



Short Update 22a COVID-19 Coronavirus Disease 5th of JUNE 2020



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GLOBALLY

6 605 550

Confirmed cases
2 875 197
recovered
391 304 deaths

USA

(new cases/day 21 535)

1 867 724 →
confirmed cases
484 762 recovered
108 041 deaths

Brazil

(new cases/day 24 599)

614 941 →
confirmed cases
254 963 recovered
34 021 deaths

Russia

(new cases/day 8 784)

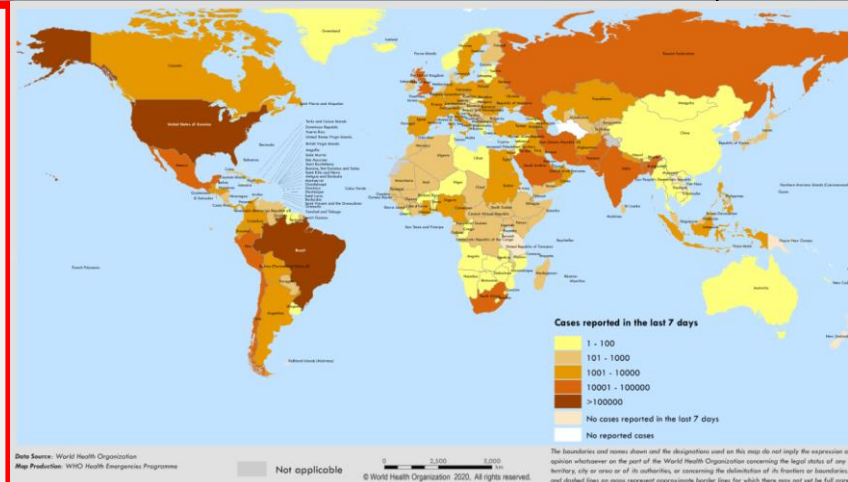
440 538 →
confirmed cases
204 197 recovered
5 376 deaths

News:

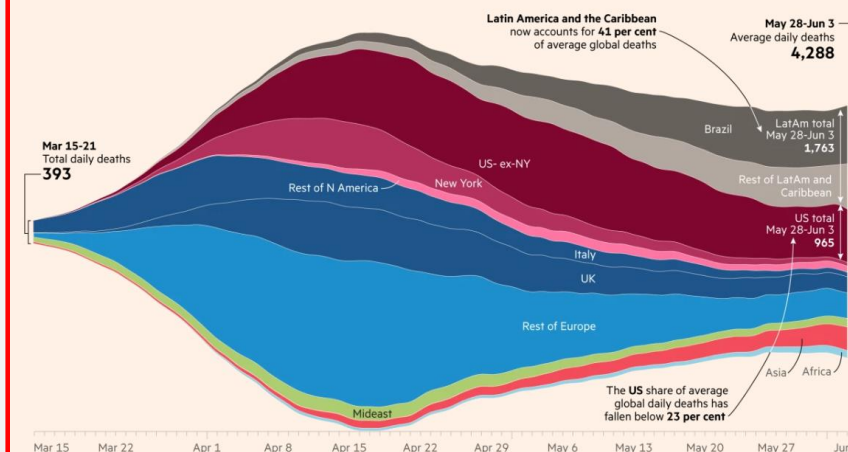
- The U.S. death toll now exceeds 100,000, far higher than any other nation.
- WHO:** Basic psychosocial support skills are at the core of any mental health and psychosocial support intervention. To assist all those involved in the COVID-19 response, WHO has published guidance on [basic psychosocial skills](#).
- You will also find the [MPSIM course](#), a course designed for military leaders/unit commanders and personnel who are NOT mental health providers on our MilMedCOE webpage.
- WHO:** A record number of countries have contributed data revealing disturbing rates of antimicrobial resistance. [WHO is concerned that the trend will further be fueled by the inappropriate use of antibiotics during the COVID-19 pandemic](#).
- WHO:** Regional Director for the Americas Dr Carissa F. Etienne said the Americas, “a region of massive inequalities,” are facing simultaneous health, economic and social emergencies from the pandemic. [Maintaining social distancing measures, improving surveillance, and strengthening health systems are key to controlling the COVID-19 pandemic](#) in the region.
- ECDC:** published a document about [conducting in-action and after-action reviews of the public health response to COVID-19](#). It is intended to support IARs and AARs by highlighting the basic planning and implementation stages.
- 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:

