



Short Update 35a COVID-19 Coronavirus Disease 04th of September 2020



GLOBAL

26 285 660

Confirmed cases
17 527 100
recovered
868 896 deaths

USA

(new cases/day 39 817)

6 113 881

confirmed cases
2 265 202 recovered
186 315 deaths

Brazil

(new cases/day 40 101)

4 041 638

confirmed cases
3 429 435 recovered
124 614 deaths

India

(new cases/day 77 596)

3 936 747

confirmed cases
3 037 151 recovered
68 472 deaths

News:

- **Brazil** has passed the mark of four million corona infections. As the Ministry of Health reported on Thursday (local time), 43,773 more new infections were reported compared to the previous day.
- The White House also said that the **United States** would [not join a global effort to develop, manufacture and distribute a coronavirus vaccine](#) because of the WHO involvement. About 172 countries are engaging with the WHO's Covid-19 vaccine plan to ensure equitable access to vaccines, known as COVAX.
- **WHO**: published a guidance on the [use of Corticosteroids for COVID-19 patients](#). Seriously ill patients should be systematically treated with certain corticosteroids. Patients with a mild course should expressly **not** be treated with the active ingredients.
- **Amnesty International**: Published a [new report](#) that stated that more than 3000 health workers are known to have died from COVID-19 worldwide, which maybe even is a underestimation.
- **WHO's** health emergencies online learning platform: [OpenWHO.org](#).
- Find Articles and other materials about COVID-19 on **our** website [here](#).
- Please use **our** online observation form to report your lessons learned observations as soon as possible [here](#).

Topics:

- **Global situation**
- **Subject in Focus**: Modelling the spread of the coronavirus
- **Conflict and Health**: Democratic Republic Congo
- **In the press**

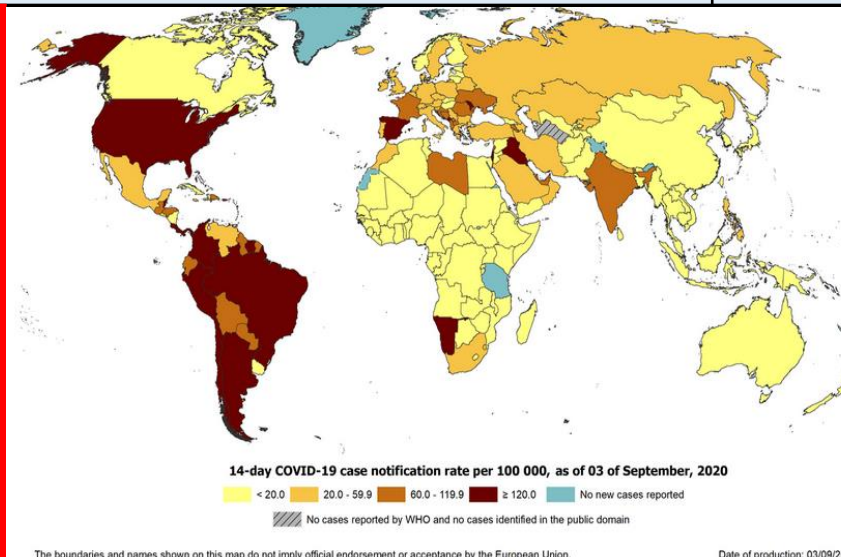
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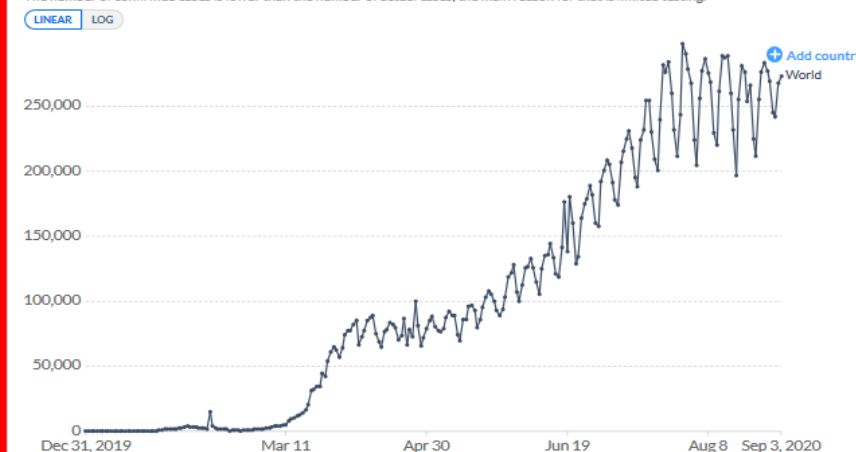
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Daily new confirmed COVID-19 cases

The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing.



