



Paige O'Leary

Grace Lowitzer



Isolation: Separation of **SYMPTOMATIC** persons with contagious diseases from non-infected



Quarantine: Restriction of healthy persons **NOT SYMPTOMATIC**, but presumed exposed, to monitor if become ill

Quarantine in History

- Began in 14th century – infected ports
- Federal quarantine legislation in U.S in 1878
- 19th century
 - Federal role clarified in congress due to Cholera in 1892
 - Federal quarantine facilities nationally established in 1921
- Public Health Service Act (1944)
 - Established federal government's quarantine authority
- Quarantine part of CDC in 1967
- Division of Global Migration and Quarantine



<https://www.cdc.gov/quarantine/historyquarantine.html>

HIV -1980

Renewed interest in quarantine

Isolation of HIV-positive persons
in Cuba

US ban on immigration by HIV-
positive persons, lifted in 2010, -
*violates the right to
nondiscrimination.*

Restrictive measures for
communicable diseases in a liberal
democracy

Advocates, practitioners, and
scholars alike, that “the revival of
[this] archaic doctrine”¹(p53) was
not, nor would ever be, a
justifiable intervention for victims
or carriers of HIV/AIDS.

Reflecting back this seems
ridiculous... *yet what about the
evidence at the time?*

SARS - 2003

Unknown disease – invoked precautionary principle

Quarantine was invoked on a scale unprecedented in several decades

- *“it would be the only way to contain the spread of a disease of which very little was known.”*
– Justified significant deprivation of liberty?

Scientific uncertainty permeated public health decision making

SARS in Taiwan 131,132 quarantined 12 potential SARS, 2 were confirmed.

SARS still spread after the widespread use of quarantine

Quarantine may have made it worse, or could have reduced spread of disease by 50%

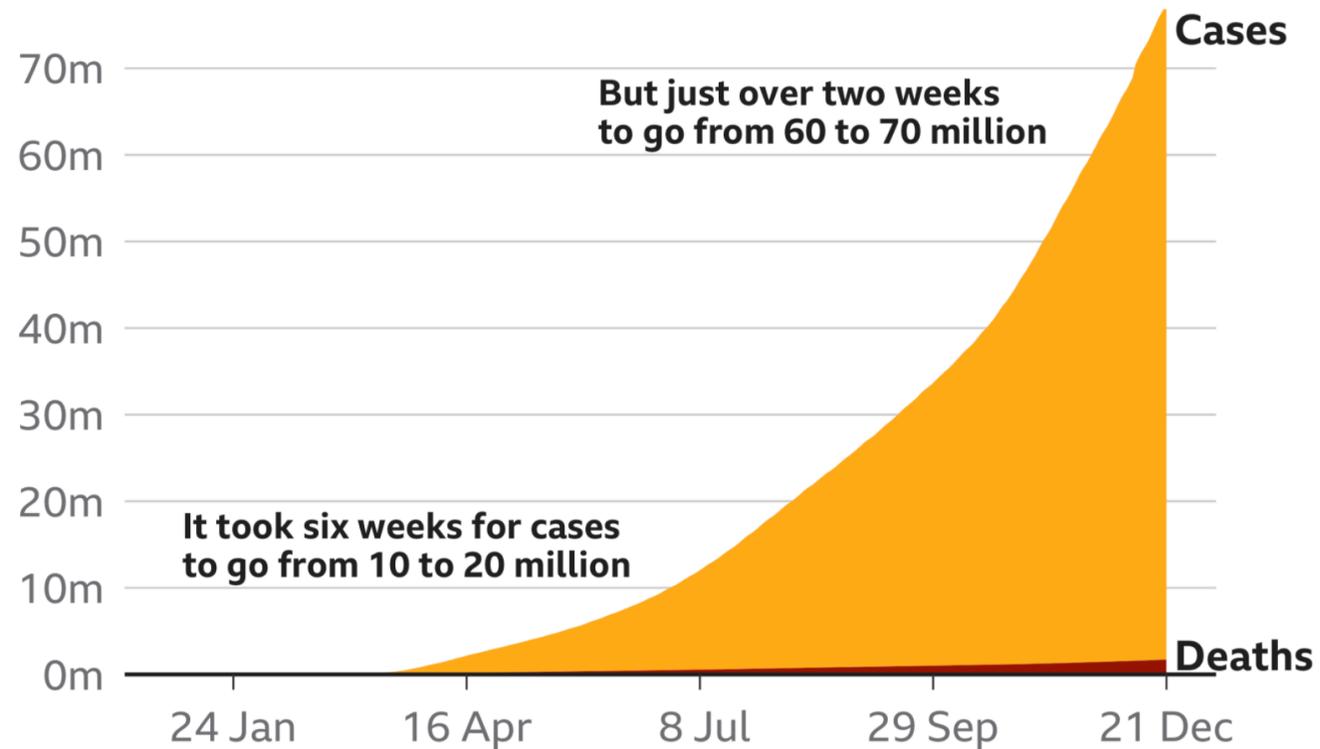
Ebola

- Quarantine used different ways
 - During Ebola outbreak in West Africa, boy shot after protesting for no food (curfew, border limitations, road blocks)
- Kaci Hickox
 - Quarantine at airport and in home (21 days)
 - Guidelines for New Jersey released the day after her release
 - Stigma
 - Protections of freedom?
 - Least restrictive?



