Update 18 (4th of May 2020)

Information about Infection disease
COVID-19 (novel coronavirus)

Force Health Protection Branch FHPB (former DHSC) NATO MILMED COE in Munich
4th of May 2020
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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

- Two new States (Comoros and Tajikistan) reported cases of COVID-19 over the weekend.
- **Roche's** COVID-19 antibody test receives FDA Emergency Use Authorization and is available in markets accepting the CE mark, the company announced on 3 May.
- **EU:** According to the EU Commission, more than 70 possible vaccines are currently being researched worldwide. At least three are now being clinically tested. Many researchers believe that a vaccine will not be available until next year due to lengthy studies and approval procedures.
- **WHO** published their weekly update on COVID-19 for 23 April to 1 May here.
- **WHO:** Wants to participate in the investigation of the origin of the corona virus in China. The organisation asked the government in Beijing for an "invitation". "WHO would like to work with international partners and would like to participate in studies on the animal origin of the virus at the invitation of the Chinese government."
- **UNICEF**: The corona pandemic threatens vaccination programs for millions of children in the Middle East and North Africa, according to the United Nations Children's Fund. Some of the routine programs have already been suspended because health workers have been withdrawn. In addition, flight cancellations aggravate the shipment of vaccines to the countries.
- **CDC**: published a Personal Protective Equipment (PPE) Burn Rate Calculator a spreadsheet-based model that will help healthcare facilities plan and optimize the use of PPE for response to coronavirus disease 2019. More information find here.
- **FHP Branch** started to organize a weekly VTC on "COVID-19 response" next VTC will take place on Wednesday,6th of May focusing on **"De-Escalation".**

Find articles and other materials at the MilMed CoE homepage
https://www.coemed.org/resources/COVID19
Please use our online observation form to report your lessons learned observations as soon as possible.
https://forms.office.com/Pages/ResponsePage.aspx?id=Ada59cF6jUaZ_fZxuxzAAVLXriN_74RJnkC57W6UsgRUQVhUVlk4TUUzM1lER0NDUzE1MzZSSDVOSi4u

GLOBALLY
3 471 068 confirmed cases 1 126 119 recovered 247 506 deaths
EU/EEA and the UK
1 507 344 confirmed cases **573 592** recovered **143 974** deaths
USA (x2 in 27.0 d ↘) **1 155 856** confirmed cases **180 152** recovered **67 571** deaths
Spain (x2 in 115.0 d ↗) **217 466** confirmed cases **118 902** recovered **25 264** deaths
Italy (x2 in 76.0 d ↘) **210 717** confirmed cases **81 654** recovered **28 884** deaths
Russia (x2 in 9.5 d ↗) **134 687** confirmed cases **16 639** recovered **1 280** deaths
Brazil (x2 in 10.0 d ↗) **101 826** confirmed cases **42 991** recovered **7 051** deaths

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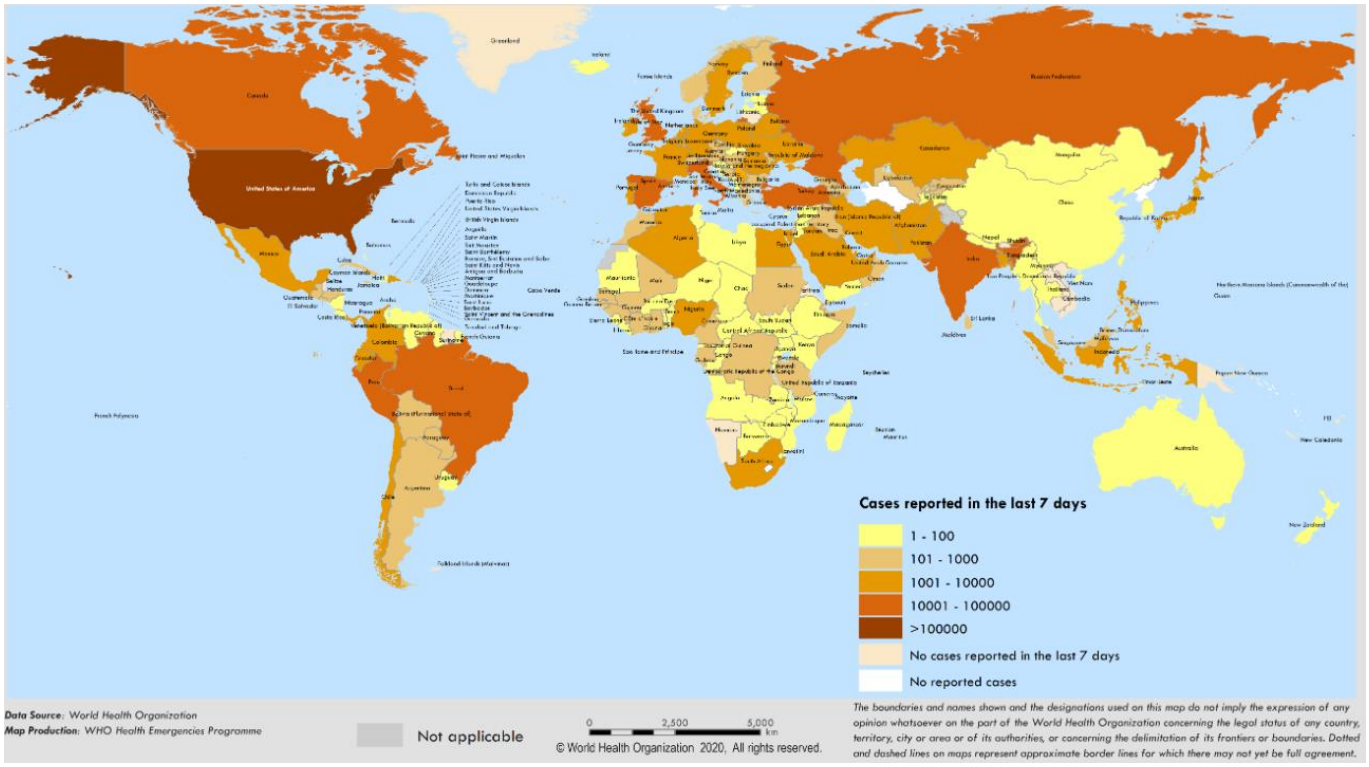
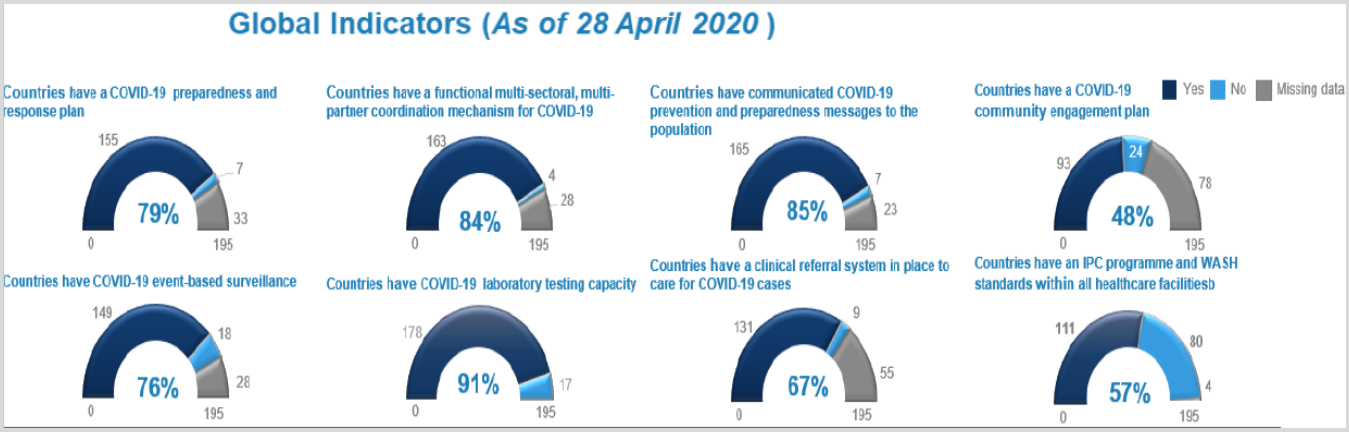
Map of countries with reported COVID-19 cases (last 7 days)



