COVID-19

From the Frontline

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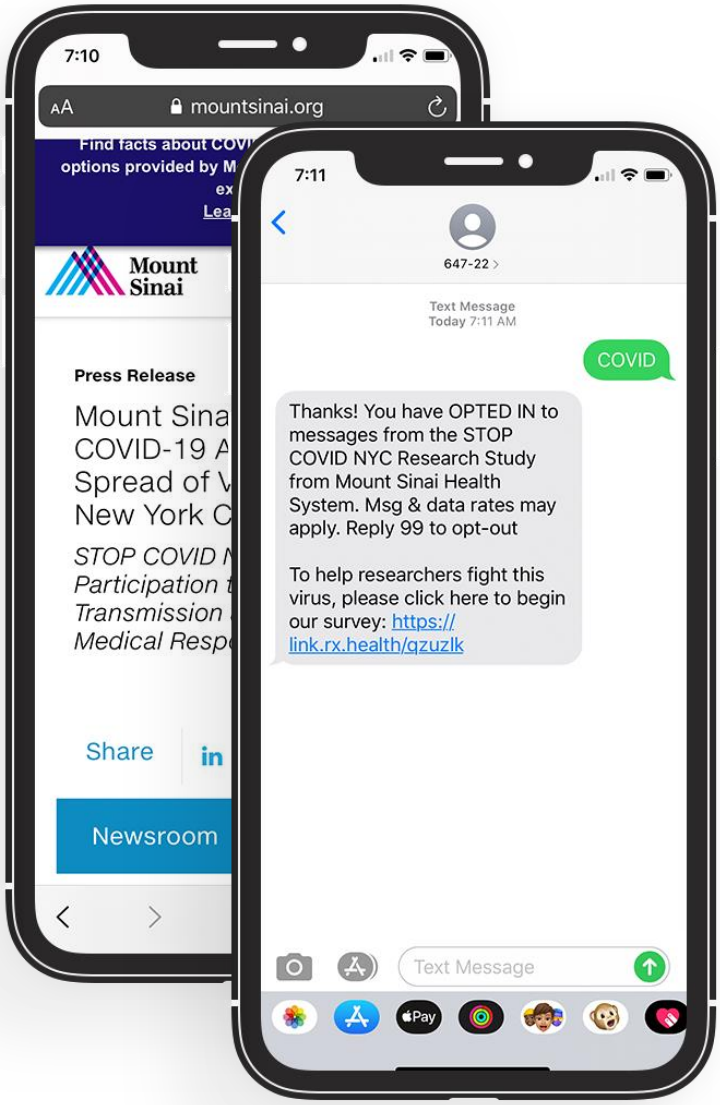
Inside the Hospital

- Transformation of the healthcare system
- Deferment of medical care for other illnesses
- Psychological effects
- Innovation