EUROPE

3 971 777

confirmed cases
2 278 750 recovered
215 832 deaths

Russia

(new cases/day 4 850)

1 006 923
confirmed cases

824 783 recovered
17 479 deaths

SPAIN

(new cases/day 8 429)

488 513
confirmed cases
150 376 recovered
29 234 deaths

GBR

(new cases/day 1 435)

340 411
confirmed cases
not reported recovered
41 527 deaths

Global Situation

New rapid test by Roche

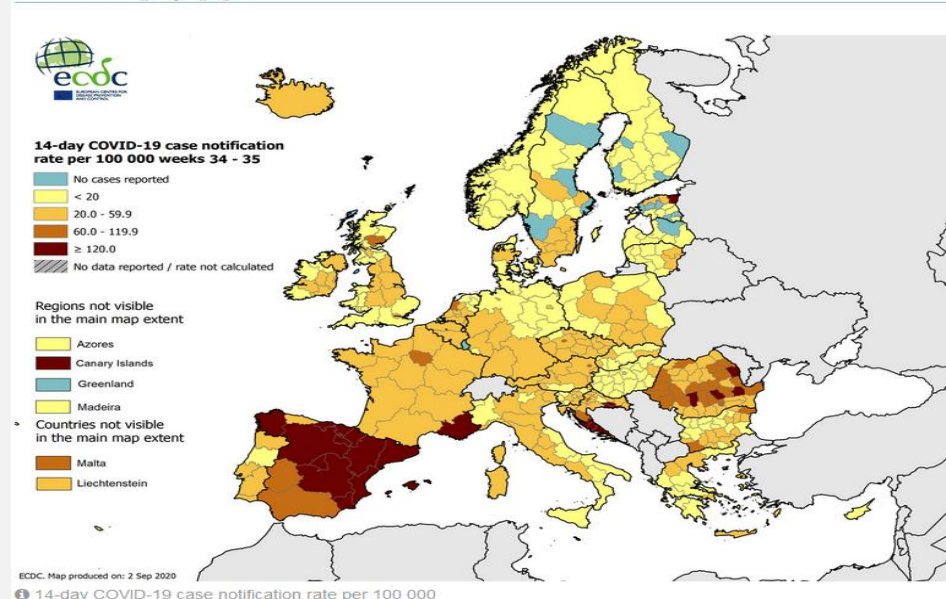
The Swiss pharmaceutical company Roche [will launch a rapid corona antigen test this month](#). The company announced on Tuesday evening that the test result was usually determined within 15 minutes.

According to the information, the test will initially be launched in Europe (countries with CE marking) at the end of September. It is planned, however, to apply for a rapid approval (Emergency Use Authorization) also in the USA with the responsible authority FDA.

According to the report, the test can be carried out with a nasopharyngeal swab without any laboratory infrastructure and is highly reliable. According to Roche, 40 million rapid tests will be available per month when it is launched. This capacity will more than double by the end of this year.

“The SARS-CoV-2 Rapid Antigen Test is for use in point of care settings for both symptomatic and asymptomatic people. This can help healthcare professionals identify a SARS-CoV-2 infection in people suspected to carry the virus with results typically ready in 15 minutes. In addition, it serves as a valuable initial screening test for individuals that have been exposed to SARS-CoV-2 infected patients or a high risk environment. The test has a sensitivity of 96.52% and a specificity of 99.68%, based on 426 samples from two independent study centers (India and Brazil).”

14-day COVID-19 case notification rate per 100 000, weeks 34-35



The manufacturer AstraZeneca has started large-scale clinical trials of its vaccine in the **USA**. Around 30,000 adult volunteers will take part in the Phase III test series, according to the responsible US health authority.

The **US government** plans to start the corona vaccination before the US presidential election in November. The US health authority CDC is preparing for the distribution of a potential corona vaccination from the end of October. However, this is a theoretical scenario. The CDC also expects that by the end of October only two million doses of one vaccine and one million doses of another vaccine could be available. It is unlikely that a vaccine will be ready by then - but it is important to prepare early for its distribution experts say.

As **Brazil** has passed the mark of four million corona infections on Thursday, scientific studies suggest, that at least seven times as many people were infected and twice as many died as recorded. Among other things, Brazil has a very low test rate.

The **Australian** government has extended the international corona travel ban by three months until at least December 17th. Australians are also only allowed to leave the country in exceptional cases.

In **Israel**, more than 3000 new corona infections were recorded in one day. The Ministry of Health announced that 3074 new cases had been registered. For the third day in a row, a record was set

Russia reports almost 5000 new infections within the past 24 hours, exceeding the cumulative case number of more than 1 million cases.

Austria starts a four-stage "traffic light system" to assess the infection situation. This is intended to facilitate the coordination of containment measures. In addition to the development of the number of cases, the risk assessment also includes the occupancy of the hospitals, the traceability of chains of infection and the number of positive tests in the overall ratio.

France again counts over 7,000 new infections with the corona virus within 24 hours. With 464 patients, more and more people with COVID-19 are being treated in intensive care units.

Turkey has tightened the rules for weddings and celebrations due to the increasing number of corona cases. Street and village weddings, engagement or circumcision celebrations in the open air will no longer be allowed from Friday, said the Turkish Ministry of the Interior. In Turkey, the number of cases has risen again in recent weeks, according to which civil weddings are permitted in event rooms, but they can only last a maximum of one hour. Dance, food and all drinks except packaged water are not allowed, it said. In addition, the usual hygiene and distance rules as well as a mask requirement apply.

Global Situation

Source: https://www.who.int/publications/i/item/WHO-2019-nCoV-EHS_continuity-survey-2020.1

WHO Survey 'Rapid assessment of continuity of essential health services during the COVID-19 pandemic'

The WHO's first indicative survey on the impact of COVID-19 on health systems was conducted in 159 countries (all WHO regions except the Americas). 105 responses were received (66% response rate) from senior ministry of health officials covering the period from March to June 2020. The purpose of the survey was to gain insights and perspectives on both the impact of the COVID-19 pandemic on up to 25 essential health services in countries and how countries are adapting strategies to maintain essential services.