Worldwide Situation

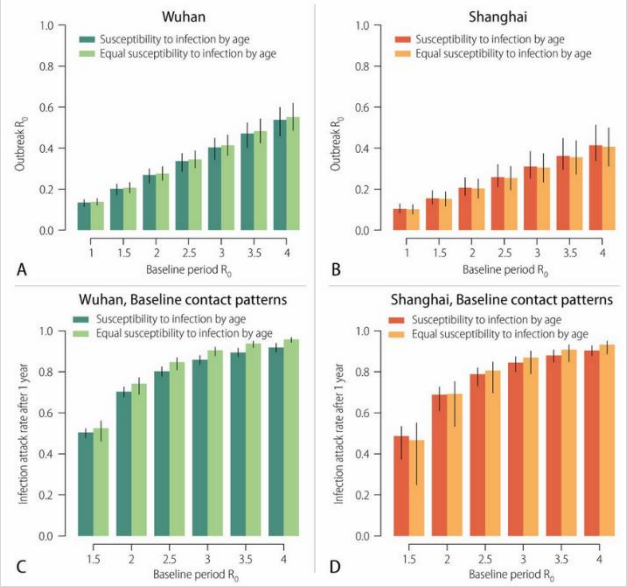
Global Situation



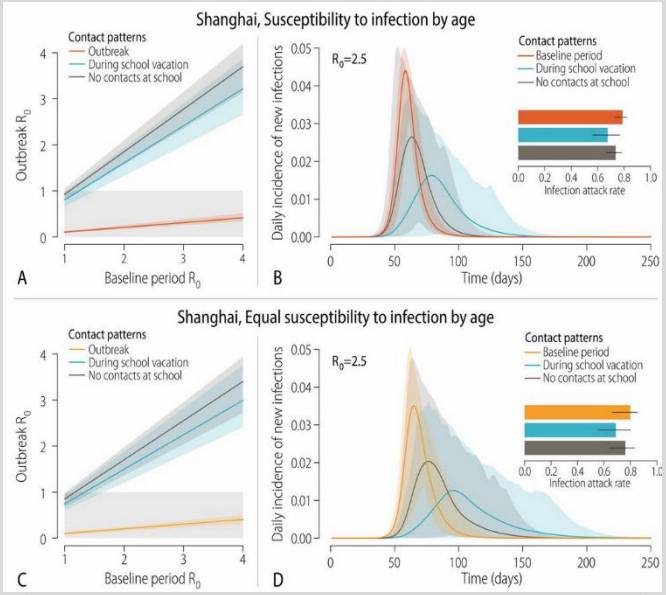
Source: https://www.who.int/who-documents-detail/weekly-update-on-covid-19---1-may-2020

Contact and transmission study in Wuhan and Shanghai:

- Daily contacts were reduced 7-8 times during the lock down, with most interactions limited to the household.
- Children aged 0-14 years were less susceptible to infection with SARS-CoV-2 than adults aged 15-64 years (OR 0.34, 95% CI 0.24-0.49).
- People over the age of 65 were more susceptible to infection (OR 1.47, 95% CI: 1.12-1.92).
- Social distancing (lockdown) alone is enough to control COVID-19.
- Proactive school closings alone cannot interrupt transmission, but they can reduce peak incidence by 40-60% and delay the epidemic.



Effect of contact patterns on the epidemic spread



Effect of limiting school contacts on the epidemic spread

Source: https://science.sciencemag.org/content/early/2020/04/28/science.abb8001

COVID-19 disorder tracker by ACLED

CDT FORECASTS

Iraq – After a sharp decline at the onset of the coronavirus pandemic, demonstrations have increased in many countries across the Middle East, pointing to the potential for a new wave of mass protests. In Iraq, as the government eases lockdown restrictions – and the protest movement continues to reject Prime Minister-designate Mustafa Al Kazimi – demonstrations will likely return to key cities like Baghdad and Nassriya.

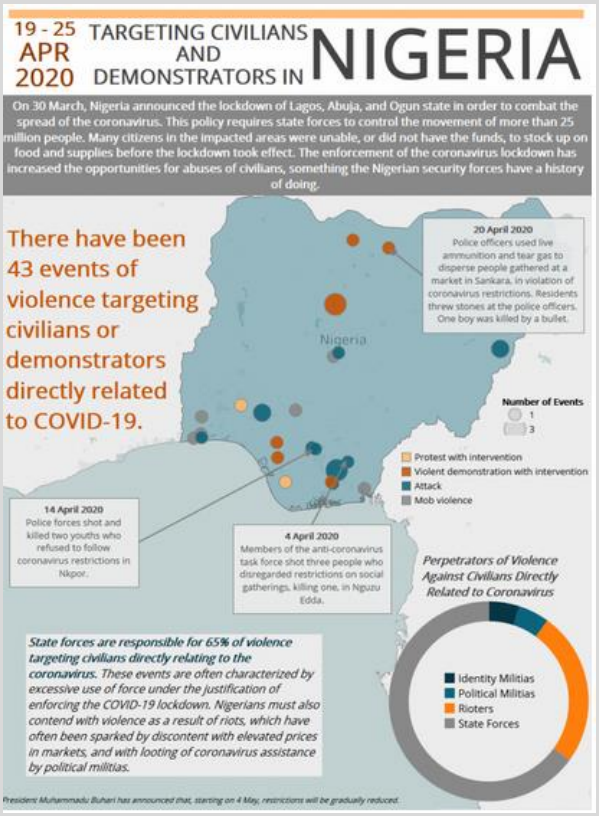
(For more, see ACLED's report on the protest movement, Iraq's October Revolution: Six Months On)

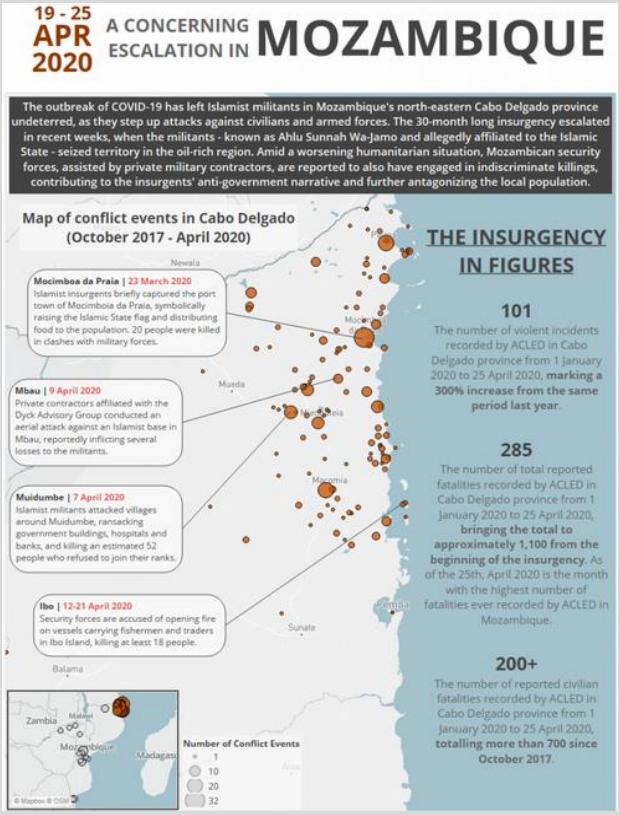
India – India faces active conflicts on multiple fronts. Militant groups continue to target security personnel as they vie for greater influence in Jammu and Kashmir, while state forces battle Naxal-Maoist rebels in the 'Red Corridor.' Despite a unilateral ceasefire declared by the Maoists, reports indicate that fighters are regrouping, holding meetings with villagers, and digging lanes to plant landmines — suggesting increased violence to come. As the Indian government grapples with the coronavirus pandemic, and the number of cases continues to rise, domestic rebel groups may use the opportunity to bolster their positions.