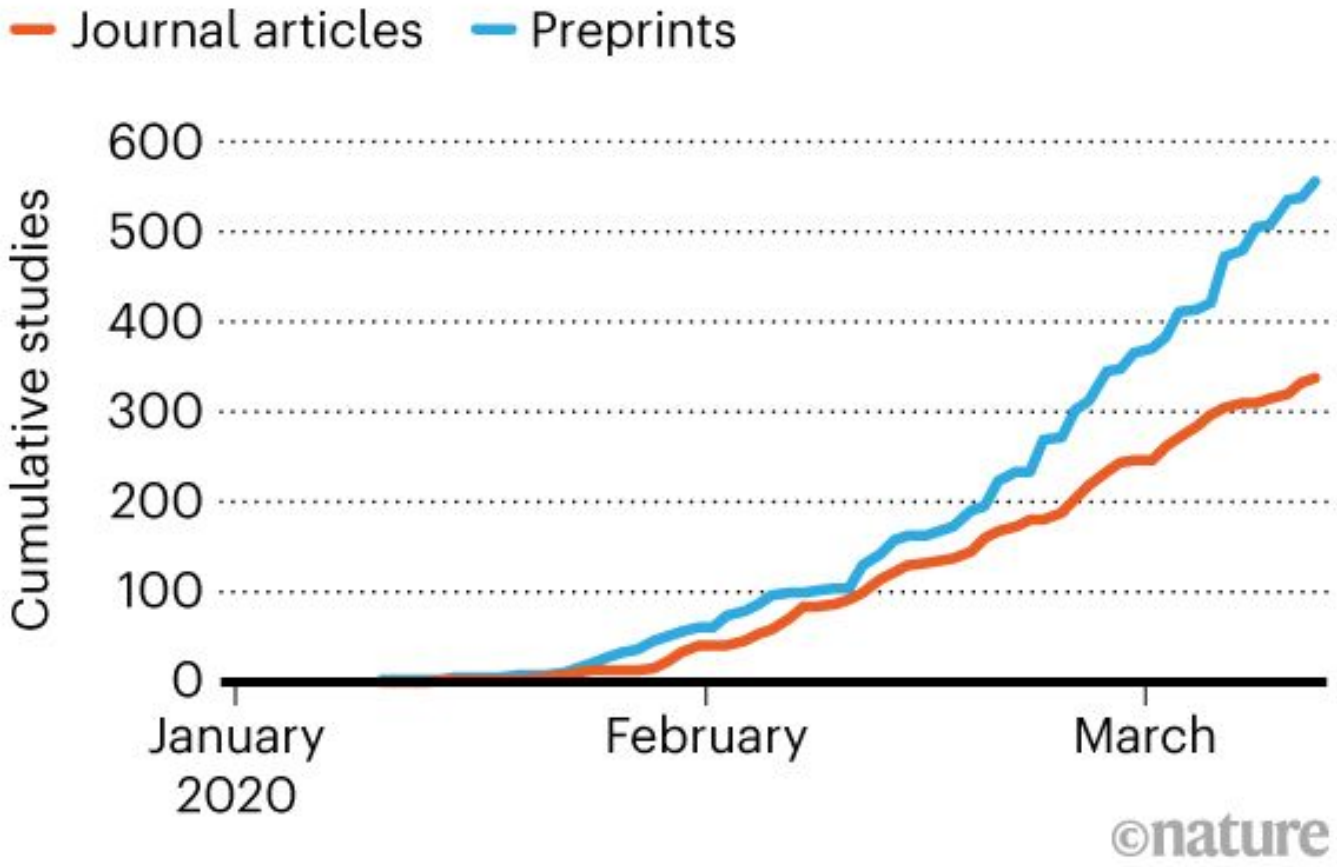
Research for the Future – STOP COVID NYC

- **Icahn School of Medicine is requesting information from all New Yorkers whether you think you have had COVID-19 or not**
- Helps healthcare workers and government officials advise our community on how to slow COVID-19 transmission in New York City.
- Helps us predict smaller outbreaks within neighborhoods of New York City so we can alert medical professionals in those areas and allocate resources accordingly
- Text COVID to 64722
- You will receive daily texts to check on your symptoms