- Subject in Focus - NIH Clinical Trial Shows Remdesivir Accelerates Recovery from Advanced COVID-19
- Was the “Russian Flu” in 1890 caused by a Coronavirus instead of an Influenza virus?
- In the press



Global Covid-19 death toll: Latin America offsets decline in Europe and the US
Daily deaths of patients diagnosed with coronavirus (7-day rolling average)



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EUROPE

2 166 232
confirmed cases

1 119 341 recovered
181 594 deaths

UK

(new cases/day 1 791)

281 661 →
confirmed cases

-not reported- recovered
39 904 deaths

SPAIN

(new cases/day 393)

240 660 →
confirmed cases

150 376 recovered
27 133 deaths

ITALY

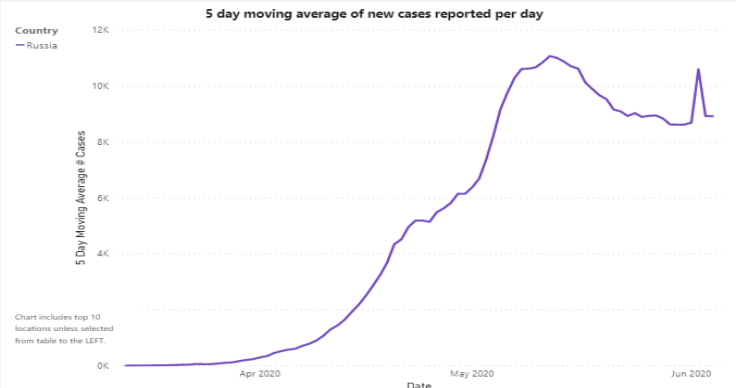
(new cases/day 326)

234 013 →
confirmed cases

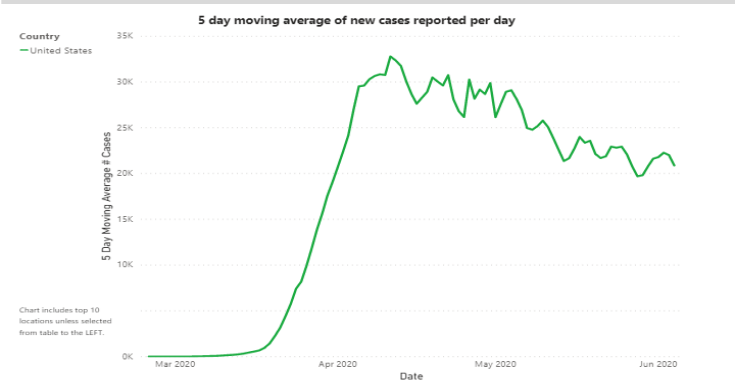
161 895 recovered
33 689 deaths

Global Situation

Countries who still face the 1st Wave of COVID-19

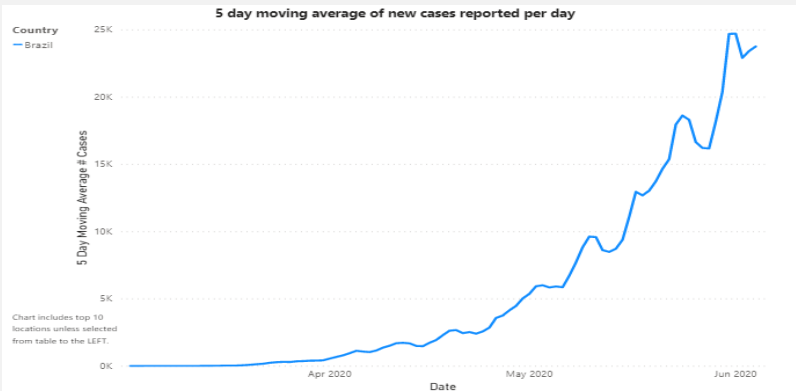


RUS: Currently 230 965 active cases, with 8 784 new cases reported in the last 24h and total 5 376 death