Services hit across the board:

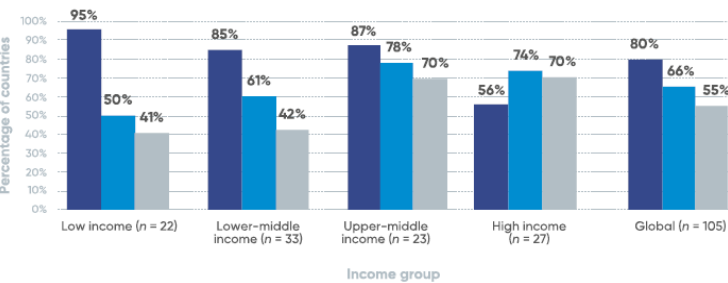
Countries on average experienced disruptions in 50% of a set of 25 tracer services. The most frequently disrupted areas reported included:

- routine immunization – outreach services (70%),
- facility-based services (61%),
- non-communicable diseases diagnosis and treatment (69%),
- family planning and contraception (68%),
- treatment for mental health disorders (61%),
- cancer diagnosis and treatment (55%),
- disruptions in malaria diagnosis and treatment (46%),
- tuberculosis case detection and treatment (42%),
- antiretroviral treatment (32%).

Impact:

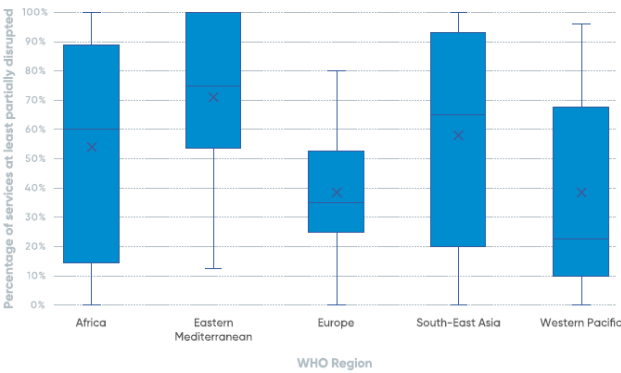
While some areas of health care, such as dental care and rehabilitation, may have been deliberately suspended in line with government protocols, the disruption of many of the other services is expected to have harmful effects on population health in the short- medium- and long-term.

Fig. 1. Countries with national essential health service packages and government funding (by income group)



■ National essential health services package defined prior to COVID-19 (%);
■ Essential health services to be maintained during COVID-19 defined in national plan (%);
■ Additional government funding allocated for maintaining essential health services during COVID-19 (%)

Fig. 4. Percentage of services at least partially disrupted (by WHO region) (n = 105)



X indicates the average percentage of services at least partially disrupted reported per region; the line across the bar in the middle quartiles indicates the median percentage of services at least partially disrupted reported per region

Disruption due to a mix of supply and demand side factors

76% of countries reported reductions in outpatient care attendance due to lower demand and other factors such as lockdowns and financial difficulties. The most commonly reported factor on the supply side was:

- cancellation of elective services (66%). Other factors reported by countries included:
- staff redeployment to provide COVID-19 relief,
- unavailability of services due to closings,
- interruptions in the supply of medical equipment and health products.

Adapting service delivery strategies

Many countries have started to implement some of the WHO recommended strategies to mitigate service disruptions:

- triaging to identify priorities,
- shifting to on-line patient consultations,
- changes to prescribing practices and supply chain,
- public health information strategies.

Outcome

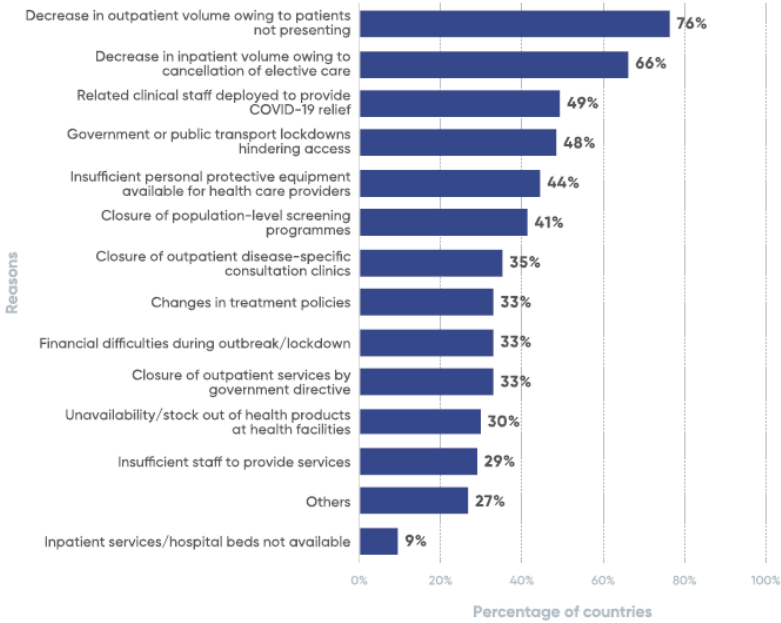
The reports illustrate that almost every country (90%) experienced disruption to its health services, with low- and middle-income countries reporting the greatest difficulties.

Most countries reported that many routine and elective services have been suspended, while critical care - such as cancer screening and treatment and HIV therapy – has seen high-risk interruptions in low-income countries.