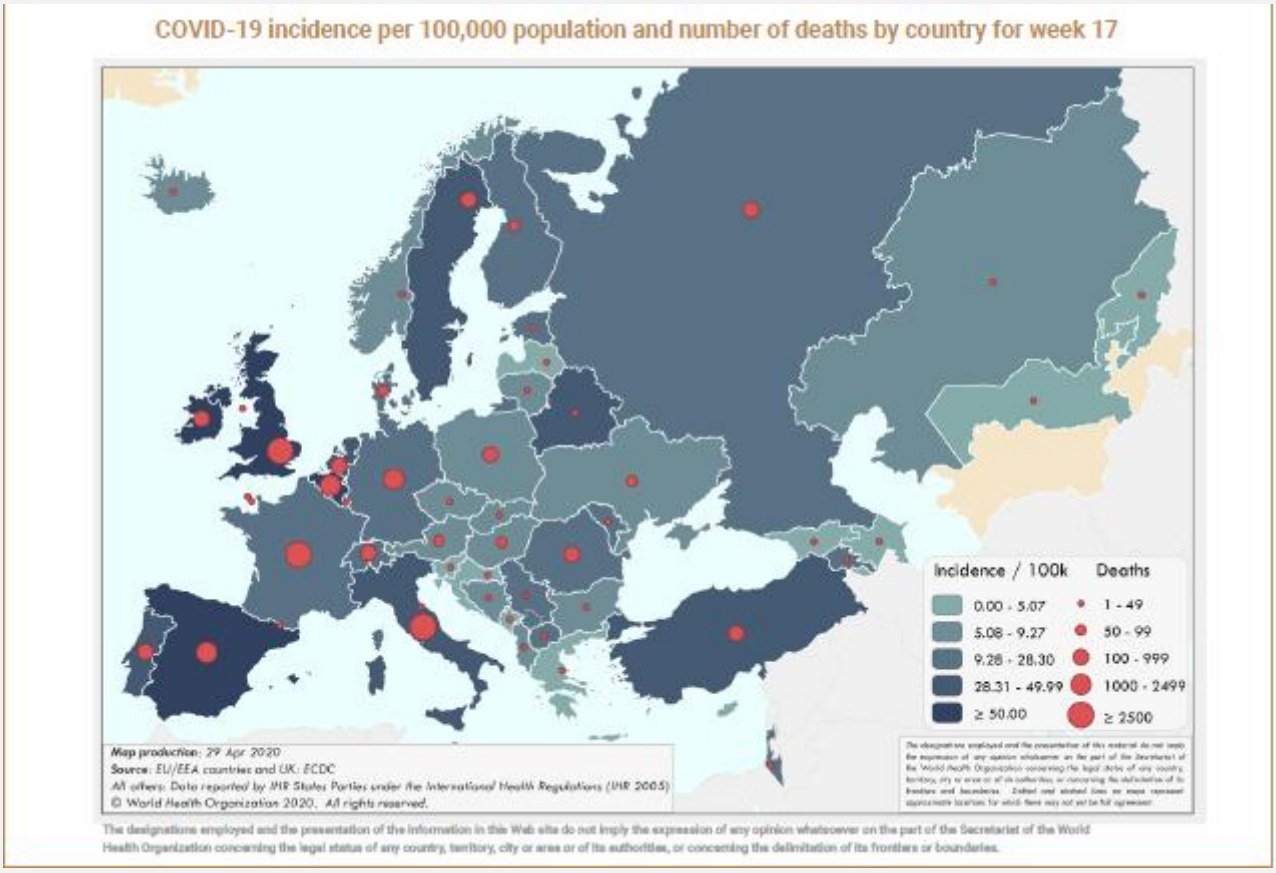
(For more, see The Print, 20 April 2020)

Uganda – ACLED records a steep rise in state repression against civilians in Uganda. Authorities have violently enforced strict lockdown measures, with multiple cases of police attacks on marginalized groups. Reports indicate that state forces are increasingly targeting opposition politicians under the pretense of lockdown enforcement. As COVID-19 restrictions continue, the pandemic threatens to provide an excuse for further state violence.

(*For more, see Human Rights Watch, 28 April 2020*)





Situation in Europe	The EU is making progress in building a strategic reserve of protective equipment and delivering another 330,000 FFP2 masks to Spain, Italy and Croatia as EU crisis commissioner Janez Lenarcic announced. Germany and Romania were the first EU countries to have agreed to store the common stock. In March, due to the scarcity and cost of protective clothing and masks, the EU Commission announced the creation of a strategic reserve for all EU countries. In concrete terms, this works in such a way that the EU fully finances the purchase, but individual Member States take over the purchase and storage. The stocks are then brought to where they are most needed. 

COVID-19 situation update for the WHO European Region (20 – 26 April 2020 Epi week 17)

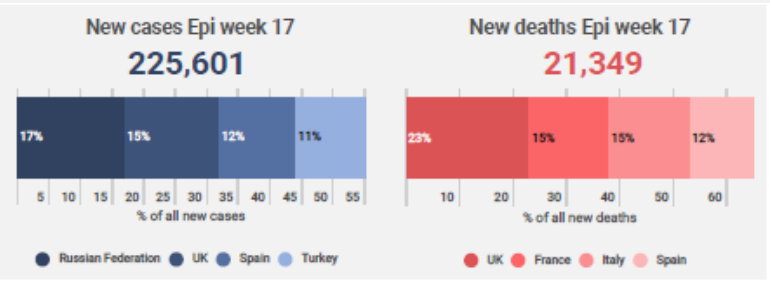
Key points

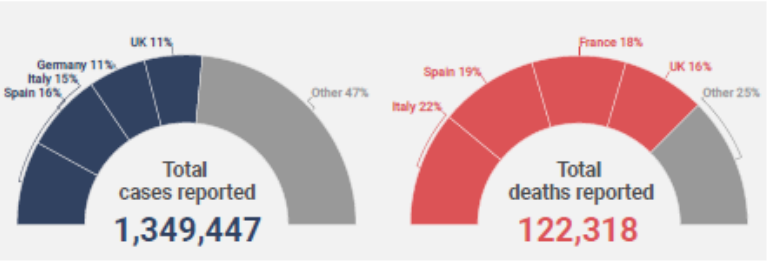
Week 17/2020 (20-26 April 2020)

- The number of cases reported in week 17/2020 in the Region has declined by 13% since week 14/2020
- 56% of the cases reported in week 17/2020 were from the Russian Federation, United Kingdom, Spain and Turkey
- Four countries had a crude incidence of ≥50 per 100,000 in week 17/2020: Ireland, Belgium, Spain and the United Kingdom
- In the Russian Federation, Belarus, Ukraine and Kazakhstan, the number of cases in week 17/2020 increased by ≥50% compared those reported in week 16/2020 (see EURO COVID-19 Dashboard for recent trends)
- 65% of the deaths reported in week 17/2020 were from the United Kingdom, France, Italy and Spain
- The proportion of reported cases that died increased from 2.2% in week 9/2020 to 9.5% in week 17/2020, a change that is likely due to a range of factors

Summary overview

- 75% of cumulative deaths were reported from Italy, Spain, France and the United Kingdom
- 17% of all reported infections with information available were in health care workers
- 81% of all ICU admissions were in persons aged 50-79 years of age, with 73% of all ICU admissions in men
- 94% of all deaths were in persons aged ≥60 years and 61% of all deaths are in men
- 95% of all deaths with information available had at least one underlying condition, with cardiovascular disease the leading comorbidity (68%)
- Seven countries and territories in the Region each reported a cumulative incidence of ≥400 cases per 100,000 population
- Between week1/2020 and week 17/2020, there were over 159,487 excess deaths reported from 24 countries/regions, primarily in the age group ≥65 years (144,960), but also in the 15-64 years age group (13,757). This time period includes the influenza season as well as the start of the COVID-19 pandemic. See European Mortality Bulletin)
- In week 17/2020, two countries reported a total of 71 tests and no COVID-19 detections in persons with influenza-like illness in primary care sentinel surveillance. The updated positivity rate in week 16/2020 was 9.1% (6 countries) compared to 8.0% (6 countries) in week 15/2020





94% of all deaths were in persons aged 60+

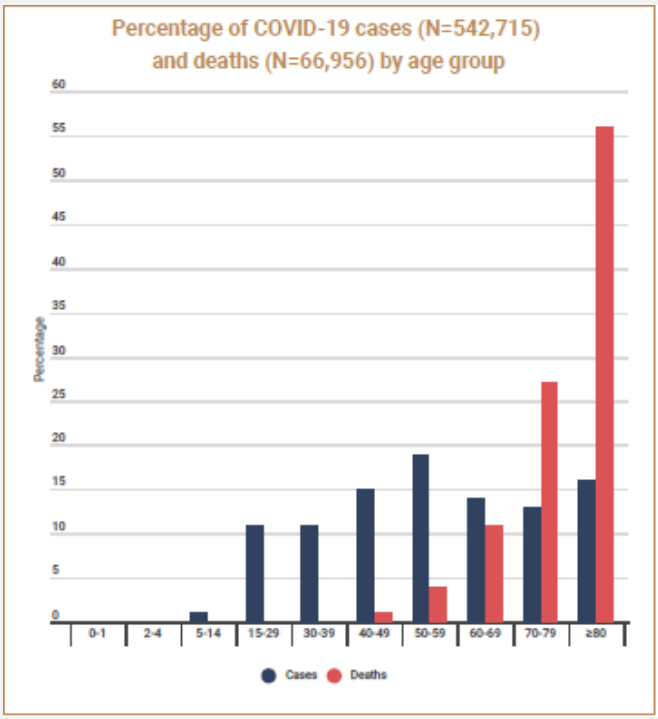
95% of all deaths had at least 1 underlying condition