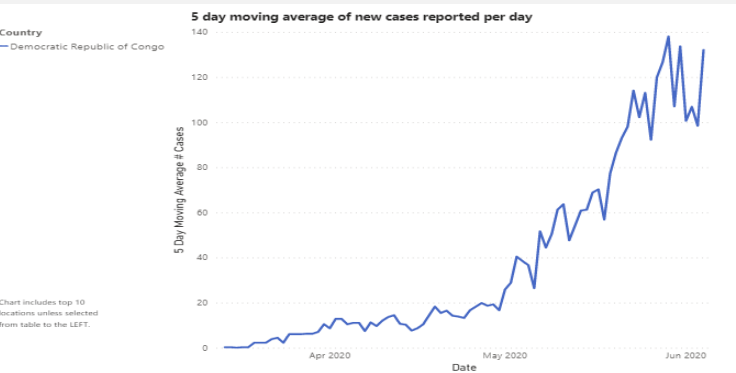
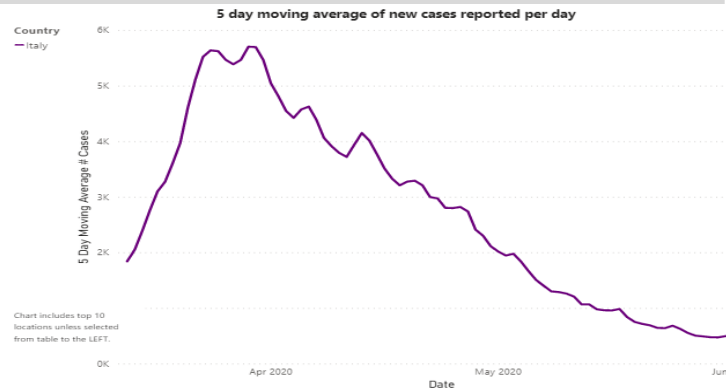


USA: Currently 1 274 921 active cases, with 21 535 new cases reported in the last 24h and total 108 041 death

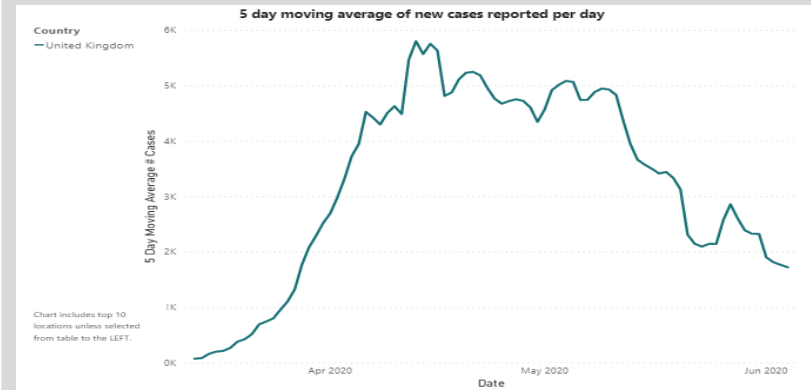
BRA: Currently 325 957 active cases, with 24 599 new cases in the last 24 h and total 34 021 death



ITA: Currently 38 429 active cases, with 326 new cases reported in the last 24h and total 33 689 death



COD: Currently 3 071 active cases, with 141 new cases reported in the last 24h and total 78 death

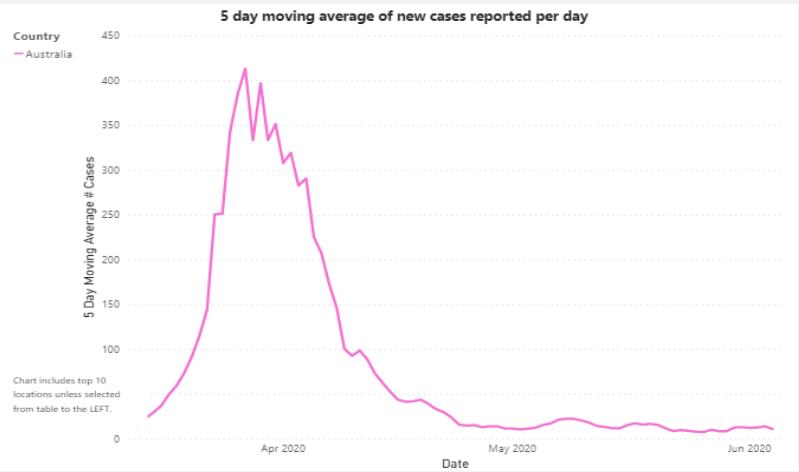


GBR: Currently 241 872 active cases, with 1 791 new cases and 39 904 death within the last 7 days