The survey showed how vulnerable the health systems are but also serves to inform new strategies to improve healthcare provision during the pandemic and beyond.

It highlights the need to improve real-time monitoring of changes in service delivery and utilization as the outbreak is likely to wax and wane over the next months, and to adapt solutions accordingly.

Fig. 10. Reasons for service disruptions (n = 97)



Subject in Focus

Mask or face shield?

Modelling the spread of the coronavirus

The question arises again and again: Do hygienic protective screens really protect against corona infection? Researcher now find again evidence for the threat of aerosol particles that can carry virus and that those particles even remain in the air longer than was originally thought and can bypass protective screens.

A joint project carried out by four Finnish research organisations has studied the transport and spread of coronavirus through the air and their outcomes the importance to avoid busy public indoor spaces. This also reduces the risk of droplet infection, which remains the main path of transmission for coronavirus.

The researchers from Florida Atlantic University's College of Engineering and Computer Science used qualitative visualizations to test how face shields and masks with valves perform in impeding the spread of aerosol-sized droplets. They showed with these experiments that widespread public use of these alternatives to regular masks could potentially have an adverse effect on mitigation efforts.

The Finnish study

The researcher developed a model that shows how extremely small airborne aerosol particles emitted from the respiratory tract when coughing, sneezing or even talking are transported in the air. Such particles can carry pathogens such as coronaviruses. Their model shows a scenario where a person coughs in an aisle between shelves, like those found in grocery stores; and taking into consideration the ventilation.

The researchers of the consortium modelled the airborne movement of aerosol particles smaller than 20 micrometres. For a dry cough, which is a typical symptom of the current coronavirus, the particle size is typically less than 15 micrometres. Extremely small particles of this size do not sink on the floor, but instead, move along in the air currents or remain floating in the same place. Studies of influenza A have confirmed that the influenza A virus can be found in the smallest particles, which measure less than 5 micrometres. The model shows that the aerosol can stay up to 6 minutes in the air.

The airborne transport and preservation of droplets leaving the respiratory tract were simulated using a supercomputer, and 3D visualisation of the results was then carried out (see the video here: <https://youtu.be/WZSKoNGTR6Q>).

Preliminary results

In the situation under investigation, the aerosol cloud spreads outside the immediate vicinity of the coughing person and dilutes in the process. However, this can take up to several minutes.

'Someone infected by the coronavirus, can cough and walk away, but then leave behind extremely small aerosol particles carrying the coronavirus.

These particles could then end up in the respiratory tract of others in the vicinity



The researchers modeled a situation in which a person coughs down a shelf-restricted corridor typical of grocery stores. Photo: Petteri Peltonen / Aalto University

The US study

In this study the researchers tried to find out what would stop the spread of COVID-19 better. A mask or a face shield. The study was just published in the journal Physics of Fluids.

The researchers employed flow visualization in a laboratory setting using a laser light sheet and a mixture of distilled water and glycerin to generate the synthetic fog that made up the content of a cough-jet. They visualized droplets expelled from a mannequin's mouth while simulating coughing and sneezing. By placing a plastic face shield, a surgical mask and an N95-rated face mask with a valve, they were able to map out the paths of droplets and demonstrate how they performed.

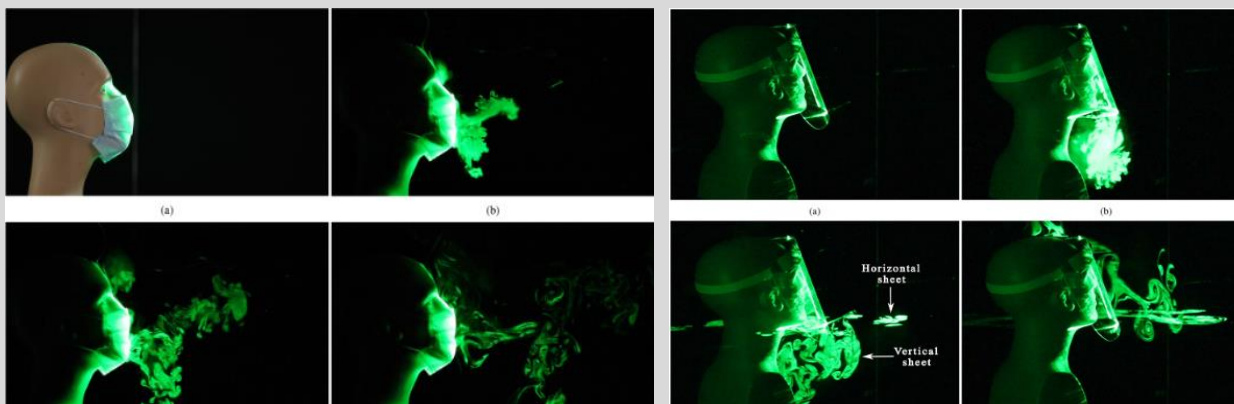
Results

The face shields block the initial forward motion of the jet, the expelled droplets move around the visor with relative ease and spread out over a large area depending on light ambient disturbances, as well as a large number of droplets pass through the exhale valve unfiltered, which significantly reduces its effectiveness as a means of source control.

The N95-rated face mask with the exhale valve used in this study had a small amount of exhaled droplets that escaped from the gap between the top of the mask and the bridge of the nose. Moreover, the exhalation port significantly reduced the effectiveness of the mask as a means of source control, as a large number of droplets passed through the valve unfiltered and unhindered.