61% of all deaths were in men

81% of all ICU admissions were people aged 50-79 years

17% of all people infected were health care workers

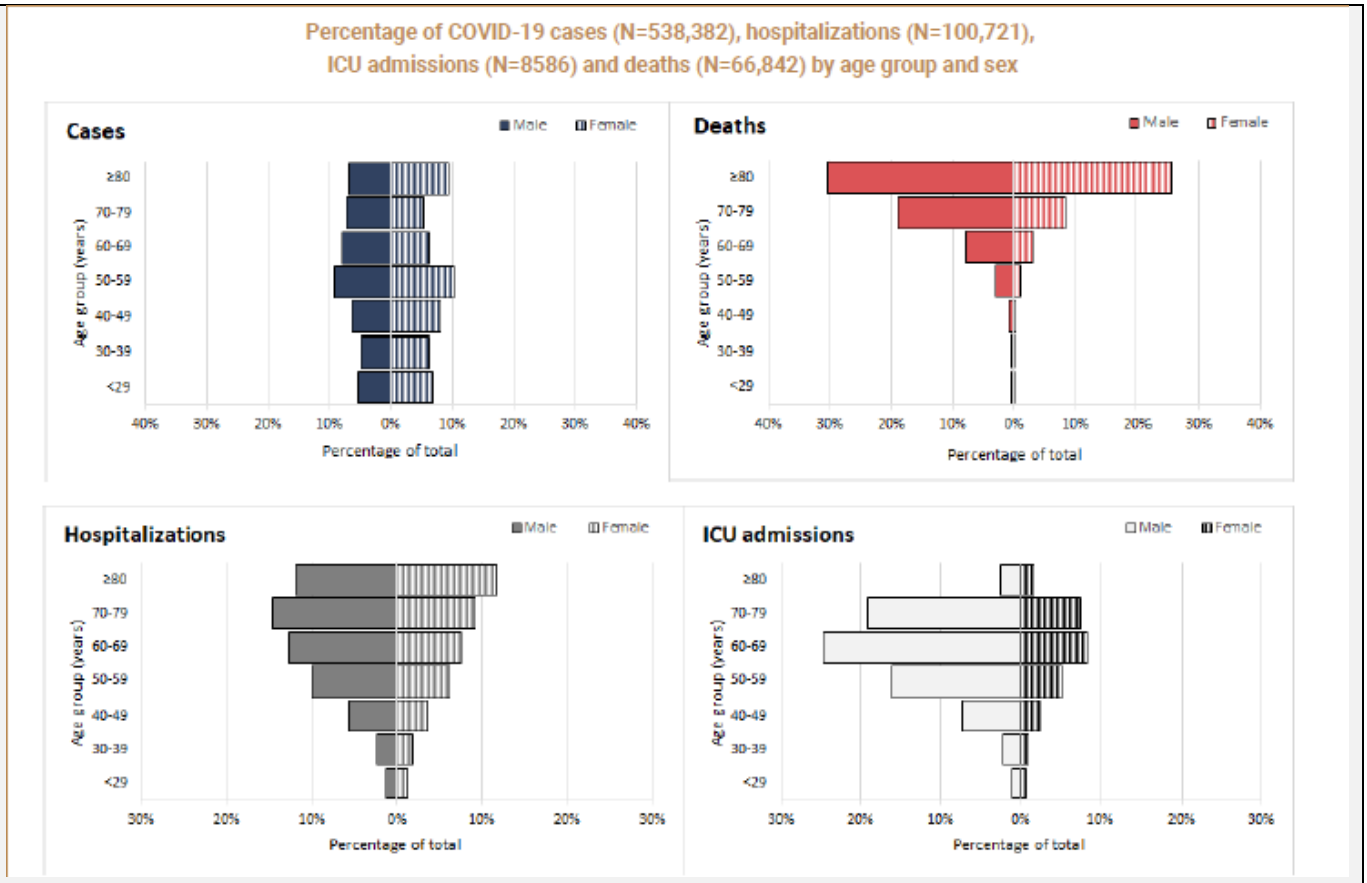
11% of all reported cases resulted in deaths

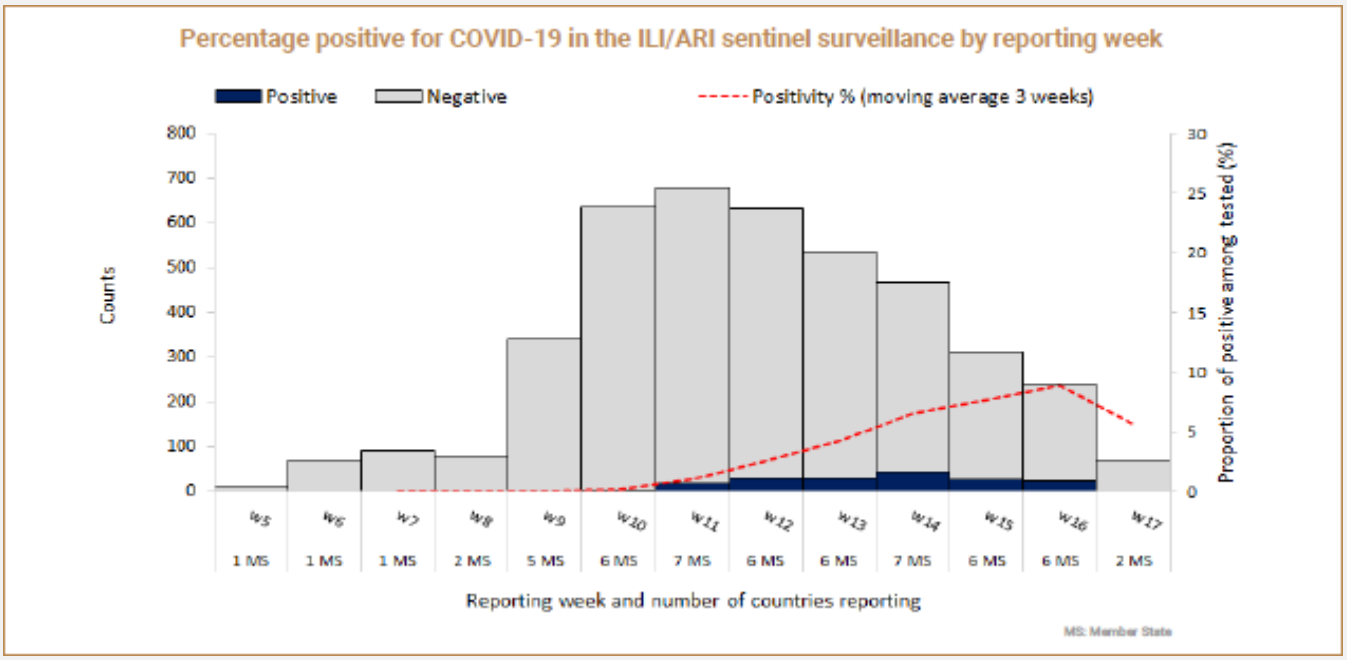


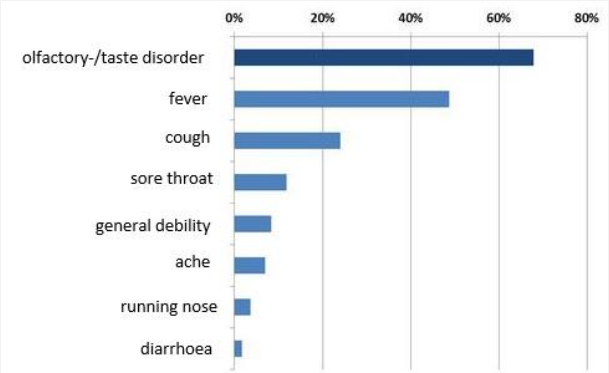
Characteristics of COVID-19 cases and deaths

	Characteristics	n	%	Total records with data available
Cases	Age in years, median (range)*	54(1-105)		395015
	Sex, male*	191158	49	393107
	Travelled*	16745	14	119874
	Recovered*	162290	86	188695
	Health care workers*	57633	17	336117
	Hospitalization*	105035	32	323660
	Intensive care unit admissions*	9652	4	246188
Deaths	Age in years, median (range)^	81 (0-106)		66956
	Sex, male^	40909	61	66861
	At least one underlying condition^	35571	95	35518
	• cardiovascular disease	10951	68	16158
	• diabetes	5343	34	15705
	• lung disease	3476	24	14378
	• neurological disease / dementia	1092	23	4657
	• renal disease	850	21	4149
	• malignancy	567	25	2264
	• obesity	353	10	3480
	• liver disease	191	5	4155
	• immune disease	144	3	4358
	• other	7186	50	14312

Source:
*Case report forms (n=897,688);
^Case report forms and aggregated data from Italy (23/24 April 2020) and Spain (23 April 2020) (n=827,048); Health care workers refer to occupation and not to the place of exposure
^Case report forms, mortality survey; aggregated data from Italy (23 April 2020) and Spain (23 April 2020) (n=67,016);


Percentage of COVID-19 cases (N=538,382), hospitalizations (N=100,721),
ICU admissions (N=8586) and deaths (N=66,842) by age group and sex
Cases
Male
Female
Deaths
Male
Female
Age group (years)
≥80
70-79
60-69
50-59
40-49
30-39
<29
40%
30%
20%
10%
0%
10%
20%
30%
40%
Percentage of total
Hospitalizations
Male
Female
ICU admissions
Male
Female


Percentage positive for COVID-19 in the ILI/ARI sentinel surveillance by reporting week
Positive
Negative
Positivity % (moving average 3 weeks)
Counts
Proportion of positive among tested (%)
800
700
600
500
400
300
200
100
0
30
25
20
15
10
5
0
W5
W6
W7
W8
W9
W10
W11
W12
W13
W14
W15
W16
W17
1 MS
1 MS
1 MS
2 MS
5 MS
6 MS
7 MS
6 MS
6 MS
7 MS
6 MS
6 MS
2 MS
Reporting week and number of countries reporting
MS: Member State