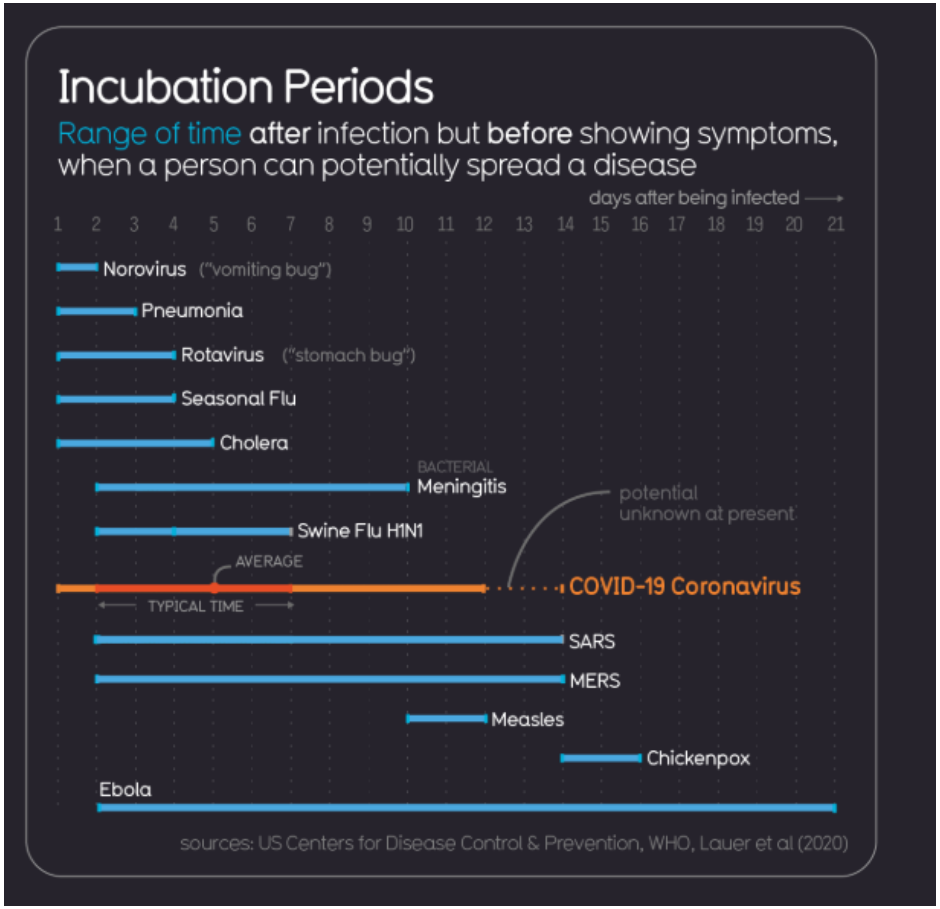


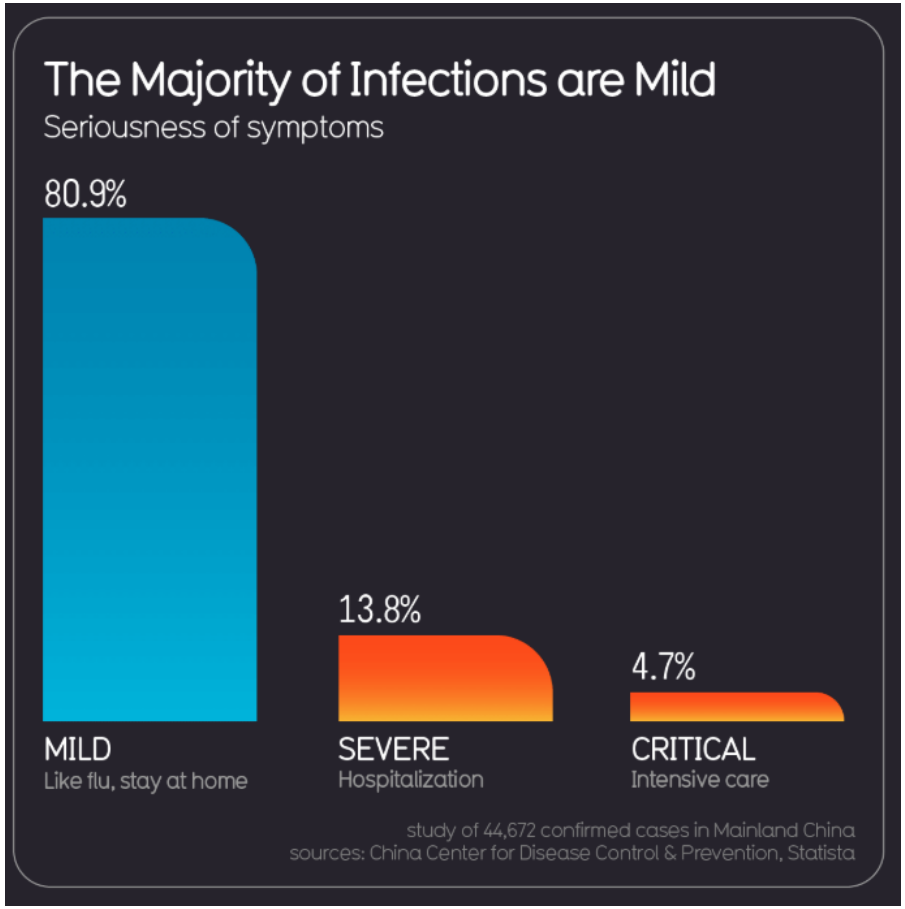
https://covid19.healthdata.org/united-states-of-america

Coronavirus Research: hundreds of studies about the virus have been published since the outbreak began



What are the latest findings for COVID-19 symptoms?





