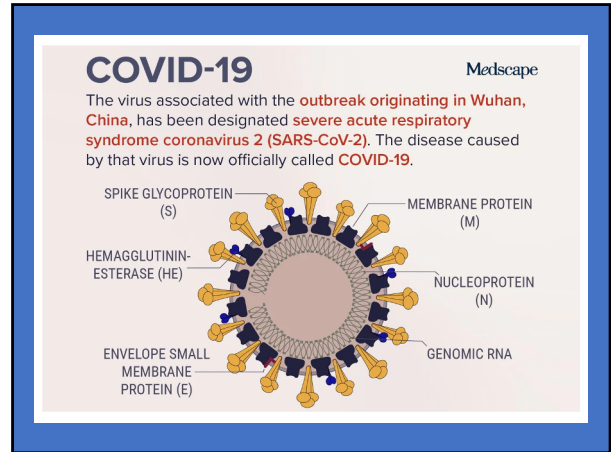
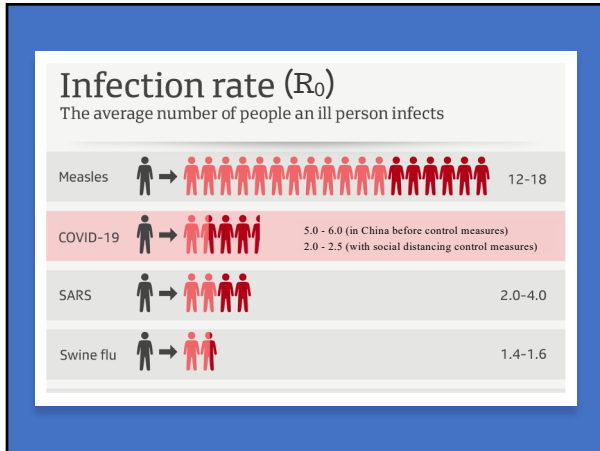