0%
20%
40%
60%
80%
olfactory-/taste disorder
fever
cough
sore throat
general debility
ache
running nose
diarrhoea

	AUT: From Monday onwards, Vienna Airport will offer corona virus tests in order to avoid the 14-day quarantine that is otherwise customary when entering Austria. However, the test is subject to a fee: Passengers can be tested for the virus on arrival for € 190, the airport says. **ITA:** The number of new corona deaths has dropped to its lowest level since the curfew began. The authorities said on Sunday that 174 people had died as a result of their viral illness within 24 hours. **RUS**: The number of people newly infected with the coronavirus continues to increase dramatically. With 10,633 new cases within a day, a new high was reached, said the authorities in Moscow. **GRB**: Wants to make 441 million euros available at the donor conference organized today by the EU Commission to finance vaccines and medicines against the coronavirus. Prime Minister Johnson said in London. **FRA**: Authorities planning to extend the state of health emergency by two months until July 24th. The central government agreed on a corresponding bill in Paris on Saturday. **SWE**: A compilation by the Swedish health authority shows that the reproductive rate in the country has been relatively stable since April 10 at around 1.0 - this means that a Swede infected with the novel coronavirus infects fewer than another Swede on average. Sweden is taking an internationally recognized special route in the fight against the corona crisis. Compared to most other countries, the Scandinavian country has responded to the pandemic with more relaxed measures, kindergartens, schools and other facilities have never been closed. Rather, the government is appealing to the common sense of the public to keep their distance and to slow down the spread of corona. On April 1, it was still 1.40, on April 25 - the last value published so far - after a decline of several days, it was only 0.85. Compared to the rest of Scandinavia, however, the Swedes have a relatively large number of infections and deaths. People there are also much less on the road, people work from home if possible, visits to retirement homes are prohibited.

Subject in Focus

SARS, MERS, COVID-19 similarity, different behaviour and why such disease outbreaks like to start in China.

Coronaviruses are enveloped, positive-sense single-stranded RNA viruses with a nucleocapsid of helical symmetry, divided into four genera: alpha-coronavirus, beta- coronavirus, gamma-coronavirus and delta-coronavirus. Gamma and delta-coronaviruses generally infect birds, although some of them can cause infection in mammals, whereas, alpha and beta-coronaviruses are known to harm humans and animals. Those type of viruses jump to humans and usually can cause upper-respiratory tract illnesses, like the common cold but as well as gastrointestinal, hepatic, and neurologic diseases.

Coronaviruses have been widely identified as causing respiratory and intestinal infections in humans after the outbreak of severe acute respiratory syndrome (SARS) in Guangdong, China in November 2002 and 2003. SARS was determined to be caused by SARS-CoV and emerged in a market where civets were sold. Only a decade later, the world witnessed another outbreak in the form of Middle East respiratory syndrome (MERS) caused by MERS-CoV in the Middle East. Transmitted from an animal reservoir in camels, MERS was identified in humans in Saudi Arabia and Jordan in September 2012 and continues to cause sporadic and localized outbreaks. Among all reported cases in people, about 80% have occurred in Saudi Arabia.

While the researchers were still investigating the underlying mechanisms of pathogenicity and developing effective therapeutic strategies against MERS, the world witnessed the deadliest outbreak in the form of COVID-19, which emerged from Wuhan, Hubei Province, China in December 2019 and was declared a global pandemic by the World Health Organization on March 11, 2020. To date, cases of COVID-19 have been reported on every continent except Antarctica. The contributing coronavirus of this outbreak was named SARS-CoV-2 due to its similarity to SARS-CoV.

The SARS-CoV infects ciliated bronchial epithelial cells and type-II pneumocytes through angiotensin-converting enzyme 2 (ACE2) as a receptor. According to the World Health Organization (WHO), the first cluster of SARS cases occurred in China's Guangdong province in November 2002. Research has identified horseshoe bats as the natural reservoir of SARS-CoV. Civets and animals in wet markets also likely contributed to the virus crossing from animals into humans.

MERS infects unciliated bronchial epithelial cells and type-II pneumocytes by using dipeptidyl peptidase 4 (DPP4), also known as CD26, as a receptor. Regarding similarity of MERS CoV and SARS CoV-2. Research demonstrated that MERS-CoV and SARS-CoV-2 use their spike (S) protein to enter cells and initiate infection. After entering the cell, the viruses delay usual immune system responses, allowing the infection to gain a foothold. By the time the immune system responds, the infection has progressed and becomes much harder to fight. MERS-CoV is a zoonotic virus, meaning that most cases of infection pass from animals to humans. According to the WHO, direct or indirect contact with dromedary camels is the most common route of infection. Transmission among people is rare, and it mostly occurs among family members or in healthcare settings. The MERS-CoV virus has similarities to European bat coronaviruses.

The mechanisms associated with the infectiousness of SARS-CoV-2 are not clear enough yet, however, structural analysis suggests it is likely entering human cells through the ACE2 receptor. This newly emerged virus has much greater similarity to SARS-CoV than to MERS-CoV, thus both SARS-CoV and SARS-CoV-2 may cause pathogenesis through similar mechanisms. The transmission of SARS-CoV to humans was reported from market civets, while that of MERS-CoV was from dromedary camels. Similarly, the newly emerged SARS-CoV-2 also appears to be transmitted to humans from markets where wild animals are sold. Recent research has found that the virus is 96% identical at the whole-genome level to a bat coronavirus, which means bats are the most possible host of the SARS-CoV-2. Subsequently, studies have shown that pangolins are potential intermediate hosts, but in general, there may be multiple intermediate hosts.

Each of the three new coronaviruses that has emerged since the turn of the century has caused respiratory disease outbreaks, but each has also displayed unique features.

SARS and MERS have significantly higher case fatality rates than COVID-19. Yet COVID-19 is more infectious — the underlying SARS-CoV-2 virus spreads more easily among people, leading to greater case numbers. Despite the lower-case fatality rate, the overall number of deaths from COVID-19 far outweighs that from SARS or MERS. There have been no cases of SARS for over a decade. But MERS is an ongoing public health concern.

One factor that could contribute to the extent of damage that any new coronavirus can cause is globalization. In accordance to WHO advisor Prof. David Heymann, in the past, coronaviruses that cause the common cold in humans also emerged, possibly in the same way as did the current pandemic. But they did not have the opportunity to hop on international flights and spread rapidly around the globe. They likely circulated locally and then gradually spread to neighbouring countries and onward throughout the world.

What is in favour for CoVs outbreaks in China?

As far as the SARS and COVID-19 outbreak goes, the cultural factors help explain how the natural occurrence of a single virus infecting a single mammal could have cascaded into a global health crisis.

The first is China's long history of punishing the messenger.

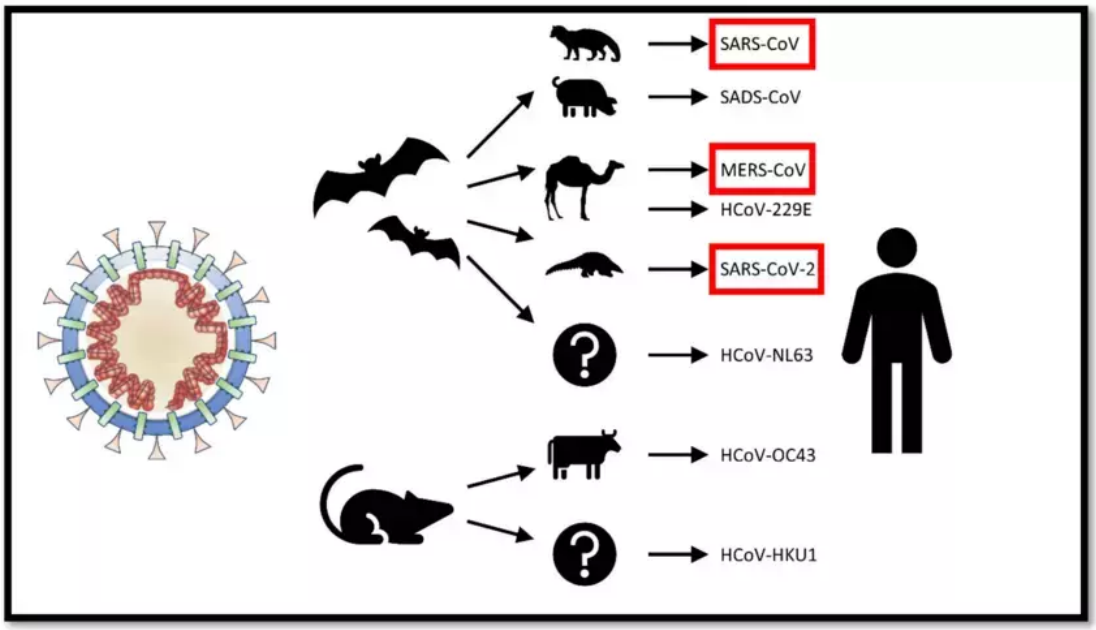
A doctor who had announced on social media the risk of a possible new viral outbreak was among several people summoned by the police in Wuhan in early January and warned not to spread rumours. He died recently after being infected with COVID-19. Similarly, the epidemic of SARS was covered up by local authorities for more than a month, and the surgeon who first sounded the alarm was held in military detention for 45 days.

