

COVID Response

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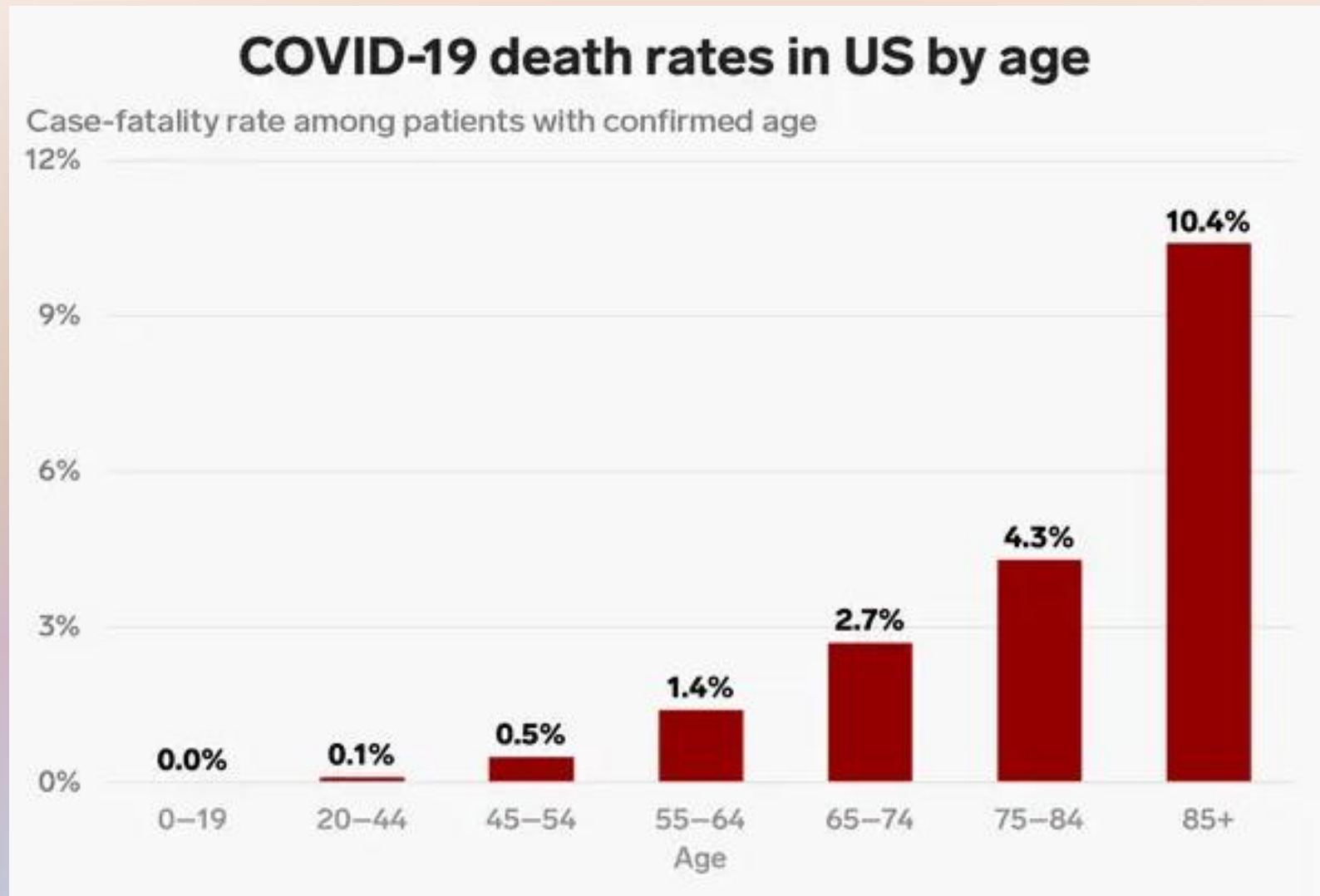
Basic Problem

- New (to us) virus
- Resident in bats, jumped to pangolin, then 1 person
- Now spreading globally, a pandemic
- Expected to infect about 50% of all humans
- December 2019 China reported problems
- Nations under-report infection
- China censored early reports
- USA slow to respond
- Massive global panic