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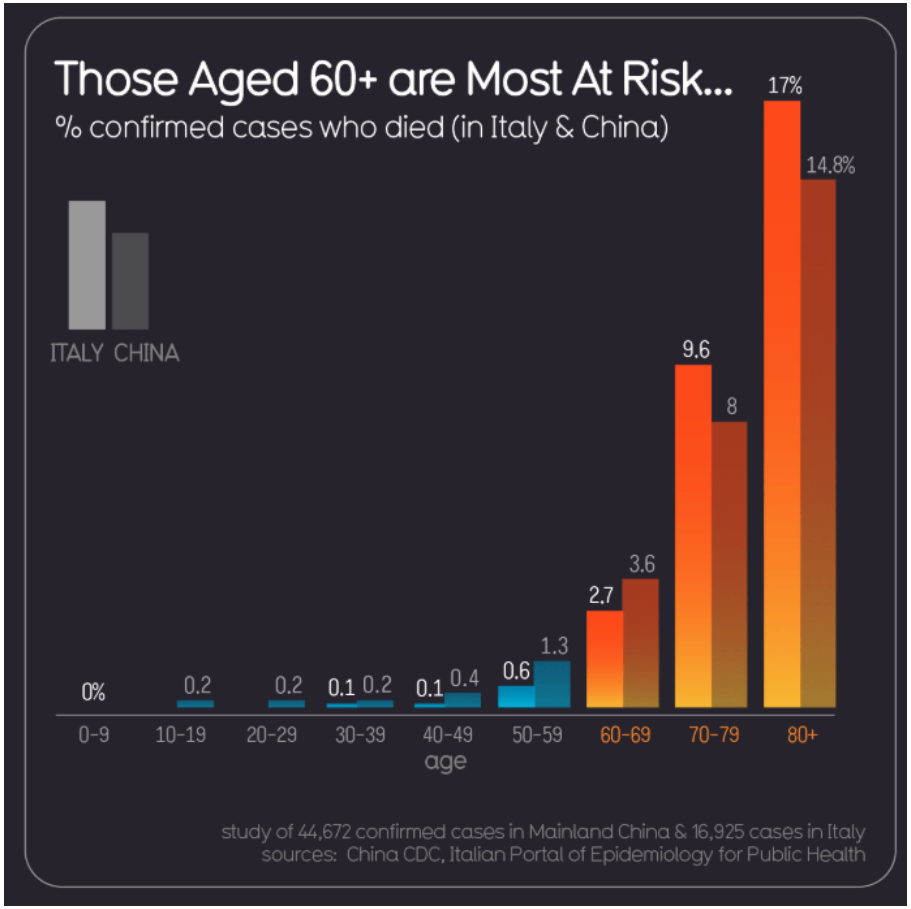
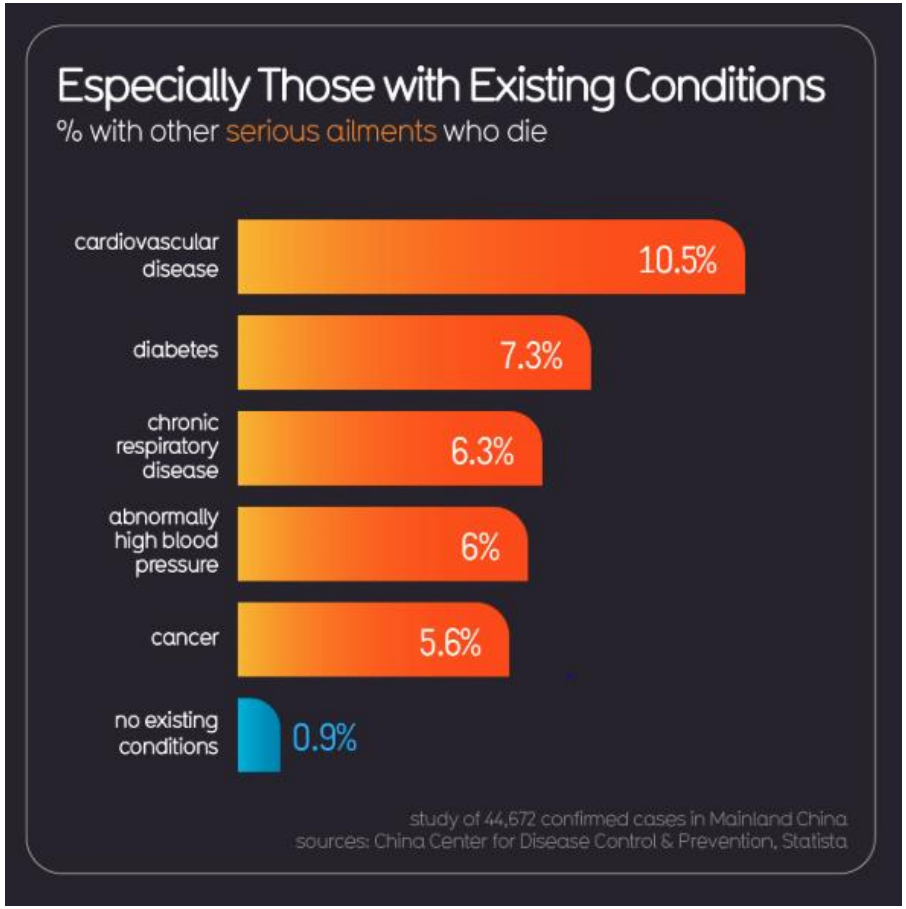
Who is most at risk?