Second cultural factor behind the epidemic are traditional Chinese beliefs about the powers of certain foods, which have encouraged some hazardous habits. There is an aspect of Chinese eating culture known as "jinbu," meaning, roughly, to fill the void. Some of its practices are folklorist or esoteric, but even among Chinese people who don't follow them, the concept is widespread.

It is better to cure a disease with food than medicine. Illnesses result when the body is depleted of blood and energy — though not the kind of blood and energy studied in biology and physics, but a mystic version. For men, it is most important to fill the energy void, which is related to virility and sexual prowess; for women, the stress is on replacing blood, which improves beauty and fertility. Rare plants and animals from the wild are thought to bring the best replenishment, especially when eaten fresh or raw. Winter is said to be the season when the body needs more "jinbu" foods. Could that help explain why both SARS and the current epidemic broke out during that time of year?

Bats, which are thought to be the original source of both the current coronavirus and the SARS virus, are said to be good for restoring eyesight. Gallbladders and bile harvested from live bears are good for treating jaundice; tiger bone is for erections.

More ordinary yet no less popular is the palm civet, a small, wild quadruped suspected of having passed on the SARS virus to humans. When stewed with snake meat, it is said to cure insomnia.



An illustration showing the suspected transmission routes of SARS, MERS and COVID-19 to humans. Image: Firas A Rabi, Mazhar S Al Zoubi et al/MDPI.com

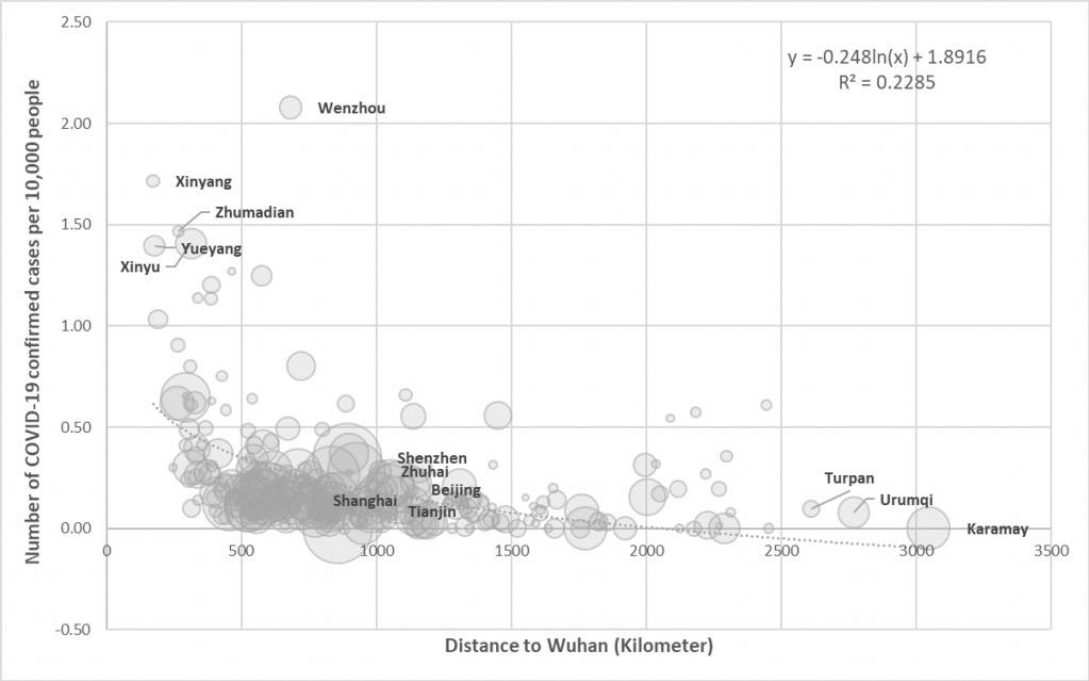
Eating exotic wildlife has long been endorsed by scholars and elevated to mystical heights. Beliefs surrounding the health benefits of certain wildlife foods permeate the Chines culture. These practices are not across China. Nor are they uniquely Chinese: Many peoples in many other countries eat exotic foods, too. But what is notable about China is that these beliefs about the special powers of some foods have been accepted, are now a given, even among people who do not put them into practice. They have become firmly embedded in the Chinese collective consciousness.

Other factors

The sanitary condition of China's "wildlife markets" has also significant importance for infectious diseases risk increases. These markets, commonly called ''wet markets", were reported to have been the birthplace for SARS, Avian Flu and now are the possible origin of COVID-19, which started supposedly with the consumption of pangolin or bats kept along with other wildlife in unsanitary and horrifying conditions in Wuhan's wet markets. Without any doubts, the viruses can spread easily if terrified wild animals of every variety are kept in cramped, dirty conditions like market cages, often sick and/or injured, housed closely together before being slaughtered in unhygienic settings. This close contact, between humans and wild animals is in favour to viruses interact, mutate and transfer/jump to handlers or customers of the markets. In response to the coronavirus pandemic, the Chinese government temporarily banned the trade of wild animals for food in late February and is currently drafting a permanent law to further tighten controls. It's essential to remember that only a small proportion of Chinese people eat wild animals but the use of wild animals for medicinal purposes is unlikely to be wiped out straight away by a simple blanket ban.
Last not negligible condition is density of China population.

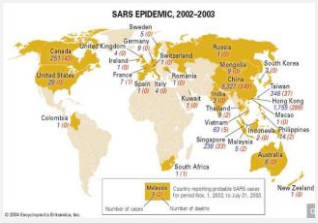
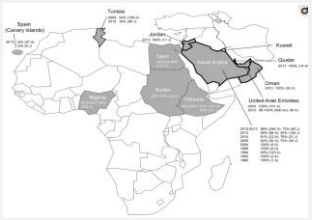
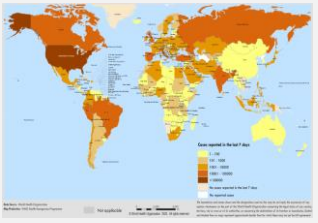
Considering a correlation between a country's/city's density and its vulnerability to COVID-19 epidemics may seem like an obvious connection. Since the outbreak of the coronavirus (COVID-19) and its spread across the globe, places with high urban population density have seemed to be especially at risk to some observers. A common argument is that high population density makes cities more exposed to epidemics because of the possibility of frequent interpersonal interactions. Wuhan and as well as New York City can proved this theory. This argument may sound straightforward, but on examination of China COVID-19 spread is not well-grounded. Some extremely dense cities, such as Shanghai, Beijing, Shenzhen, Tianjin, and Zhuhai, have outperformed many other less-populated places in combating the coronavirus. It should be noticed that the group of densely populated cities are also the wealthier ones in China, making them more able to mobilize enough fiscal resources to cope with the coronavirus. This partly clarified their lower infection rates. On the contrary, cities with the highest coronavirus infection rates were those with relatively low population densities, in the range between 5,000 to 10,000 people per square kilometre. The higher infection rates can be correlated either to their strong economic connection with Wuhan. After spatial analyse of the coronavirus spread in China, can be seen that distance from Wuhan has more significant meaning of infection rate than population density of the city. It means that the chances of infection decline as distance to Wuhan increase.

Finally, regarding the population density impact of COVID-19 transmission, the more important fact is that the population density is influential but only in an area where there are a significant number of coronavirus cases. In more distant location form disease epicentre can be limited by quick and proper preventions measures.



Infection rate of coronavirus and distance to Wuhan

Considered above circumstances can be proved strong connection of the SARS and COVID-19 outbreak in Chinese with traditional and cultural practices. It is essential to stress that regardless very high densely populated China, after proper and prompt countermeasures implementation, the outbreak can be limited and controlled locally.