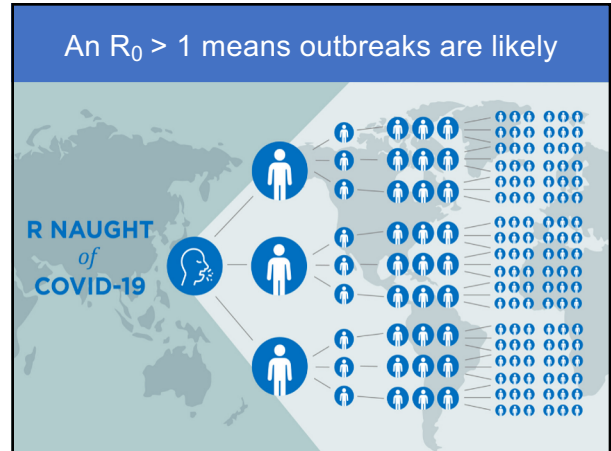
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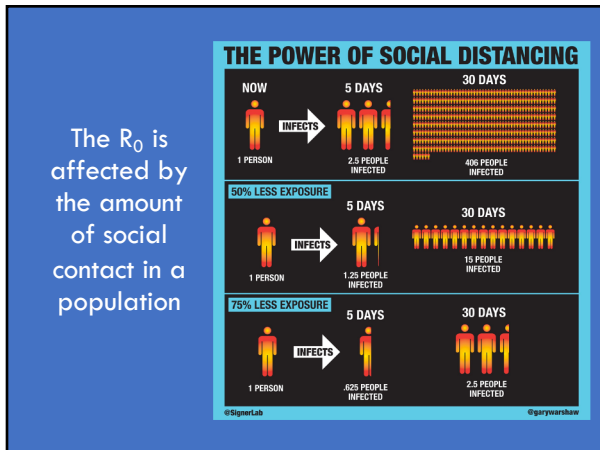
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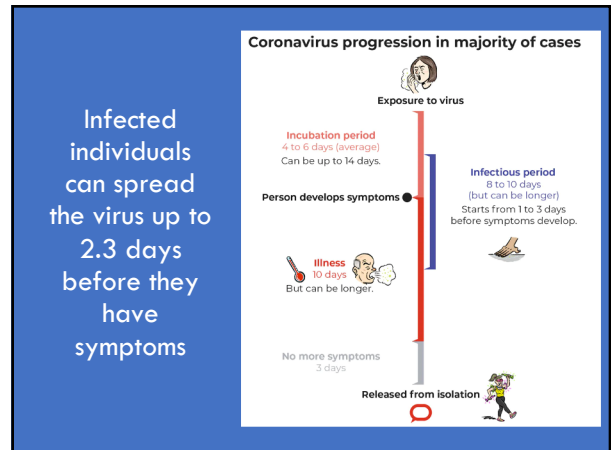
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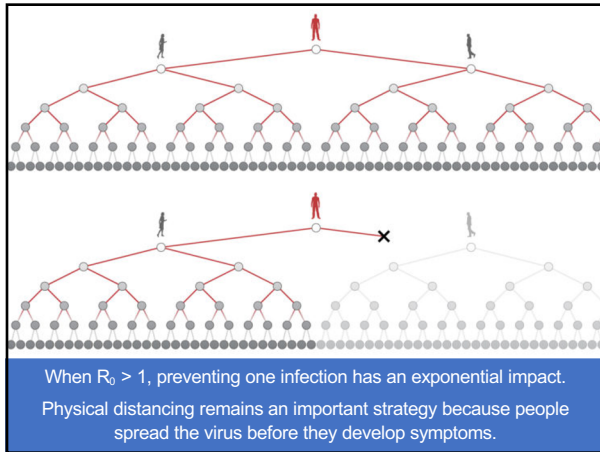
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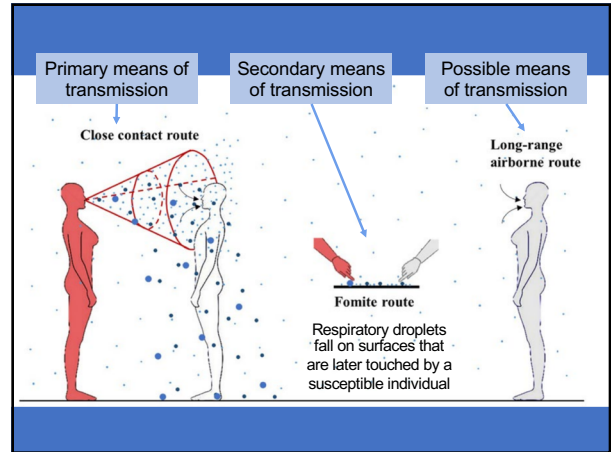
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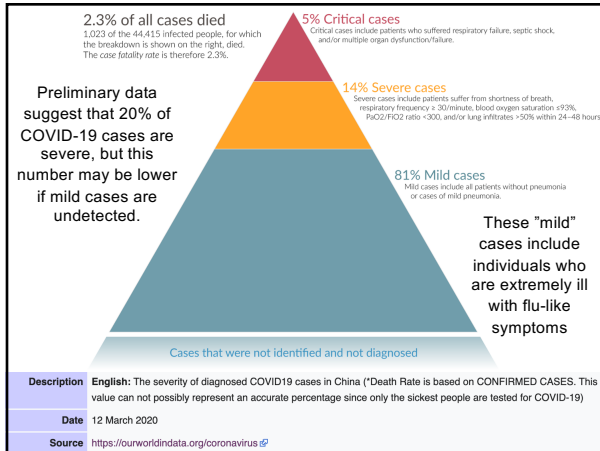
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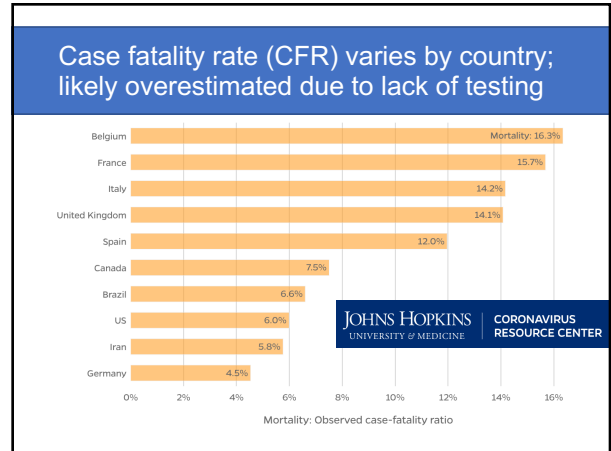
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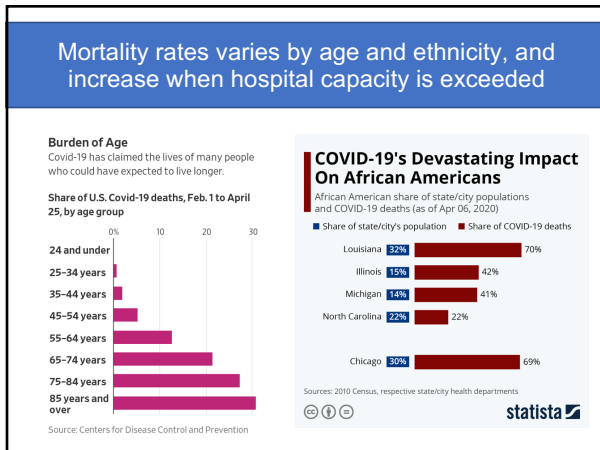
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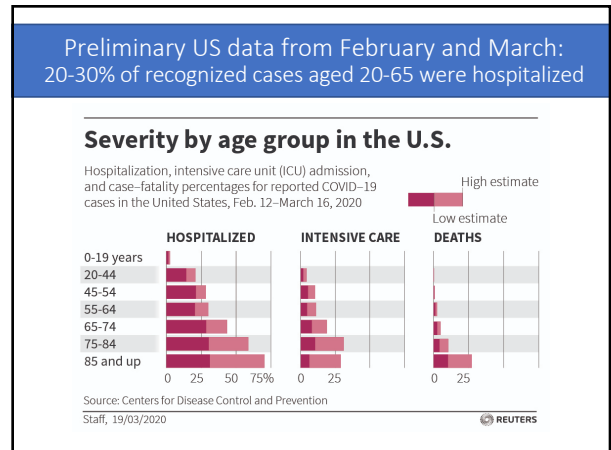
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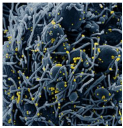
True proportion of severe/fatal cases will be unclear until antibody surveys are completed

