

THE ALCIVAX

Alcimed is monitoring the discussions on SARS-CoV-2's origins and the impact it will have on outbreak surveillance.

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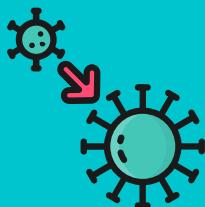
Edition #42 - 27 May 2021

COVID's Origin Story - The New Debate

The [WHO-China joint report on the origins of the SARS-CoV-2 virus](#) responsible for the COVID-19 pandemic, released in February 2020, the [follow-up global study in November 2020](#), and the [final report issued in April 2021](#) have come under scrutiny from the scientific community and politicians alike. The conclusions of the three reports was as follows:

- The COVID-19 virus arose from zoonotic transfer, i.e. transmission of a virus from animals into humans.
- The animal reservoir for the COVID-19 virus is a bat. The COVID-19 virus is 96% identical to the BatCov RaTG13 virus.
- The outbreak origin point is still unclear as all the animal specimens tested from the Huanan Market in Wuhan, suspected of being the COVID-19 origin point, have tested negative and the intermediate species bridging the gap from bats to humans has yet to be identified.

While wild food markets like Huanan are likely sources of zoonotic viral transmission, the alternative theory for COVID-19 is that it is the result of accidental leakage from a viral laboratory in Wuhan that was studying bat coronaviruses and their likelihood of transfer into humans. [Numerous prominent coronavirus virologists have called for a more thorough investigation](#) into this alternative theory, especially into the BSL 4 facility at the Wuhan Institute of Virology.



NOT A BIOWEAPON

Everyone in the scientific community agrees COVID-19 was not engineered in a lab.

What everyone does agree on is that COVID-19 was not engineered in a laboratory as a bioweapon. It did naturally arise from nature, based on the high level of similarity between the COVID-19 virus and its bat relatives. Additionally, there is no indication of manipulation, commonly found with genetic engineering tools, in the circulating viral sequences.



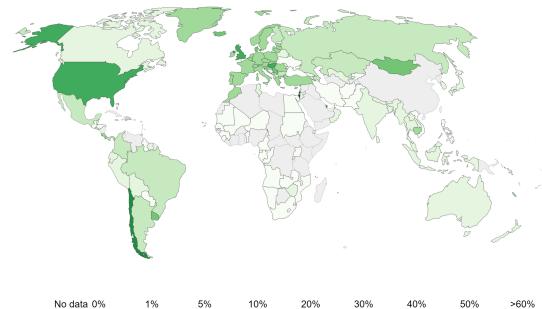
- [No link between the earliest COVID patients and the food market.](#)
- The Wuhan Institute of Virology (WIV) had highly similar bat coronavirus on site for research.
- Concerns over safety violations that could lead to accidental leaks were raised about WIV previously.
- [A full timeline of the evidence can be found here.](#)

Image Credit: Michael Ramirez

The COVID Vaccine Race In Graphs

403M people in the world are fully vaccinated.

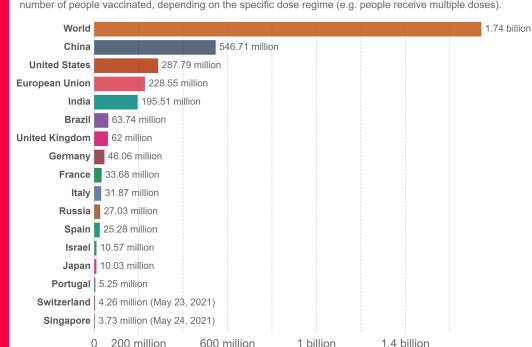
Share of the population fully vaccinated against COVID-19, May 25, 2021
Share of the total population that have received all doses prescribed by the vaccination protocol. This data is only available for countries which report the breakdown of doses administered by first and second doses.



Source: Official data collated by Our World in Data – Last updated 26 May, 20:40 (London time) OurWorldInData.org/coronavirus • CC BY

More than 1.7B doses of COVID vaccine have been administered to date. That's 10% of the globe.

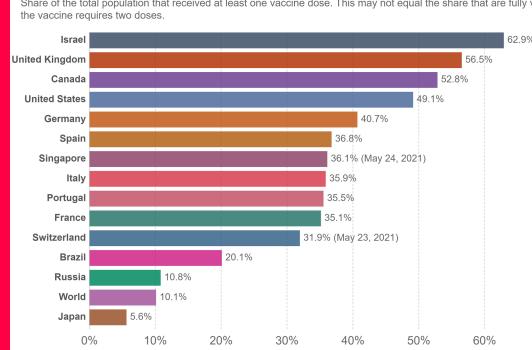
COVID-19 vaccine doses administered, May 25, 2021
Total number of vaccination doses administered. This is counted as a single dose, and may not equal the total number of people vaccinated, depending on the specific dose regime (e.g. people receive multiple doses).



Source: Official data collated by Our World in Data – Last updated 26 May, 20:40 (London time) OurWorldInData.org/coronavirus • CC BY

36% of the EU has been received at least 1 dose as they rapidly catch up with Isreal, the US and UK.

Share of people who received at least one dose of COVID-19 vaccine, May 25, 2021
Share of the total population that received at least one vaccine dose. This may not equal the share that are fully vaccinated if the vaccine requires two doses.