Pathogen	SARS-CoV	MERS-CoV	SARS-CoV-2 as of today
Total number of cases	8,439, 21% (healthcare workers)	2,519	3,471 068
Total number of deaths	812	866	247 506
Case fatality rate	9.6%	34.3%	1.38% - 3.4%
Basic reproduction number R0 without restrictions	2 - 5	2 - 5	2 – 3,3
Mode of transmission	Droplets produced by coughing, sneezing, talking, or breathing	Droplets from person to person, unclear from camels to humans	Droplets produced by coughing, sneezing, or talking, limited evidence of other routes
Mean incubation period	5 days	5 days	5 days
Key symptoms	A cough (dry at first), a fever, and diarrhoea in the first or second week of illness, or both	A fever, a cough, shortness of breath	A fever, a dry cough, shortness of breath
Risk group	People with underlying medical conditions	Men above the age of 60, particularly those with underlying medical conditions such as diabetes, high blood pressure, and kidney failure	Adults aged 65 and over, and people of all ages with underlying medical conditions
Treatment	No specific treatment	No specific treatment	No specific treatment
Vaccine	No vaccine	No vaccine	No vaccine
Distribution		 Source: https://www.ncbi.nlm.nih.gov/pubmed/25062254	

COVID de-escalation strategies/ -criteria and expected results

- **Situation:** in the absence of specific prevention (vaccination) and specific treatment (effective antiviral treatment), the virus is expected to produce an unmanageable medical system overload: the number of critical patients will overcome on the existing capacity of the medical systems
- **Aim:** to balance the number of critical patients with the capacity of medical systems, reducing the number of infected on one hand and increasing the medical system capacity on the other hand.
- **Measures**
  - I. Addressing the virus transmissibility
    - a) Limit the interhuman contacts: social distancing, prohibitive movement measures (isolation, quarantine),
    - b) Limit the presence of the virus: hygiene, disinfection
  - II. Addressing the medical systems
    - a) Increasing the ICU capability
    - b) Reconfiguring the medical system's structure and procedures.
- **Effects**

I. **Medical**
With 2 exceptions (Italy and Spain) the societies managed to avoid the overloading the medical systems. In the current conditions there are enough resources to treat the critical patients in the existing ICUs after a significant development of this capability.
The focus on the COVID affected the quantity and quality of the non-infection related diseases, and further studies will reveal the related impact.

II. **Social**
Dramatic changes in the individual and social behaviour caused by the unprecedented changes in the social imposed restrictions and regulations.

III. **Economic**
The huge restrictions had a tremendous impact on the national and global economy. The home office as a solution applicable in a very specific domains, was a proper substitute for a small part of the overall world economy. The industrial production of goods, and the significant restriction of movement and the lock down regulation regarding the selling of the non-alimentary and non-pharmaceutical products, was leading to crushing down entire industries.
As part of social distancing measures, and restriction of traveling, the tourism related activities, sports and arts events were literally shut down.
All the restrictive measures in support of medical systems had as a result an unpredictable impact of national and global GDP. The main challenge is to keep the GDP crashing as low as possible.

IV. **Politic**
The national and global strategies have already started to rearrange the available political relationships as a start for reshaping organizations, roles and regulations.

- **De-escalation**
  As long and persistent are the restrictive measures, as much the negative social, economic and political effects will increase.
  There is a need to reshape the measure in order to get the optimal medical results with minimal restrictions.
  The main dilemma about the world's reaction in front of this pandemic is how to calibrate the response to the cause, looking at the effects. Was this an exaggerated, anaphylactic indiscriminatory, unfocused and ineffective response? How much of the existing restriction (if any) should be terminated, when and in which way?
  The positive effects resulted from the measures taken should be preserved and developed, and ineffective and overestimated measures should be optimized, and new effective measures should be applied.

  As the medical global emergency was the trigger of the escalation, the medical criterium should trigger the de-escalation strategies as well.
  Being a global situation, all the measures should be agreed and co-ordinated at the global level since the situation in one nation will affect all the other nations (as it was proved by the development of the pandemic).
  A clear, objective, science (evidence) based, internationally agreed set of criteria should be the foundation of any kind of de-escalation strategy.

- **As examples:**
  a) The risk of increasing the number of critical cases
  b) The medical systems capacity
  c) The effectiveness of the preventive measures (specific and non-specific)
  d) The availability of effective specific medical treatment.

  All the restrictive measures were triggered by an external threat, as it was stated in the WHO case definition referring primary to the subjects traveling from the affected areas from abroad. Currently, considering the pandemic definition, the vast majority of countries are more ore less considered as

	affected areas. The trigger of de-escalation strategy should aim to define how much affected should be considered a nation or an area to allow the deescalating measures. The objective measurement of the risk, in order to determine the population at risk should consider the utility of developing a immunity map, using specific, massive, populational level immunity testing strategy (i.e. IgM/IgG testing). Without clear and objective criteria, any de-escalation measures could result in a dramatic revenue of the number of the infected and severe affected patients, and all the efforts and sacrifices of the society will be in vain. • **Military relevance:** The military missions and specific activities are decisively affected by the worldwide restrictive measures. As the military systems are strong and deeply involved in the national and multinational effort against the pandemic there are significant implications over the overall military activities. As a selected population at risk, composed mainly by young, heathy and without comorbidities members, the main risk is not addressed to the health of the troops, but mainly to the treat over the community (asymptomatic infected soldiers) with they are interacting with. Moreover, the economic conditions are impacting the budgets of the defence systems and the political factors could reshape the missions. As the military systems are following mostly the national civilian regulations, with some specific adaptations, the de-escalations measures in the military should follow the same pathway.

MilMed CoE VTC 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 last VTCs:** 1. 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. 2. Testing strategies 3. Aeromedical evacuation **Topic next VTC:** • De-escalation strategy and measures

Conflict and Health

Conflict and Health

(Public) Health is a topic that is often neglected during times of conflicts and civil unrest. While military personnel regularly have access to medical supplies and a dedicated military health service, the public often suffers from a lack of supply with medical equipment and basic goods (e.g. clean water), low number of health-care professionals and an increased burden on the individuals' mental and physical wellbeing.

During conflicts an increased probability of the emergence of infectious diseases can be observed (e.g. in refugee-camps or in war zones with numerous unburied corpses). Given those circumstances public authorities are seldom capable of maintaining surveillance networks and enforcing mitigation and containment measures (e.g. contact tracing) which are key for preventing large-scale outbreaks within an already highly vulnerable and challenged population. If a disease like COVID-19 is introduced into such a population an uncontrolled spread and devastating consequences for the society are highly likely. In addition, in some conflict areas external/international help is either unwanted by the public (due to previous bad subjective experience or disinformation campaigns) or prohibited by local authorities/conflict parties. In certain conflicts the emergence of an infectious disease might also be used as a "natural" bioweapon by only protecting selected (ethnic/political) groups or not protecting the population of opponent's areas.

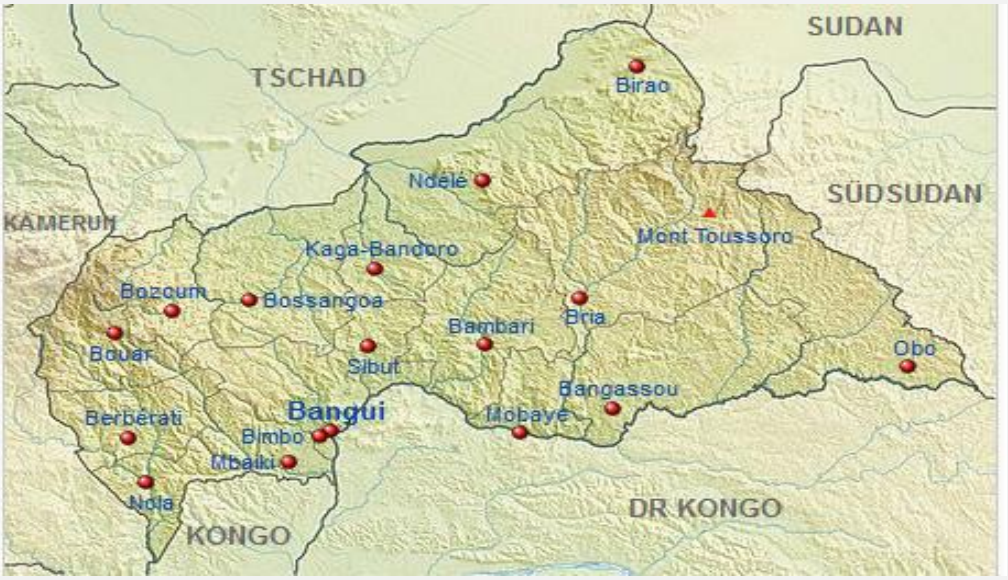
If countries want to help areas with on-going conflicts, they should keep in mind aspects like:

- Necessity and difficulty of maintaining **clear and transparent communication** (e.g. cultural/social barriers, distrust in existing governmental structures, disinformation campaigns orchestrated by conflict parties, the disease might be considered a less important problem compared to everyday risks within a warzone)
- Necessity of a **minimum stability** within the area to send civil personnel. A robust mission with mostly military personnel comes with additional difficulties and is usually not possible without major political consequences and planning. In addition, a military operation can negatively affect the publics willingness to accept foreign help.
- Allowing a virus to spread within war zones can on the one hand put an unbearable burden on already heavily challenged populations, on the other hand it can foil the plan of global containment of the pandemic if the virus is allowed to become **endemic** in the affected population due to possible **global re-infections**.