Key Take away

Face shields and masks with exhale valves may not be as effective as regular face masks in restricting the spread of aerosolized droplets. Despite the increased comfort that these alternatives offer, it may be preferable to use well-constructed, high quality cloth or surgical masks that are of a plain design, instead of face shields and masks equipped with exhale valves. (see the video here: <https://youtu.be/JEy1cF2pMdM>)





Conflict & Health

Democratic Republic Congo

Congo (Democratic Republic)

26.5 Index Score 161/195



	COUNTRY SCORE	AVERAGE SCORE*
PREVENTION	24.0	34.8
Antimicrobial resistance (AMR)	8.3	42.4
Zoonotic disease	20.4	27.1
Biosecurity	4	16.0
Biosafety	0	22.8
Dual-use research and culture of responsible science	0	1.7
Immunization	93.9	85.0
DETECTION AND REPORTING	25.1	41.9
Laboratory systems	16.7	54.4
Real-time surveillance and reporting	30	39.1
Epidemiology workforce	50	42.3
Data integration between human/ animal/environmental health sectors	0	29.7
RAPID RESPONSE	31.3	38.4
Emergency preparedness and response planning	25	16.9
Exercising response plans	50	16.2
Emergency response operation	0	23.6
Linking public health and security authorities	0	22.6
Risk communication	25	39.4
Access to communications infrastructure	40.1	72.7
Trade and travel restrictions	100	97.4
HEALTH SYSTEM	11.8	26.4
Health capacity in clinics, hospitals and community care centers	18.8	24.4
Medical countermeasures and personnel deployment	0	21.2
Healthcare access	29.6	38.4
Communications with healthcare workers during a public health emergency	0	15.1
Infection control practices and availability of equipment	0	20.8
Capacity to test and approve new medical countermeasures	25	42.2
COMPLIANCE WITH INTERNATIONAL NORMS	45.9	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	28.1	53.4
JEE and PVS	25	17.7
Financing	50	36.4
Commitment to sharing of genetic & biological data & specimens	66.7	68.1
RISK ENVIRONMENT	20.1	55.0
Political and security risks	71	60.4
Socio-economic resilience	28.7	66.1
Infrastructure adequacy	0	49.0
Environmental risks	62.9	52.9
Public health vulnerabilities	9.4	46.9

*Average: all 195 countries
Scores are normalized (0-100, where 100 = most favorable)

Land of raw materials, conflicts and humanitarian disasters

After the Democratic Republic of the Congo, was released from the sometimes cruel Belgian colonial rule in 1960, the dictator Mobutu ruled for 32 years. The country then plunged into a series of conflicts with serious economic and social consequences, from which the Congo is still suffering today. This phase, also known as the “African World War”, since numerous neighbouring states were involved in the internal conflicts, was followed by a peace agreement in 2002 that pacified most parts of the Congo. The first free elections then took place in 2006, followed by two more elections in 2011 and 2018. Despite all this, the Congo is at the bottom of many indices due to massive corruption, conflicts and human rights violations, including position 5 on the Fragile States Index 2019 (FSI) and 166 out of 167 on the democracy index. Since 1999 the United Nations has been trying to support the peace process with currently almost 17,000 soldiers from the MONUSCO mission. Nevertheless, conflicts in the east of the Congo (over 100 rebel groups) and in individual other regions of the country continue to this day and cause a very poor security situation and constant and almost unmanageable violence and conflicts, the main victims of which are the population.

With its area, the Congo is the eleventh largest country in the world and is roughly the size of half of Europe. The approx. 80 million inhabitants are divided into approx. 200 ethnic groups and almost 45 percent live in urban areas. The annual growth of the total population of approx. 2.7 percent per year over the last 20 years and the continuous increase in the urban population of approx. 4 percent p.a. are particularly significant and can be observed. In recent years through rural exodus and displacement. This constant increase and mobility of the population has a negative impact on the social infrastructure and natural resources in the Congo. This development has a direct impact on the distribution of the available agricultural land and the biosphere of the rainforest, which covers a large part of the Congo. The increase also increases the need for food, energy, water, social services and infrastructure.

Another challenge for the country's development is the barely existing infrastructure. There are around 3000 km of asphalt roads in the whole of the Congo. For decades, conflicts and mismanagement have brought the road and rail links that existed from colonial times to a standstill. The main traffic axes are the rivers that cross the whole country and ensure a supply.

As one of the most resource-rich countries in the world, the Congo plays an important and elementary role in the global raw material supply and on the raw material market despite its difficult political and social situation. In particular, diamonds, gold, zinc, copper, petroleum and coltan are mined. Coltan in particular plays an important role in all electronic devices that are used around the world and the often inhumane promotion is the subject of public criticism. The abundance and depletion of raw materials is leading to serious conflicts in the regions of the Congo. Many of the rebel groups in Eastern Congo (gold) and various other groups in conflict regions such as Kasai (diamonds) and Katanga (manganese, copper) are financed by this.