Source: Official data collated by Our World in Data – Last updated 26 May, 20:40 (London time) OurWorldInData.org/coronavirus • CC BY



COVID's Real Death Toll

One of the prevailing questions during the outbreak has been: How do we accurately calculate how many people have died from COVID? The question arises as many countries require a positive COVID test and the patient to have been recorded as having died of COVID. By this metric, there have been 3.5M COVID deaths since the beginning of the pandemic. But to account for the number of people who died of COVID that weren't tested, then we have to look to excess mortality.

3X

Excessive Mortality

Calculated as the number of deaths in a certain time frame that is higher than expected based on the same time frame from previous years, may prove that the COVID death toll is 3X higher than reported.



Highest Excess Mortality in 2020

458K



EXCESS DEATHS IN
2020

89K



EXCESS DEATHS IN
2020

85K



EXCESS DEATHS IN
2020

84K



EXCESS DEATHS IN
2020

To extrapolate that over the course of the pandemic, the Economist has pulled all the available data as well as bootstrapped an model for estimated excess mortality where data is not currently available.

Global estimated daily excess deaths* v confirmed covid-19 deaths, '000

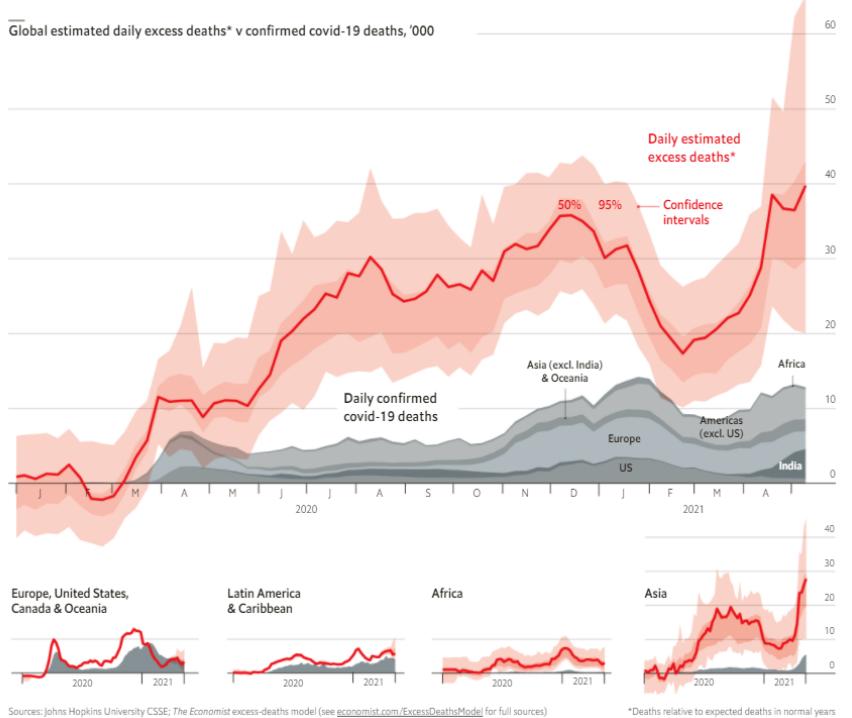


Chart: The Economist

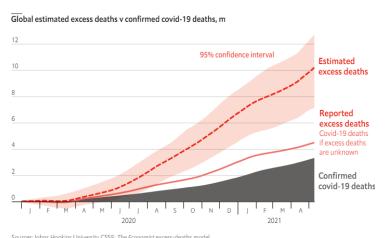


Chart: The Economist

Based on the model built by the Economist, excess mortality indicates that between 7 and 13M people have died from COVID since the pandemic began, which is 3X higher than the number of officially reported COVID deaths. So far this is the most extensive model of COVID deaths to date. These numbers will be important to understand the real toll of the pandemic in the long run.



Breathing Easier

As daily coronavirus cases have continued to be higher than 500K since mid March, it is clear that meeting in large groups, travel, and having a larger freedom of movement will still require active testing for some time. But those efforts may be getting a breathe of fresh air soon, as COVID rapid breathalyzer tests are gaining traction in several key markets around the world.

- Singapore provisionally approved a COVID breathalyzer test this week as a pilot program for checking travelers crossing the border from Malaysia. Travellers are given both a breathalyzer tests and a rapid antigen test in parallel. Breathonix's clinical trial data showed the test to be 90% accurate and is in talks to expand the program outside of Singapore.
- Sentech Medical, based in Israel, also showed 90% accuracy in clinical trials with its VOX rapid breath testing system and is in the process of readying the technology for launch, including seeking US FDA approval. Sentech claims that the technology can also be used to test for antibodies and vaccine effectiveness.
- SpiroNose is also being deployed in Amsterdam to screen Eurovision song contest employees setting up for the upcoming competition. The breath test is made by the Dutch company Breathomix.



Returning to our Pre-COVID Roots

Pre-mask Life



Image Credit: Plante

Foreign Travel



Image Credit: Chip Bok

Genetic Tests not PCRs

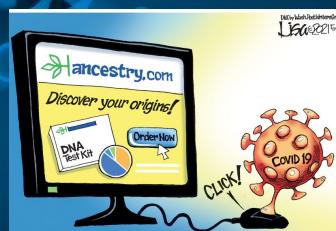


Image Credit: Lisa Benson

In Person Instruction

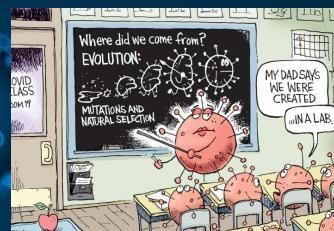


Image Credit: Joe Heller