Global Situation

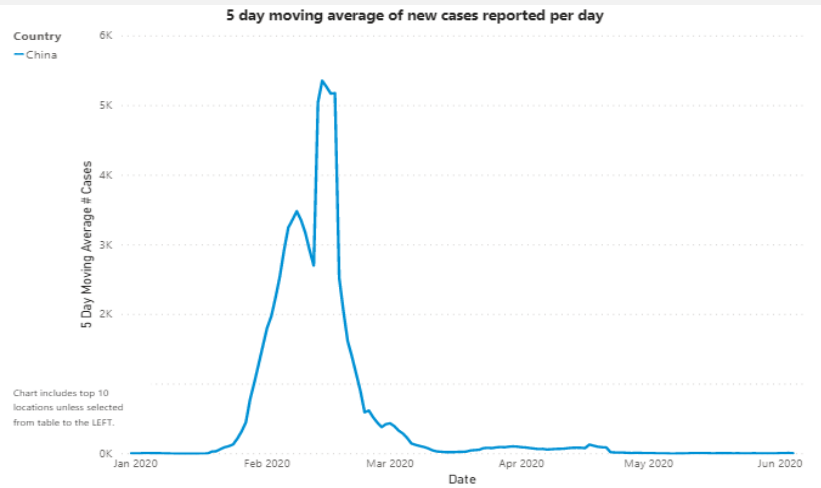
Countries with declining daily case numbers

Some countries, such as Australia, China, have probably passed the 1st wave of the COVID-19 outbreak.



AUS: Currently 466 active cases, with 12 new cases reported in the last 24h and total 102 death

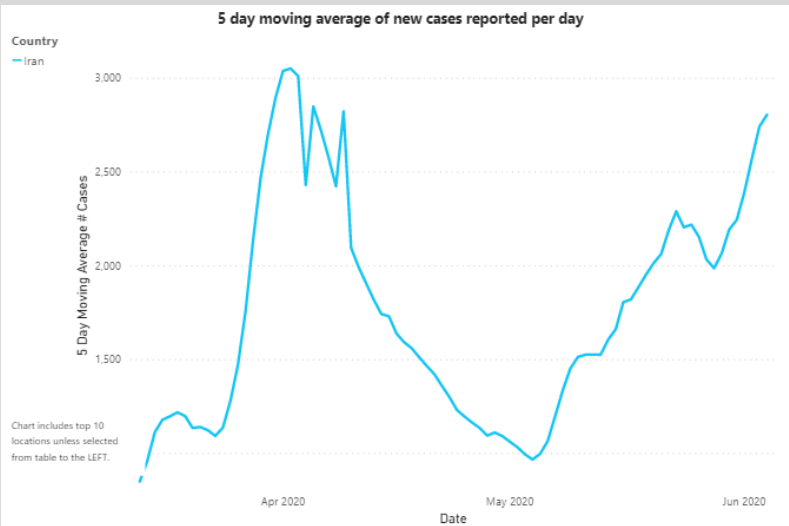
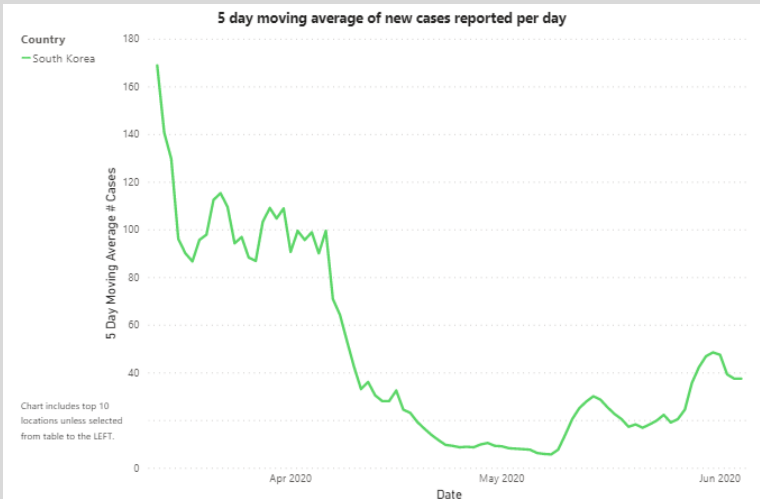
AUS: Currently 65 active cases, with 4 new cases reported in the last 24h and total 4 634 death



Countries currently facing the 2nd wave

After passing the 1st wave countries like **KOR** or **IRN** currently facing the 2nd wave. As clearly recognizable in the adjacent graphs.