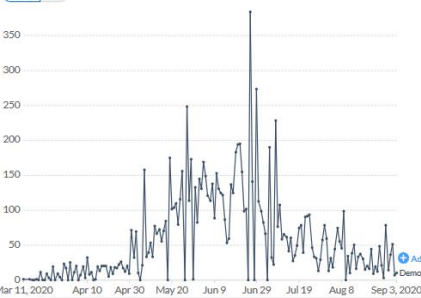
The very bad medical situation in the Congo is based on one of the worst health care facilities in the world (cf. GHSI). Government spending is around \$ 3 a year per inhabitant and there is about one doctor for every 10,000 people. At the same time, only about 35 percent of the population has access to clean drinking water and a third has access to sanitary facilities. These poor hygiene measures encourage the spread of infectious diseases and epidemics. In addition, the situation has deteriorated significantly in recent years due to severe flooding and countless epidemics such as cholera, measles (currently over 8,000 deaths in 2020), Ebola (currently over 2,500 deaths) and a high risk of malaria. In particular, the third Ebola outbreak in the last three years, in eastern Congo, has been described as one of the most complex health crises in history. The reason for this is the fight against an Ebola outbreak in one of the war zones with over 100 conflicting parties in a geographically difficult area with a variety of other influencing factors. The only hope in the fight against the virus was the first-time vaccine against Ebola, which led to a noticeable containment of the virus despite the catastrophic circumstances and the security situation. Three weeks before this outbreak was declared over in June of this year, the Ebola virus broke out again in a city of millions in the north-west of the country.

With 10,114 confirmed COVID-19 cases and 259 deaths, the Congo currently reports comparatively few COVID-19 cases and deaths, which is certainly also due to a low test capacity. Fewer tests are also being carried out than a few months ago, which is probably one of the reasons for the decrease in the number of new cases (see graph below). The outbreak currently has its main focus in the capital Kinshasa, with the conflict and Ebola outbreak regions in eastern Congo and other provinces in the meantime also reporting confirmed COVID-19 cases.

catastrophe the other

Conclusion: The mixed situation in the Congo, with a politically difficult situation, a very poor security situation, hardly any infrastructure, a global and local struggle for raw materials, the constantly increasing population and the associated lack of supply and the destruction of the environment continue to ensure that one humanitarian Disaster will replace other. One of the biggest drivers for this is the ongoing violent conflicts that are destabilizing parts of the country and sometimes making medical aid difficult or even impossible for the population. These circumstances are also the framework conditions for combating the outbreak in the current corona epidemic and containment will pose major challenges or lead to the next humanitarian catastrophe.

Daily new confirmed COVID-19 cases
The number of confirmed cases is lower than the number of actual cases; the main reason for that is limited testing.



<https://eu.boell.org/en/2020/08/17/dr-congo-challenge-convincing-people-coronavirus-exists>
<https://reliefweb.int/report/democratic-republic-congo/democratic-republic-congo-coronavirus-covid-19-situation-report-4>
<https://data.worldbank.org/country/congo-dem-rep>
<https://kivusecurity.org/>
<https://www.arcgis.com/apps/Cascade/index.html?appid=33c9cbd9ef4f49abb771b13d9965b7c>
<https://www.unocha.org/drc>
<https://reliefweb.int/report/democratic-republic-congo/analysis-interactive-map-artisanal-mining-areas-eastern-drc-congo-3>
<https://monusco.unmissions.org/en>

In the press

This section aims at summarizing trending headlines with regards to COVID-19. The collection does not aim at being comprehensive and we would like to point out that headlines and linked articles are no scientific material and for information purposes only. The headlines and linked articles do not reflect NATO's or NATO MilMed COE FHPB's view. Feedback is welcome!

03rd September 2020

Aljazeera

The Afghan herbalist who claims to have a 'cure' for COVID-19

<https://www.aljazeera.com/indepth/features/afghan-herbalist-claims-cure-covid-19-200831044849614.html>

03rd September 2020

South China Morning Post

Covid-19 research shows downsides of face shields and valve masks

<https://www.scmp.com/news/china/science/article/3100051/covid-19-research-shows-downsides-face-shields-and-valve-masks>

04th September 2020

The Guardian

After coronavirus we should be ready for an uncertainty pandemic

<https://www.theguardian.com/business/2020/sep/04/after-coronavirus-we-should-be-ready-for-an-uncertainty-pandemic>

03rd September 2020

The Guardian

GSK and Sanofi to start human trials of potential Covid-19 vaccine

<https://www.theguardian.com/business/2020/sep/03/gsk-and-sanofi-to-start-human-trials-on-covid-19-vaccine>

31st August 2020

DW

Coronavirus denialism still holding Africa back

<https://www.dw.com/en/coronavirus-denialism-still-holding-africa-back/a-54770075>

04th September 2020

The Guardian

Covid symptoms: diarrhoea and vomiting may be key sign of coronavirus in children – study

<https://www.theguardian.com/science/2020/sep/03/diarrhoea-and-vomiting-may-be-key-sign-of-covid-in-children-study>

03rd September 2020

Aljazeera

Nepal police break up religious rally amid coronavirus surge

<https://www.aljazeera.com/news/2020/09/nepal-police-break-religious-rally-coronavirus-surge-200903142312070.html>

03th September 2020

SPIEGEL international

How Feces and Other Bodily Fluids Can Help Track COVID Outbreaks

<https://www.spiegel.de/international/world/how-feces-and-other-bodily-fluids-can-help-track-covid-outbreaks-a-cfabb3bb-df1c-4a07-8199-3156a6533a1a>



