to save lives. However, these measures may also severely slow down our economies and can delay the deliveries of critical goods and services. The European Commission has taken measures to ensure continued and uninterrupted land, waterborne and air cargo services. These services are of crucial importance for the functioning of the EU's internal market and its effective response to the current public health crisis.

On 13 May, the European Commission presented <u>quidelines and recommendations</u> to help Member States gradually lift travel restrictions, with all the necessary safety and precautionary means in place. Measures intended to enable citizens to travel again after months of confinement include, but are not limited to:

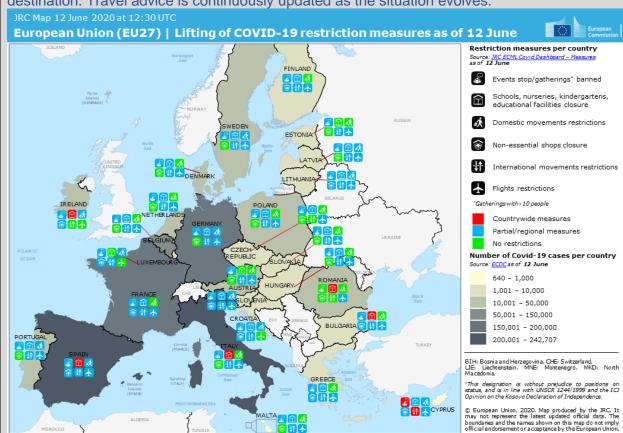
Re-open EU – new web platform to help travellers and tourists

On 15 June, the European Commission <u>launched</u> 'Re-open <u>EU</u>', a web platform that contains essential information allowing a safe relaunch of free movement and tourism across Europe. To help people confidently plan their travels and holidays during the summer and beyond, the platform will provide real-time information on borders, available means of transport, travel restrictions, public health and safety measures such as on physical distancing or wearing of facemasks, as well as other practical information for travellers.

Re-open EU will act as a key point of reference for anyone travelling in the EU as it centralises up-to-date information from the Commission and the Member States in one place. It will allow people to browse country-specific information for each EU Member State through an interactive map, offering updates on applicable national measures as well as practical advice for visitors in the country. Available in the 24 official EU languages.

Travel advice and Border measures

Travel advice is a national competence and you should check if your national authority, e.g. the Ministry of Foreign Affairs, has issued an official travel warning concerning your planned destination. Travel advice is continuously updated as the situation evolves.



Source: https://ec.europa.eu/info/live-work-travel-eu/health/coronavirus-response/travel-and-transportation-during-coronavirus-pandemic_en

Risk Assessment

Global

- Because of global spread and the human-to-human transmission the **moderate to high** risk of further transmission persists.
- Travellers are at risk of getting infected worldwide. It is highly recommended to avoid all unnecessary travel for the next weeks.
- Individual risk is dependent on exposure.
- National regulation regarding travel restrictions, flight operation and screening for single countries you will find here.
- Official IATA changed their travel documents with new travel restrictions. You will find the documents here.
- Public health and healthcare systems are in high vulnerability as they already become
 overloaded in some areas with elevated rates of hospitalizations and deaths. Other critical
 infrastructure, such as law enforcement, emergency medical services, and transportation
 industry may also be affected. Health care providers and hospitals may be overwhelmed.
- Appropriate to the global trend of transmission of SARS-CoV-2 an extensive circulation of the virus is expectable. At this moment of time, asymptomatic persons as well as infected but not sickened persons could be a source of spreading the virus. Therefore, no certain disease-free area could be named globally.

Europe

ECDC assessment for EU/EEA, UK as of 11 June 2020:

- Risk of COVID-19 to the general population currently assessed:
 Low in areas where community transmission has been reduced and/or maintained at low levels and where there is extensive testing showing very low detection rates.
 Moderate in areas where there is substantial ongoing community transmission and where appropriate physical distancing measures are not in place.
- Risk of COVID-19 to the population with defined factors associated with severe disease outcome currently assessed:
 Moderate in areas where community transmission has been reduced and/or maintained at low levels and where there is extensive testing showing very low detection rates.
 Very high in areas where there is substantial ongoing community transmission and where appropriate physical distancing measures are not in place.
- Risk of COVID-19 incidence rising to a level that may require the re-introduction of stricter control measures is currently assessed as:
 Moderate if measures are phased out gradually, when only sporadic or cluster transmission is reported, and when appropriate monitoring systems and capacities for extensive testing and contact tracing are in place.

 High if measures are phased out when there is still ongoing community transmission, and no appropriate monitoring systems and capacities for extensive testing and contact tracing are in place.

References:

- European Centre for Disease Prevention and Control www.ecdc.europe.eu
- World Health Organization WHO; www.who.int
- Centres for Disease Control and Prevention CDC; www.cdc.gov
- Our World in Data; https://ourworldindata.org/coronavirus
- Morgenpost; https://interaktiv.morgenpost.de/corona-virus-karte-infektionen-deutschland-weltweit/

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