Country in Focus Central African Republic

Central African Republic

The Central African Republic is one of the poorest, most vulnerable countries of the World, with the most unprepared Health System which is not accessible for the waste majority of the population. The country is affected by a long-lasting civil war causing countrywide violence, insecurity, shortage of food, and very limited access to water, sanitation and hygiene as well as humanitarian aid. Moreover, besides the just recently started COVID 19 crisis, other endemic infectious diseases have the potential to cause epidemics, such as measles. That is why we can conclude; **the Central African Republic is in Complex Emergency situation**.



QUICK COUNTRY INFORMATION

Area of the country: 620.980 Km^2

Estimated population: 4.8 million

Urban / Rural population: 43% vs 57%

Life expectancy: 54.4 years

Median age: 17.6 years

Age structure

0-14 years: 39.89% (male 1,151,724 /female 1,140,083)

15-24 years: 19.91% (male 574,969 /female 568,942)

25-54 years: 32.64% (male 938,365 /female 936,948)

55-64 years: 4.17% (male 112,310 /female 127,045)

65 years and over: 3.39% (male 75,401 /female 119,275)

Source: https://www.worldometers.info/world-population/central-african-republic-population/

Map: https://en.wikipedia.org/wiki/Central_African_Republic

QUICK HISTORY

The European invasion of Central African territory began in the 19th century, Central African Republic (CAR) became French colony (former name was French Equatorial Africa). In 1960 the country had formally received independence from France. In 1965 following a coup d'état was established the Central African Empire under emperor Bokassa. In 1979 France overthrew Bokassa and restored the original government and rename the country. Since 2012 there is an ongoing civil war involving the government, rebels from the anti-government coalition, and different militias.

NUMBERS AT A GLANCE

4.8 million Estimated Population

2.6 million Estimated People in CAR Requiring Humanitarian Assistance

1.6 million Estimated People in CAR Facing Severe Levels of Acute Food Insecurity

682,000 IDPs in CAR

613,000 Central African Refugees in Neighbouring Countries

KEY DEVELOPMENTS

The country has been continuously in complex emergency situation. Insecurity continued to intensify in CAR in early 2020, with incidents in several prefectures in January and February displacing populations and increasing humanitarian needs. The country remains among the most dangerous countries for humanitarian personnel; security incidents resulted in injuries to six aid workers in February.

Health actors have confirmed cases of coronavirus disease (COVID-19) in CAR. In response to the ongoing outbreak, the Government closed the international airport in the capital city of Bangui to passenger travel and introduced a range of measures, such as limiting public gatherings, to slow the spread of the disease.

Conflict-affected areas of CAR continue to experience food production deficits, according to the UN Food and Agriculture Organization (FAO). As a result, populations in eastern and southeaster CAR are likely to experience deteriorated food security conditions from September 2019.

COVID-19 POTENTIAL IMPACT

As of today, there are 50 confirmed COVID-19 infections in CAR, 10 patients have already recovered. Since CAR is one of the poorest and least prepared country in Africa, Covid-19 has the potential to tear through the country at lightning spread if it doesn't get the support it needs to adequately protect itself against the virus.

The country has only one dedicated COVID-19 treatment centre with just 14 beds, according to a report by the UN's Office for the Coordination of Humanitarian Affairs (OCHA), along with a nationwide total of three ventilation kits, one oxygen concentrator and zero isolation units to treat milder cases to provide quarantine. Only three ventilators in a country of five million people. 2.2 million people already needing health assistance.

	Close to 700,000 people are displaced from their homes with half living in densely populated camps with poor access to water, sanitation or hygiene (WASH). Without a scale-up of support from the international community, an outbreak in camps could be catastrophic. Humanitarian needs look set to worsen due to Covid-19 as the country depends heavily on outside assistance. For example, 70 per cent of health services are provided by aid organisations. A suspension of international commercial and cargo flights could severely impact aid organisations' capacity to respond. It is crucial to maintain the necessary infrastructure to allow supplies and personnel into the country to ensure the continuation of humanitarian operations. (Source: Norwegian Refugee Council - https://www.nrc.no/news/2020/march/just-three-ventilators-to-cope-with-covid-19-in-central-african-republic/) **INSECURITY, DISPLACEMENT, AND HUMANITARIAN ACCESS** Violence escalated in some areas of CAR in early 2020 and continued to displace populations and disrupt livelihoods. Armed group clashes in Ndélé town had displaced more than 12,500 people as of mid-March. From January 25 to 26, clashes between armed groups in Bria city resulted in nearly 50 deaths. According to an interagency humanitarian assessment, the violence displaced nearly 11,500 people across the city as of January 28, including in five IDP sites. The temporary suspension of humanitarian assistance in Bria—leaving up to 50,000 conflict-affected individuals without access to humanitarian assistance in late January. **FOOD SECURITY AND NUTRITION** Populations in some areas of eastern and southeastern CAR will likely face crisis levels of acute food insecurity through September, due to seasonal declines in food availability and conflict-related disruptions of markets and income-generating activities. The conflict and localized flooding also disrupted trade flows and food availability in some markets, increasing the price of essential food staples. Despite above-average cereal production countrywide during the 2019/2020 agricultural season, conflict-affected areas of CAR continued to experience food production deficits in early 2020. **HEALTH AND PROTECTION** Following a resurgence of measles in areas of CAR, the Ministry of Health (MoH) declared a national measles epidemic on January 24. The UN World Health Organization (WHO) reported 7,626 suspected measles cases, including at least 130 confirmed cases and 83 related deaths. The MoH implemented vaccination campaigns in several health districts, however the disease continued to rapidly spread. The CARG is requesting technical and financial support to scale up the measles response, including the procurement of vaccines sufficient to reach children between 6 months and 9 years of age. ICRC is implementing child protection and GBV prevention and response services for displaced women and children.

Recommendations

Recommendation for international business travellers	**As of 11 April 2020, 167 countries, territories and areas have implemented additional health measures that significantly interfere with international traffic.** 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. **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 you can find at IATA and International SOS. **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. General recommendations for personal hygiene, 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. **People returning from affected areas** (= countries, provinces, territories or cities experiencing ongoing transmission of COVID-19, in contrast to areas reporting only imported cases) **should self-monitor for symptoms for 14 days and follow national protocols of receiving countries. Some countries may require returning travellers to enter quarantine. If symptoms occur, such as fever, or cough or difficulty breathing, persons are advised to contact local health care providers, preferably by phone, and inform them of their symptoms and their travel history.** Source: WHO
WHO recommendation	WHO has published guidance on adjusting public health and social measures for the next phase of the COVID-19 response. Some governments have suggested that the detection of antibodies to the SARS-CoV-2, the virus that causes COVID-19, could serve as the basis for an “immunity passport” or “risk-free certificate” that would enable individuals to travel or to return to work assuming that they are protected against re-infection. There is currently no evidence that people who have recovered from COVID-19 and have antibodies are protected from a second infection. At this point in the pandemic, there is not enough evidence about the effectiveness of antibody-mediated immunity to guarantee the accuracy of an “immunity passport” or “risk-free certificate.” People who assume that they are immune to a second infection because they have received a positive test result may ignore public health advice. The use of such certificates may therefore increase the risks of continued transmission. As new evidence becomes available, WHO will update this scientific brief. Further information: https://www.who.int/news-room/commentaries/detail/immunity-passports-in-the-context-of-covid-19

EU recommendations	The European Commission released a guideline with "EU recommendations for testing strategies" and "EU recommendations for community measures". The first document talks about whom to test in the EU and the Do and Don´t. The latter give a guiding when to initiate and when to end community measures as well talks about social distancing and infection and control measures and when to introduce lockdown measures. A third guidance talks about safe return to workplaces; "EU guidance for a safe return to the workplace".
US recommendations	United States Department of Defence released a guideline with COVID-19 practice Management for Clinical management of COVID-19 find here.

Risk Assessment	
Global	• Because of global spread and the human-to-human transmission the **high** risk of further transmission persists. • Travellers are at high 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: • **Risk of sever disease associated with SARS-CoV-2 infection for general population:** currently considered **low** in areas where appropriate physical distancing measures are in place and/or where community transmission has been reduced and/or maintained at low levels and **moderate** in areas where appropriate physical distancing measures are not in place and/or where community transmission is still high and ongoing. and **very high** for older adults and individuals with chronic underlying conditions. • **Risk of sever disease associated with SARS-CoV-2 infection in populations with defined factors associated with elevated risk for COVID-19:** currently considered **moderate** in areas where appropriate physical distancing measures are in place and/or where community transmission has been reduced or maintained at low levels and **very high** in areas where appropriate physical distancing measures are not in place and/or where community transmission is still high and ongoing. • **Risk of resurgence of sustained community transmission:** currently considered **moderate** if measures are phased out gradually and accompanied by appropriate monitoring systems and capacities, with the option to reintroduce measures if needed, and remains **very high** if measures are phased out without appropriate systems and capacities in place, with a likely rapid increase in population morbidity and mortality.

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

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