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What are the latest findings for COVID-19 symptoms?

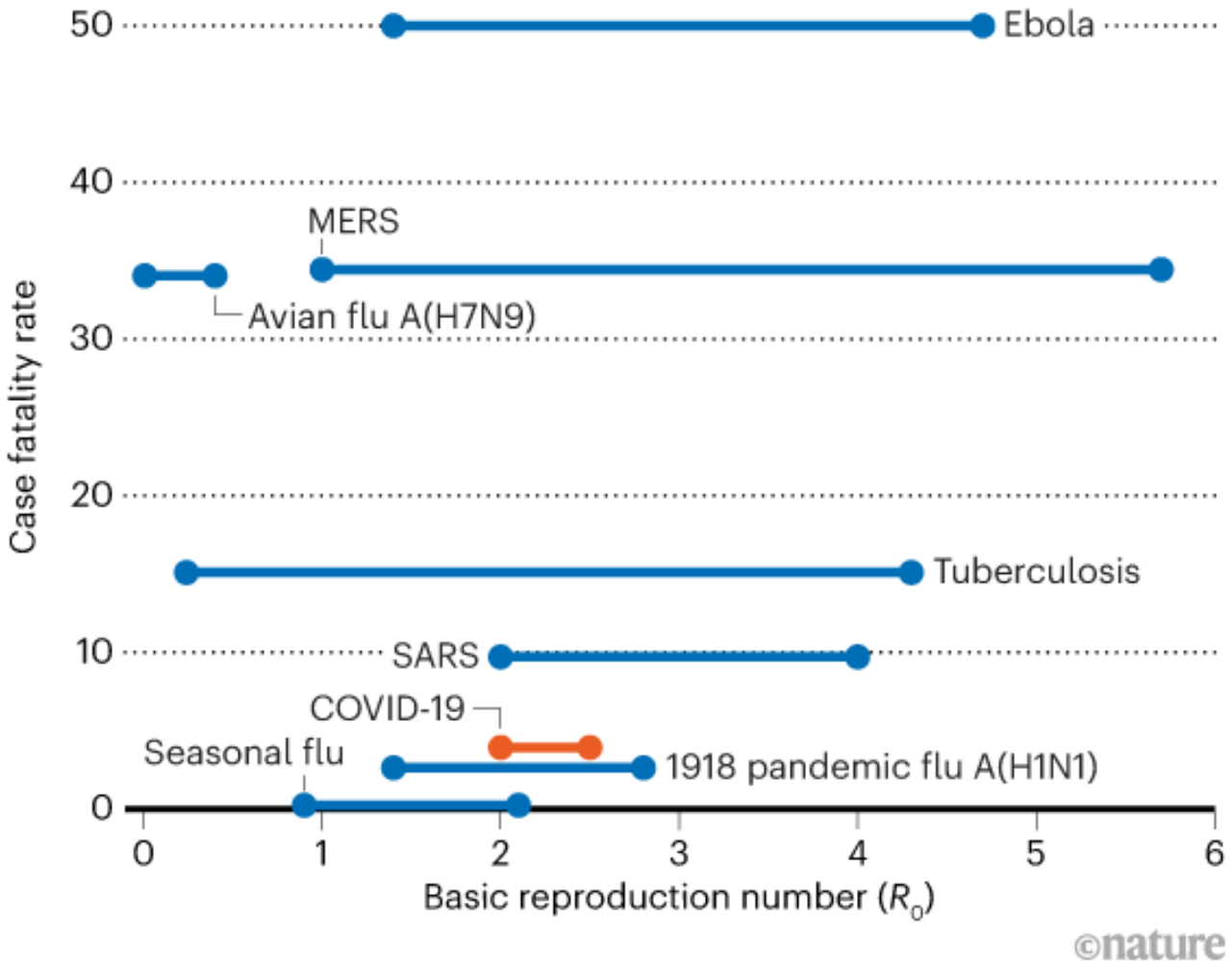
List of symptoms: people's experiences have varied so greatly