Coronavirus

Global coronavirus cases pass 70 million



Source: Johns Hopkins University, data to 21 Dec

BBC

<https://www.bbc.com/news/world-51235105>

At the beginning of the Pandemic



All the people infected with the COVID-19 virus in the US are in isolation in hospitals or quarantined at US military bases



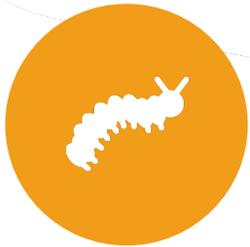
Japanese Prime Minister Shinzo Abe announced every school in Japan would close for at least a month after 890 cases of the coronavirus were confirmed.



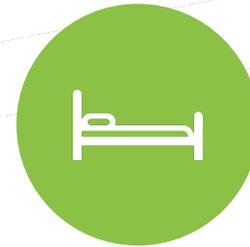
In China, all schools are closed until the coronavirus is no longer a public-health emergency. About 180 million children in China are learning from home, taking classes online, or watching primary-school classes broadcast on television.



Wuhan, the city of 11 million people where the coronavirus was first discovered, has been on lockdown since January 23. Police closed entry points into the city and have been patrolling the city's train stations. + 15 other communities – the largest quarantine in human history



Italy, 11 quarantined towns are surrounded around-the-clock by military police in an effort to try and stop the coronavirus from spreading.



Two resorts on lockdown in Europe — the Costa Adeje Palace hotel in Tenerife, Spain, which has more than 450 rooms and is on lockdown for two weeks, and a ski resort with 108 rooms in Innsbruck, Austria.

December 2020 the Pandemic:



The European Union, USA, Canada greenlit the Pfizer/BioNTech vaccine [ABC reports](#).



Pfizer's partner BioNTech has expressed "scientific confidence" that its COVID-19 vaccine will work against the UK variant. Still, experiments are being done to make sure... and results will take about 2 weeks, [AP reports](#).



A \$30, 20-minute at-home COVID-19 test: US regulators have greenlit the first over-the-counter COVID-19 test that can be done entirely at home; the tests will soon be available at drugstores. [AP](#)



Confidence in COVID-19 vaccines is growing, particularly among Black and Hispanic people, according to a new Kaiser Family Foundation [poll](#) that found 71% of Americans now say they would take a free, safe vaccine, up 8% in 3 months. [The Hill](#)
New Zealand has declared itself COVID-free after reporting no new cases for over 2 weeks—social distancing and public gathering rules have been lifted but the country's borders remain closed to foreigners. [BBC](#)

Rules of Quarantine

International Health Regulations

- free movement of people and goods will increase the risk of cross-border transmission
- quarantine is an impediment to free trade public health arguments can justify trade barriers
- Member States (WHO) agree to notify specific infectious diseases & abide by measures allowed by countries to protect themselves

United States

- Public Health Service Act (federal)
- Executive Order
- Individual States

Principles that should be followed by quarantine guidelines...



Harm principle



Proportionality



Reciprocity
upheld



Transparency

Harm Principle

Should be clear and measurable - harm to others will occur should a disease or exposure go unchecked.

Proportionality

The least restrictive means principle: public health authorities should use the least restrictive measures proportional to the goal of achieving disease control.

Reciprocity
upheld (mutual
benefit)

If society asks individuals to curtail their liberties for the good of others, society has a reciprocal obligation to assist them in the discharge of their obligations

Transparency principle

Public health authorities have an obligation to communicate clearly the justification for their actions and allow for a process of appeal