Friday, April 10, 2020

NIH begins study to quantify undetected cases of coronavirus infection

Interested in enrolling? Contact: clinicalstudiesunit@nih.gov

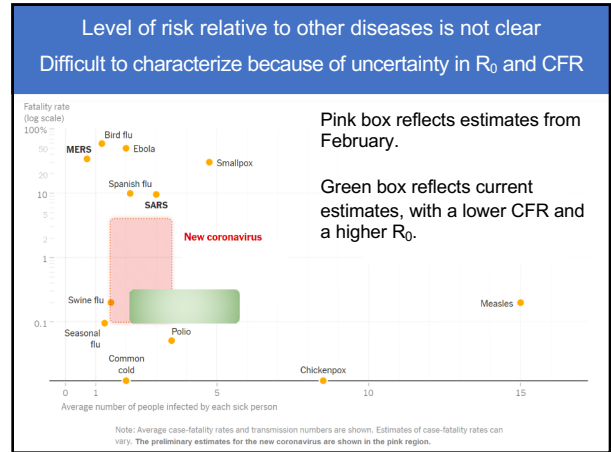
A new study has begun recruiting at the National Institutes of Health in Bethesda, Maryland, to determine how many adults in the United States without a confirmed history of infection with SARS-CoV-2, the virus that causes coronavirus disease 2019 (COVID-19), have antibodies to the virus. The presence of antibodies in the blood indicates a prior infection. In this "serosurvey," researchers will collect and analyze blood samples from as many as 10,000 volunteers to provide critical data for epidemiological models. The results will help illuminate the extent to which the novel coronavirus has spread undetected in the United States and provide insights into which communities and populations are most affected.



"This study will give us a clearer picture of the true magnitude of the COVID-19 pandemic in the US by telling us how many people in different communities have been infected without knowing it," said Anthony S. Fauci, M.D., NIAID director.

"These crucial data will help us measure the impact of our public health efforts now and guide our COVID-19 response moving forward."

13



14

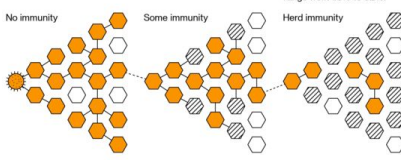
The Journey to Herd Immunity

We can move into the "new normal" when the population has herd immunity.

Vaccination will likely be necessary to produce this level of immunity in the population.

Recent research suggests that COVID-19 infection causes antibody production, but it is unclear if these antibodies confer long-term immunity.

- ① A novel pathogen is introduced to a community. Because it's new, no one has immunity and it begins to spread.
- ② Those who recover and those who receive a vaccine (if there is one) develop immunity, at least for a period of time. With the coronavirus, it's not known how long. So far, there is no proven vaccine.
- ③ Herd immunity takes hold when the pathogen can't find new hosts and stops spreading. That happens once a sufficient portion of the community is immune. For this virus, estimates range from 50% to 60%.



*According to a study published April 7, 2020

BloombergQuickTake

NIH.gov | Blog Home | Director's Album

Study Finds Nearly Everyone Who Recovers From COVID-19 Makes Coronavirus Antibodies

Posted on May 7th, 2020 by Dr. Francis Collins

15

COVID-19: PROJECTED TIMELINE FOR TREATMENT AND PREVENTION

There are **66 programs** working on **3 different approaches**:

- 7** REPURPOSED DRUGS
- 16** ANTIBODIES
- 43** VACCINES

REPURPOSING DRUGS: e.g., remdesivir, an antiviral drug originally made to fight Ebola

ANTIBODIES: PHASE 1/2

VACCINES: PHASE 1, PHASE 2/3

Timeline: Mar 2020 to Sep 2021

16

NYT article 5/18/20:

Moderna Coronavirus Vaccine Trial Shows Promising Early Results

The company said a test in 8 healthy volunteers found its experimental vaccine was safe and provoked a strong immune response. It is on an accelerated timetable to begin larger human trials soon.

If those trials go well, some doses of a vaccine could become available for widespread use by the end of this year or early 2021, Dr. Tal Zaks, Moderna's chief medical officer, said in an interview. "We're doing our best to make it as many millions as possible."

17

Key take-home points

- Any physical contact carries the risk of infection, severe illness, and death.** This will remain true until a vaccine or treatment is widely available.
- State and federal governments will make recommendations about when businesses can reopen; individual businesses will then make decisions about whether the risk of reopening is worth the continuing risks to their employees, and in our case, students.**
- Current hot spots for infection are locations with residential living (prisons, nursing homes, hospitals).**
- Decisions made by large organizations will have widely varying impacts for different portions of the population.** Older individuals, individuals with chronic conditions, and Black Americans will be put at especially high risk by the decision of large organizations to open.
- Experts expect a second wave of infections to hit the US in the fall.**

18