- Hallmark symptoms have been fever, cough and shortness of breath
- Up to 10% present initially with gastrointestinal symptoms (e.g. diarrhea, nausea), which occur before the development of fever and shortness of breath
- Latest findings have expanded the symptom list to include loss of appetite, and loss of smell and/or taste

Severity

- For the majority, about 80% of COVID-19 positive individuals are experiencing mild to no symptoms
- Predictions of upward of 25% of the people infected with COVID-19 are asymptomatic
- That is why the CDC imposed the latest recommendation that everyone going outside should wear a face covering over their nose and mouth. You just can't be certain that if you come in close contact with someone at the grocery store or pharmacy that they don't have COVID-19, or that you don't have it. It can take days after exposure to experience symptoms and a person is contagious during that pre-symptomatic stage.

COVID-19 vs. Other Diseases: How deadly or contagious is it?



What to do if you get COVID-19?

- Testing isn't currently available for most people
  - Testing is still being reserved for the individuals that are most at risk and experiencing symptoms – those people that need to be at the hospital
  - For individuals that have mild symptoms, a test isn't really necessary, because it won't change the way you would be cared for

- Assume you are positive. If you are experiencing the symptoms we just talked about, you can assume you have COVID-19
  - Take steps to isolate yourself from others as much you can
  - Call your provider
  - Increasing numbers of ways that we are learning to care for patients in the home
  - Monitor symptoms, Sp02, HR, RR via Apps and blue tooth

Can you get COVID-19 more than once?

- Within a year, probably not. But….
  - Not all people may build up enough antibodies and could therefore possibly contract COVID-19 again if exposed.
  - Further, the virus may mutate, meaning that the antibodies people built may no longer be effective at combatting the new form of the virus.

- Serological (antibody) test are the best way to know if you have built up enough immunity to fight off getting COVID-19 again
  - When the body is exposed to a virus, the immune system begins to produce antibodies to fight the virus and future infections from it.
  - Those antibodies stick around after the virus is cleared from the body, making them an indicator of past infection. For COVID, we are not sure how long these antibodies will be present in your body.
  - Serological tests check the blood for these antibodies — providing confirmation of infection and possible protection.