Some Biology

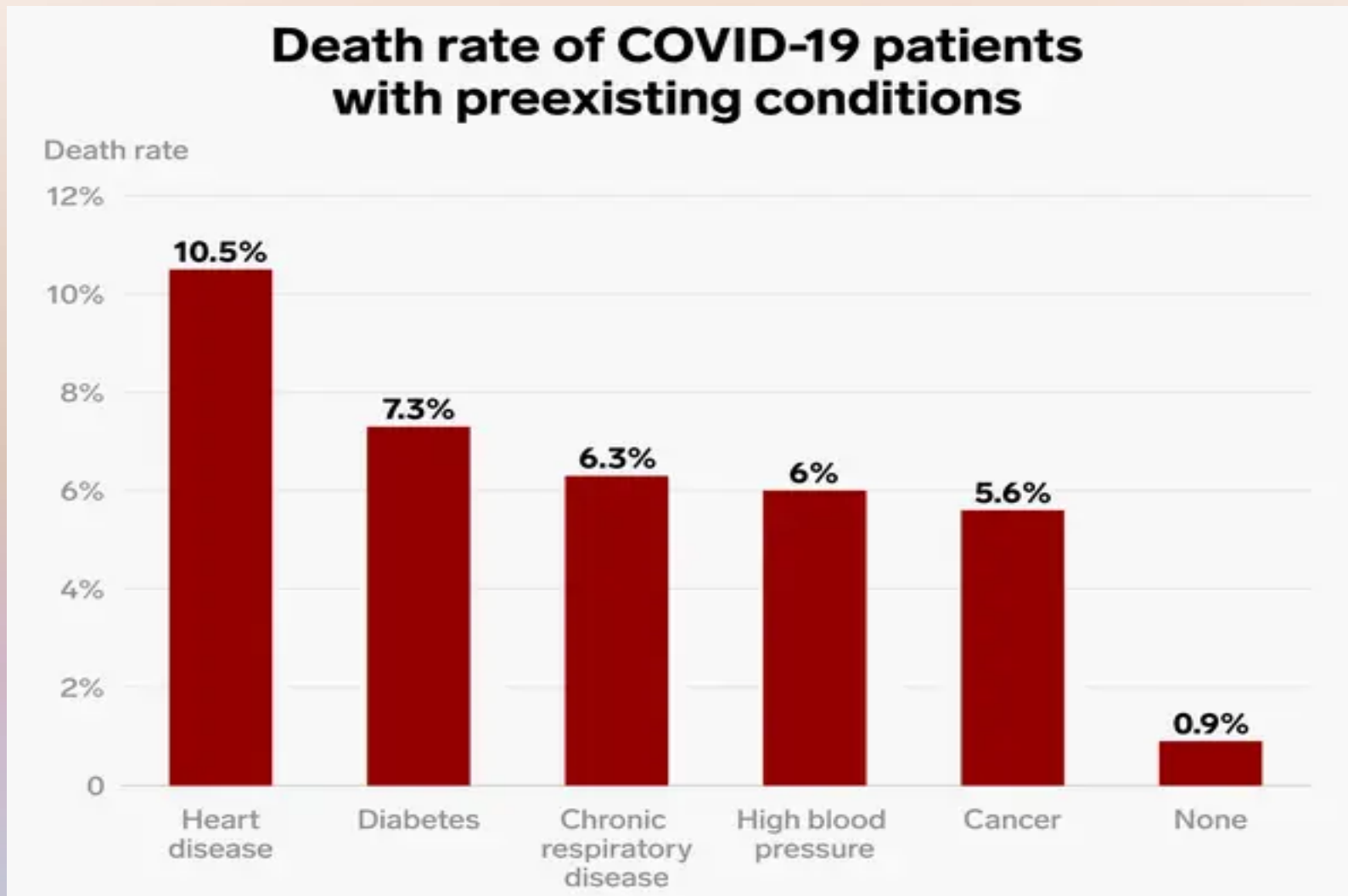
- Asymptomatic carriers – “victims” have virus, no symptoms, still spread disease
- Takes a few days to incubate, then ready to spread
- Infection fatality rate of 0.7%
- Flu rate is 0.1%; 1918 Spanish flu was 2%
- 8.2% of deaths now due to pneumonia, flu (CDC)
- <https://www.cnn.com/2020/03/30/health/coronavirus-lower-death-rate/index.html>
- <https://www.biospace.com/article/compare-1918-spanish-influenza-pandemic-versus-covid-19/>

Biggest Risk for Elderly



<https://www.businessinsider.com/most-us-coronavirus-deaths-ages-65-older-cdc-report-2020-3#china-has-also-seen-the-highest-portion-of-coronavirus-deaths-among-older-patients-5>

Compounding Problems



<https://www.businessinsider.com/coronavirus-death-rates-preexisting-conditions-heart-disease-cancer-2020-2>

Transmission

- Mainly from infected saliva droplets dispersed via coughs and speech
- Inhaled, absorbed → infection
- Possibly from droplets on touched surfaces, hands touching mouth or eyes

Disease Control

- Trying to reduce transmission speed
- Work within limits of healthcare system
- Try to assure care for all sick patients

Relative Risk

- Worse than seasonal flu
- Not as bad as heart disease, obesity
- If we can tackle COVID, we can tackle obesity
- Improve diet with less sugar, more whole grains
- More exercise
- Encourage a daily walk in school, business, life

Political Framework

- Risky to rely on federal guidelines
- Highly politicized government, science bashing, “alternative facts,” whistle blowers fired, ...
- Trump was slow to respond
- Center for Disease Control initially not in charge

Test Like Crazy

- We should test everyone with symptoms
- Test their contacts
- Not enough tests due to bad China, USA governments
- Quarantine infected people

Related Problem

- Some religious rituals spread disease
- Apply restaurant health standards to ritual
- Sound scientifically, risky politically
- Should have been done long ago
- Germ theory of disease established by 1900

Trillion Dollar Questions

- How effective are cloth face masks at stopping transmission?
- <https://www.nytimes.com/article/coronavirus-homemade-mask-material-DIY-face-mask-ppe.html>
- How do face masks compare with social distancing?
- Tremendous economic impact
- City could fund a quick study

Nature's Nightly Art