This makes it clear that the COVID-19 will not disappear after the first exposure, but that countries have to be prepare for a possible second wave.



IRAN: 3,117 new cases were reported, bringing the total number to 157,562 cases. This marks the first time that over 3,000 cases have been reported within a 24-hour period and represents the highest single-day increase since the beginning of the outbreak.

Subject in Focus

NIH Clinical Trial Shows Remdesivir Accelerates Recovery from Advanced COVID-19

Preliminary results

Gilead sciences reported the outcomes of their randomized phase III open-label trial found on 1 June. Some countries already approved the use of Remdesivir during the last weeks. Like USA, Japan, South Korea and [India](#) which starts using it in emergency cases. The U.S: Food and Drug Administration issued an [emergency use authorization for Remdesivir](#) in hospitalized persons on first of May. The [European Medical Agency](#) has recommended expanding the compassionate use of the investigational medicine remdesivir to sever patients not on mechanical ventilation as on 11 May.

Remdesivir is an antiviral medicine which is being investigated for the treatment of COVID-19. It is a 'viral RNA polymerase inhibitor' (a medicine that interferes with the production of viral genetic material, preventing the virus from multiplying). It has shown broad in vitro activity against different RNA viruses, including SARS-CoV-2 and was originally developed for the treatment of Ebola virus disease.

EMA and FDA based their recommendations on preliminary results from the [NIAID ACTT study](#).

The randomized, controlled trial (known as the [Adaptive COVID-19 Treatment Trial](#), or ACTT) enrolled hospitalized adults with COVID-19 with evidence of lower respiratory tract involvement (generally moderate to severe disease). Investigators found that Remdesivir was most beneficial for hospitalized patients with severe disease who required supplemental oxygen. Findings about benefits in other patient subgroups were less conclusive in the preliminary analysis.

The study began on Feb. 21, 2020 and enrolled 1,063 participants in 10 countries in 58 days. Patients provided informed consent to participate in the trial and were randomly assigned to receive local standard care and a 10-day course of the antiviral Remdesivir intravenously, developed by Gilead Sciences, Inc., or local standard care and a placebo. The trial was double-blind, meaning neither investigators nor participants knew who was receiving Remdesivir or placebo. The trial closed to enrollment on April 19, 2020. On April 27, 2020 (while participant follow-up was still ongoing).

Preliminary results indicate that patients who received Remdesivir had a 31% faster time to recovery than those who received placebo ($p<0.001$). Specifically, the median time to recovery was 11 days for patients treated with Remdesivir compared with 15 days for those who received placebo. Results also suggested a survival benefit, with a mortality rate of 8.0% for the group receiving Remdesivir versus 11.6% for the placebo group ($p=0.059$).



Colorized scanning electron micrograph of an apoptotic cell (pink) heavily infected with SARS-COV-2 virus particles (green), isolated from a patient sample. Image captured at the NIAID Integrated Research Facility (IRF) in Fort Detrick, Maryland. NIAID

The report notes that patients who received Remdesivir had a shorter time to recovery than those who received placebo. The study defined recovery as being discharged from the hospital or being medically stable enough to be discharged from the hospital. The median time to recovery was 11 days for patients treated with Remdesivir compared with 15 days for those who received placebo. The findings are statistically significant and are based on an analysis of 1059 participants (538 who received Remdesivir and 521 who received placebo). Clinicians tracked patients' clinical status daily using an eight-point ordinal scale ranging from fully recovered to death. Investigators also compared clinical status between the study arms on day 15 and found that the odds of improvement in the ordinal scale were higher in the Remdesivir arm than in the placebo arm. Trial results also suggested a survival benefit, with a 14-day mortality rate of 7.1% for the group receiving Remdesivir versus 11.9% for the placebo group; however, the difference in mortality was not statistically significant.