The perfect wave – why masks are still important



NEW STUDY ON MOUTH NOSE PROTECTION AND SOCIAL DISTANCING

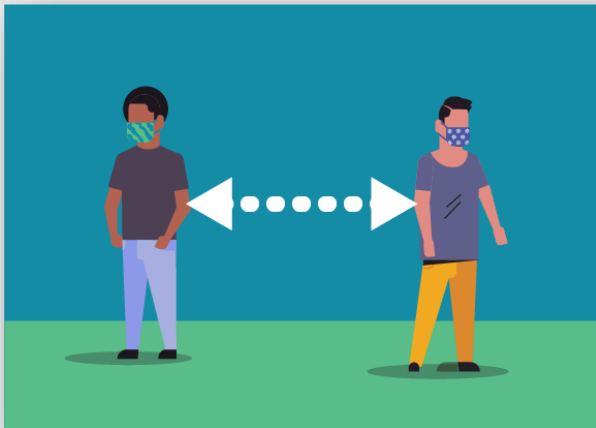
Unfortunately, in the epicenter of the new hot spots areas often enough people are seen who do not adhere to the still valid protective regulations such as social distancing and the correct wearing of a nose and mouth protection. It could be as simple as that - [new studies](#) show that these two measures make a significant contribution to reducing the probability of transmission.

In the case of protective masks with an advertised protective effect in connection with SARS-CoV-2, depending on the intended purpose, a distinction is made between two types:

Medical face masks (MNS; surgical (surgical) masks); are primarily used for third-party protection and protect the person against the exposure of potentially infectious droplets of the person wearing the face mask. Corresponding MNS protect the wearer of the mask if the fit is tight, but this is not the primary purpose of MNS. This is e.g. used to prevent droplets from the patient's breathing air from getting into open wounds of a patient. Since, depending on the fit of the medical face mask, the wearer not only breathes in through the filter fleece, but the breathing air is drawn in as a leakage current past the edges of the MNS, medical face masks generally offer the wearer little protection against aerosols containing excitation. However, you can protect the mouth and nose area of the wearer from the direct impact of exhaled droplets from the other person as well as from pathogen transmission through direct contact with the hands.

Particle-filtering half masks (FFP masks); are objects of personal protective equipment (PPE) in the context of occupational safety and are intended to protect the wearer of the mask from particles, droplets and aerosols. The design of the particle-filtering half masks is different. There are masks without an exhalation valve and masks with an exhalation valve. Masks without a valve filter both the inhaled air and the exhaled air and therefore offer both internal and external protection, although they are primarily designed for internal protection only. Masks with valves only filter the inhaled air and therefore **offer no external protection!!!**

As a large number of unrecognized people move around in public spaces without symptoms, mouth and nose protection protects other people, thereby reducing the spread of the infection and thus indirectly reducing the risk of becoming infected



Due to the occasion, it should be pointed out again and again, also by executives, that the correct way of wearing the mask is essential to achieve maximum protection. The mask wrong, e.g. for example, wearing it under the nose means accepting a possible infection of others.

FFP2 / 3 masks are still considered deficient equipment and should be kept available for healthcare workers and emergency services.

When wearing a facemask, don't do the following:



DON'T wear your facemask under your nose or mouth.

DON'T allow a strap to hang down. DON'T cross the straps.



DON'T touch or adjust your facemask without cleaning your hands before and after.

DON'T wear your facemask on your head.

DON'T wear your facemask around your neck.

DON'T wear your facemask around your arm.

Using Personal Protective Equipment (PPE) when caring for Patients with confirmed or suspected COVID-19

Who needs PPE:

Patients with confirmed or possible SARS-CoV-2 infection should wear a facemask when being evaluated medically

Healthcare personnel should adhere to Standard and Transmission-based Precautions when caring for patients with SARS-CoV-2 infection. Recommended PPE is described in the

Infection Control Guidance.

Before caring for patients with confirmed or suspected COVID-19, healthcare personnel (HCP) must:

- Receive comprehensive training on when and what PPE is necessary, how to don (put on) and doff (take off) PPE, limitations of PPE, and proper care, maintenance, and disposal of PPE
- Demonstrate competency in performing appropriate infection control practices and procedures

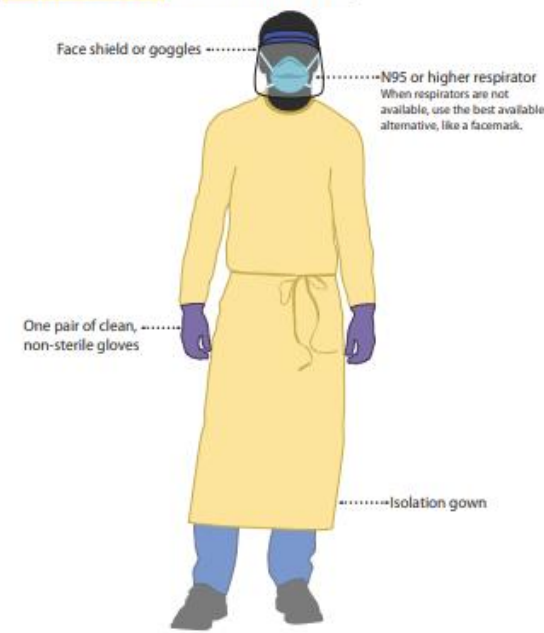
Remember:

- PPE must be donned correctly before entering the patient area
- PPE must remain in place and be worn correctly for the duration of work in potentially contaminated areas
- PPE should not be adjusted during patient care and
- PPE must be removed slowly and deliberately in a sequence that prevents self-contamination

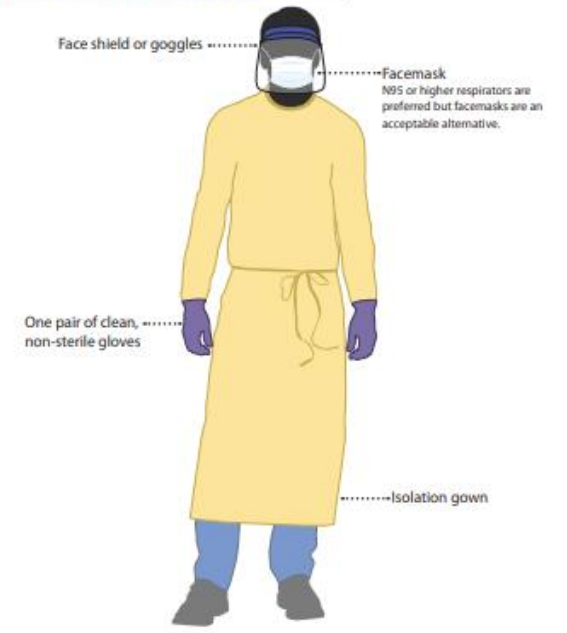
Donning (putting on the gear):

1. **Identify and gather the proper PPE to don.** Ensure choice of gown size is correct.
2. **Perform hand hygiene using hand sanitizer**
3. **Put on isolation gown.** Assistance may be needed by other HCP
4. **Put on NIOSH-approved N95 filtering facepiece respirator of higher (use a facemask if a respirator is not available).**
 - **Respirator** straps should be placed on crown of head and base of neck. Perform a user seal check each time you put on the respirator.
 - **Facemask** should be secured on crown of head and base of neck. If mask has loops, hook them appropriately around your ears.
5. **Put on face shield or goggles.**
6. **Put on gloves**
7. **HCP may now enter patient room**

Preferred PPE – Use N95 or Higher Respirator



Acceptable Alternative PPE – Use Facemask



Doffing (taking off the gear):

1. **Remove gloves.** Ensure gloves removal does not cause additional contamination of hands.
2. **Remove gown.** Untie all ties. Some gown ties can be broken rather than untied. Do so in gentle manner, avoiding a forceful movement. Reach up to the shoulders and carefully pull gown down and away from the body.
3. **HCP may now exit patient room.**
4. **Perform hand hygiene.**
5. **Remove face shield or goggles.** Carefully remove face shield or goggles by grasping the strap and pulling upwards and away from head. Do not touch the front of face shield or goggles.
6. **Remove and discard respirator.** Remove the bottom strap by touching only the strap and bring it carefully over the head. Grasp the top strap and bring it carefully over the head and then pull the respirator away from the face without touching the front of the respirator or facemask.
7. **Perform hand hygiene after removing the respirator/facemask**

Use of gloves in in the context of the COVID-19 pandemic



Recommendations for the use of gloves to prevent SARS-CoV-2 transmission by community setting

Activity	Non-sterile gloves (without EN standards)	Non-sterile gloves ^a	Sterile gloves ^a	Gloves used in microbiological and biochemical laboratories ^b
Community				
Visiting busy closed spaces such as grocery stores, shopping centers.	no	no	no	no
Leisure activities.	no	no	no	no
Using public transport.	no	no	no	no
Workplaces and professions that involve physical proximity to many people, that did not wear gloves for occupational reasons prior to the COVID-19 pandemic, e.g. cashiers in shops and supermarkets.	no	no	no	no
People in occupations that wore gloves prior to COVID-19, such as environmental cleaners and the police.	yes/no ^c	yes/no ^c	no	no
Healthcare setting (e.g. acute care hospitals, general practices, long-term care facilities)				
Aseptic procedures, e.g. surgical operations, central venous catheter insertion.	n/a	n/a	yes	no
Activities with a risk of contamination of healthcare workers' hands, including contamination with body fluids, or contact with mucous membranes and non-intact skin, e.g. peripheral venous catheter insertion/removal, intubation, cleaning spills of body fluids, emptying emesis basins, handling/cleaning used instruments, handling waste.	yes	yes	no	no
Procedures not included in the two previous examples.	no	no	no	no
Specific laboratory work.	no	no	no	yes

^a - European Standard EN 455 on medical gloves for single use, as stipulated in the Council Directive 93/42/EEC

^b - Standards and specifics for the gloves used in microbiological and biochemical laboratories are described in the European Standard EN ISO 374

^c - Dependent on occupation specific guidance applicable to the setting and/or applicable national guidelines /legislation

n/a - not applicable

Source: <https://www.ecdc.europa.eu/sites/default/files/documents/Use-of-gloves-within-COVID-19.pdf>

In the context of COVID-19, there is currently insufficient evidence to recommend the regular use of gloves as a preventive measure to the public and most occupations outside of healthcare.

Community use of gloves may lead to the misconception that hand hygiene can be neglected.

You do not need gloves, performing hand hygiene is sufficient and effective.

Wearing gloves could lead to the misconception that you can touch anything without the risk of getting infected with SARS-CoV-2.

If you decide to wear gloves, please do not forget to wash or disinfect your hands after removing the gloves.

#COVID19

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