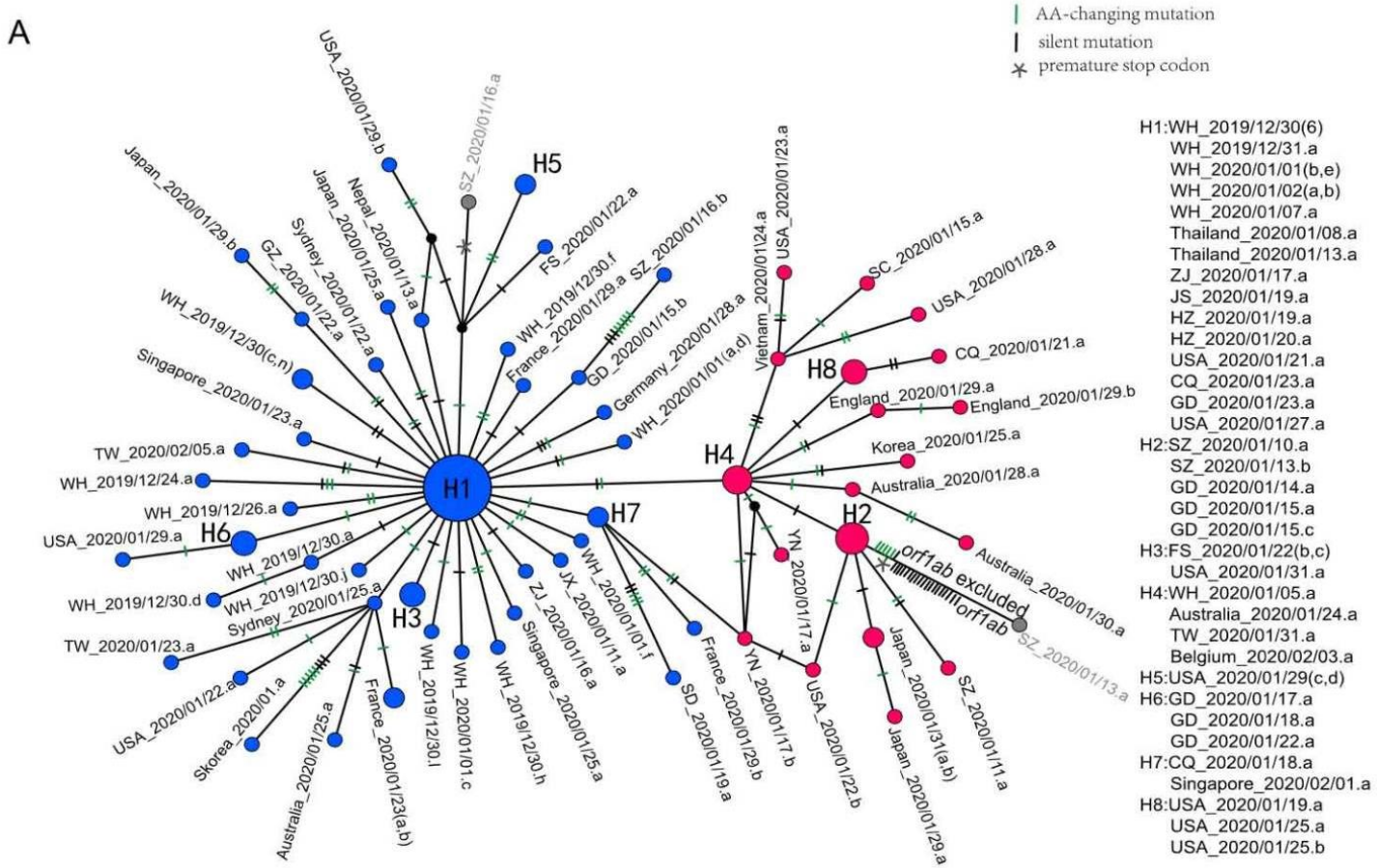
- Until serology tests are made widely available, the recommendation from the CDC is to self isolate for 7 days with 72 hours of no fever (with no fever reducing medication), and you can then return to work

Has the virus mutated?

- Many studies are underway on the evolution of SARS-CoV-2 to help researchers and public health officials track the spread of the virus over time
- Research shows that the virus has mutated, but no evidence to date shows that the mutated versions are acting differently in people
- It seems SARS-CoV-2 mutates roughly four times slower than the seasonal flu
- The fact that the seasonal flu mutates so quickly is precisely why it is able to evade our vaccines, so the significantly slower mutation rate of SARS-CoV-2 gives us hope for the potential development of effective long-lasting vaccines against the virus.

https://www.livescience.com/coronavirus-mutation-rate.html

There's no one COVID-19: there are innumerable different viruses evolving over time



L haplotype
- *More prevalent overall.*
- *More common early in outbreak.*
- *Responsible for cases in Wuhan..*
- *More virulent*

S haplotype
- *Less prevalent overall.*
- *Emerged later in outbreak.*
- *More common outside Wuhan.*
- *Less virulent.*

Tang X et. al.