Ultimately, the findings support Remdesivir as the standard therapy for patients hospitalized with COVID-19 and requiring supplemental oxygen therapy, according to the authors. However, they note that the mortality rate of 7.1% at 14 days in the Remdesivir arm indicates the need to evaluate antivirals with other therapeutic agents to continue to improve clinical outcomes for patients with COVID-19. On May 8, 2020, NIAID began a clinical trial (known as ACTT 2) evaluating Remdesivir in combination with the anti-inflammatory drug Baricitinib compared with Remdesivir alone



	5-Day RDV n=191	10-Day RDV n=193	SOC n=200
Clinical Efficacy Outcomes at Day 11			
≥ 2-point improvement in ordinal scale	134 (70)	126 (65)	121 (61)
≥ 1-point improvement in ordinal scale	146 (76)	135 (70)	132 (66)
Requiring any oxygen support	12 (6)	13 (7)	22 (11)
≥ 1-point worsening in ordinal scale	6 (3)	12 (6)	22 (11)
Death	0	2 (1)	4 (2)
Safety			
Any adverse event (AE)	97 (51)	106 (55)	90 (45)
Grade ≥3 AE	20 (10)	21 (11)	24 (12)
Any serious adverse event (SAE)	8 (4)	7 (4)	18 (9)

Source: EMA, NIH; EMA, FDA, Gilead

Was the “Russian Flu” in 1890 caused by a Coronavirus instead of an Influenza virus?

A historical digression

The Great Russian Flu of the early 1890s may have been a COVID-like virus that crossed to humans from cows, scientists suggest.

The epidemic spread around the world, eventually killing more than a million people. The outbreak was later attributed to flu.

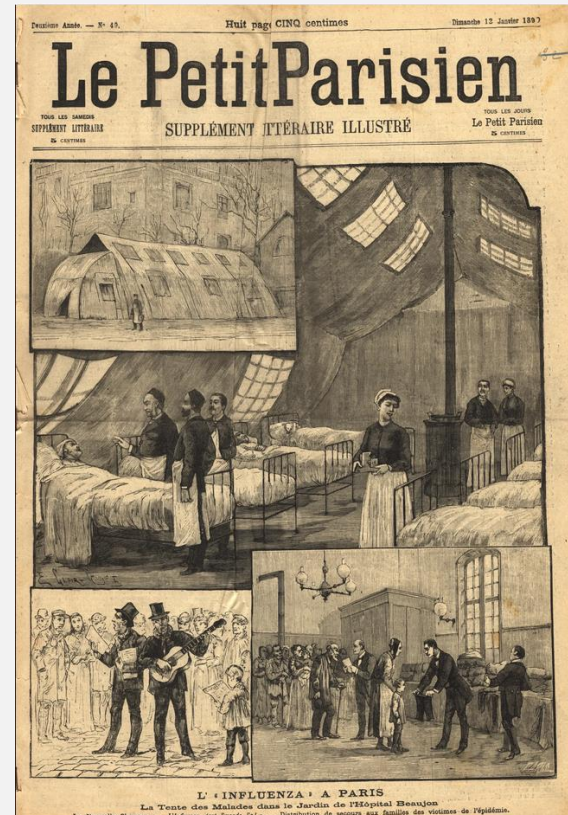
In 2005a group of Belgian scientists has since argued that the pandemic was caused by a different agent: a coronavirus.

Their work, which has re-emerged with the appearance of COVID-19, suggests the coronavirus linked to the 1890 outbreak is likely to have leapt from cows to humans before spreading worldwide.

The argument is based on the close genetic match between the human coronavirus OC43, a frequent cause of the common cold, and another coronavirus that infects cows.

As well there are more similarities in the two pandemics. Observers have pointed out that many 1890 patients suffered central nervous system damage – a relatively rare symptom for influenza but common in the COVID-19 pandemic. As well most of the infected people were male as we find it in the current outbreak.

The initial 1890 outbreak subsided after six weeks. However, the disease returned the next year and caused nearly twice as many deaths and also reappeared in 1892. The Registrar General calculated the death toll in 1890 as 27,000, in 1891 as 58,000 and in 1892 as 25,000.



▲ **Le Petit Parisien** dated 12 January 1890 focused on the the impact of the epidemic in Paris.
Photograph: The National Library of Medicine

[Complete Genomic Sequence of Human Coronavirus OC43: Molecular Clock Analysis Suggests a Relatively Recent Zoonotic Coronavirus Transmission Event](#)

Leen Vijgen et al.

J Virol. 2005 Feb; 79(3): 1595–1604.

doi: 10.1128/JVI.79.3.1595-1604.2005

Discussion (extract):

Interestingly, around the period in which the BCoV interspecies transmission would probably have taken place, a human epidemic ascribed to influenza was spreading around the world. The 1889-1890 pandemic probably originated in Central Asia and was characterized by malaise, fever, and pronounced central nervous system symptoms. A significant increase in case fatality with increasing age was observed. Absolute evidence that an influenza virus was the causative agent of this epidemic was never obtained, due to the lack of tissue samples from that period. However, postepidemic analysis in 1957 of the influenza antibody pattern in sera of people who were 50 to 100 years old indicated that H2N2 influenza antibodies might have originated from the 1889-1890 pandemic. However, it is tempting to speculate about an alternative hypothesis, that the 1889-1890 pandemic may have been the result of interspecies transmission of bovine coronaviruses to humans, resulting in the subsequent emergence of HCoV-OC43. The dating of the most recent common ancestor of BCoV and HCoV-OC43 to around 1890 is one argument. Another argument is the fact that central nervous system symptoms were more pronounced during the 1889-1890 epidemic than in other influenza outbreaks. It has been shown that HCoV-OC43 has neurotropism and can be neuroinvasive.

Maximum-likelihood phylogenetic analysis of the spike gene of HCoV-OC43 and several BCoV strains for which the date of isolation is known indicates that these strains evolved according to a molecular clock. An evolutionary rate on the order of 4×10^{-4} nucleotide change per site per year was estimated, and this rate was highly consistent across the different methods used. This rate falls within the range reported for other RNA viruses, including SARS-CoV.

This study provides evidence for viral promiscuity, a phenomenon that has already been reported for several animal coronaviruses, including BCoV, for which the potential to infect other species, including humans, has already been described. The isolation of the SARS-CoV from masked palm civets and raccoon dogs indicates that this new type of coronavirus was also enzootic in an animal species before suddenly emerging as a virulent virus for humans. The characterization of the BCoV-HCoV-OC43 pair presented in this study provides insights into the process of adaptation of a nonhuman coronavirus to a human host, which is important for understanding the interspecies transmission events that led to the origin of the SARS outbreak.

In the press

This new experimental 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!

04th June 2020

The Guardian

Almost 30,000 invalid UK coronavirus tests had to be redone

<https://www.theguardian.com/world/2020/jun/04/almost-30000-invalid-uk-coronavirus-tests-had-to-be-redone>

31st May 2020

NNY360 (powered by Watertown Daily Times and Northern New York Newspapers)

Drug overdoses climb during COVID-19 pandemic

https://www.nny360.com/communitynews/healthmatters/drug-overdoses-climb-during-covid-19-pandemic/article_d2e71ee6-5dfb-5168-8cc1-7d51828f9ba2.html

31st May 2020

Aljazeera

Coronavirus: Al-Aqsa Mosque reopens after more than 2 months

<https://www.aljazeera.com/news/2020/05/coronavirus-al-aqsa-mosque-reopens-2-months-200531065847914.html>

01st June 2020

CNN

Sewage could hold the key to stopping new coronavirus outbreaks

<https://edition.cnn.com/2020/06/01/europe/germany-sewage-coronavirus-detection-intl/index.html>

04th June 2020

Financial Times:

How Germany got coronavirus right

<https://www.ft.com/content/cc1f650a-91c0-4e1f-b990-ee8ceb5339ea>

03rd June 2020

South China Morning Post

Coronavirus may damage testicles without entering cells, study finds

<https://www.scmp.com/news/china/science/article/3087427/coronavirus-may-damage-testicles-without-entering-cells-study>

01st June 2020

The Guardian

UK hospitals to trial five new drugs in search for coronavirus treatment

<https://www.theguardian.com/world/2020/jun/01/uk-hospitals-trial-five-new-drugs-search-coronavirus-treatment#maincontent>

04th June 2020

The Guardian:

St Petersburg death tally casts doubt on Russian coronavirus figures

<https://www.theguardian.com/world/2020/jun/04/st-petersburg-death-tally-casts-doubt-on-russian-coronavirus-figures>