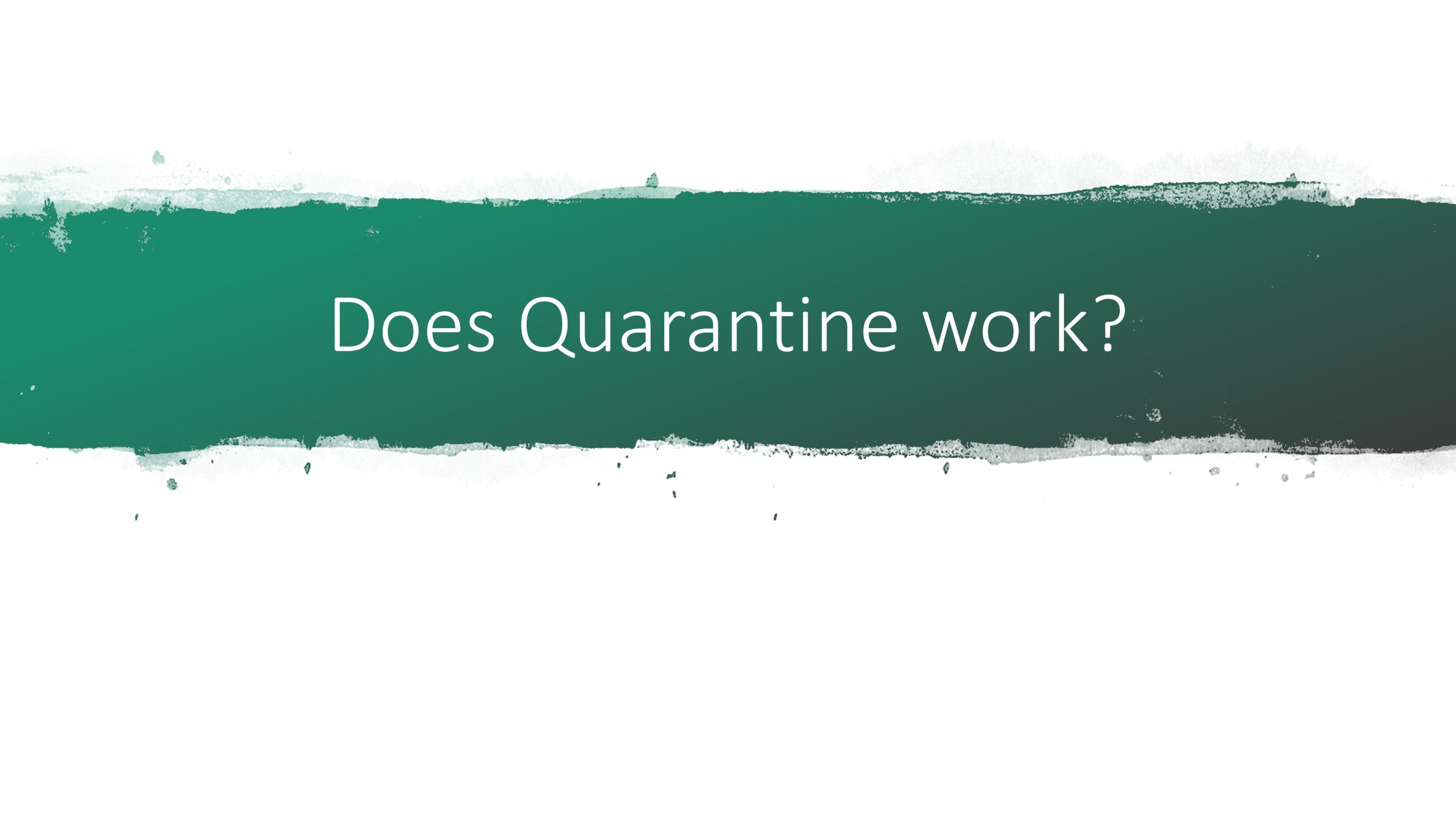
Who is in Charge? What can they do?

CDC

- Authorized to detain, medically examine travelers
- Can issue federal isolation or quarantine order
- Guidelines
- Soft Power

Federal and State

- Federal
 - Isolation and quarantine authority
 - U.S. ports of entry
- State, local, tribal law
 - Power functions within borders to enforce isolation/quarantine
 - Criminal misdemeanor
- Hard Power

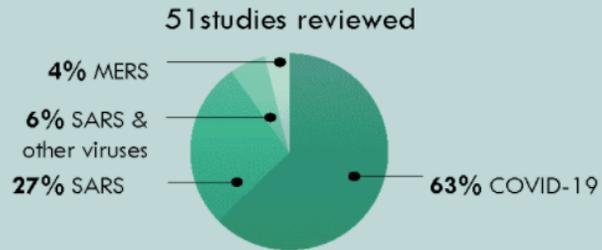


Does Quarantine work?

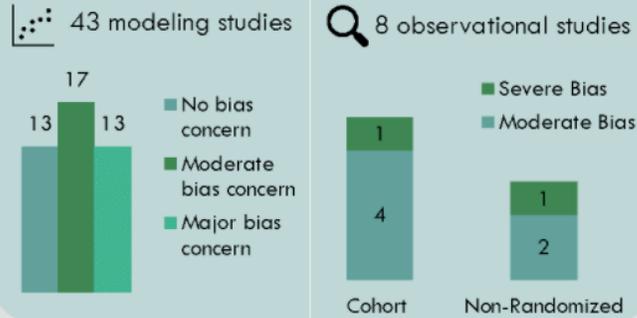
A Cochrane Rapid Review: Quarantine Efficacy for COVID-19

Does quarantining alone or with other public health measures prevent transmission or death from those who were in contact with a confirmed or suspected case of COVID-19?

Methodology



Assessing the risk of bias of each study



Results

Quarantine alone reduces:

- New infections **44-96%**
- Deaths **31-76%**
- Viral reproduction **37-88%**

Greater reductions in infection if combined with:

- Social distancing
- Travel restriction
- School closures

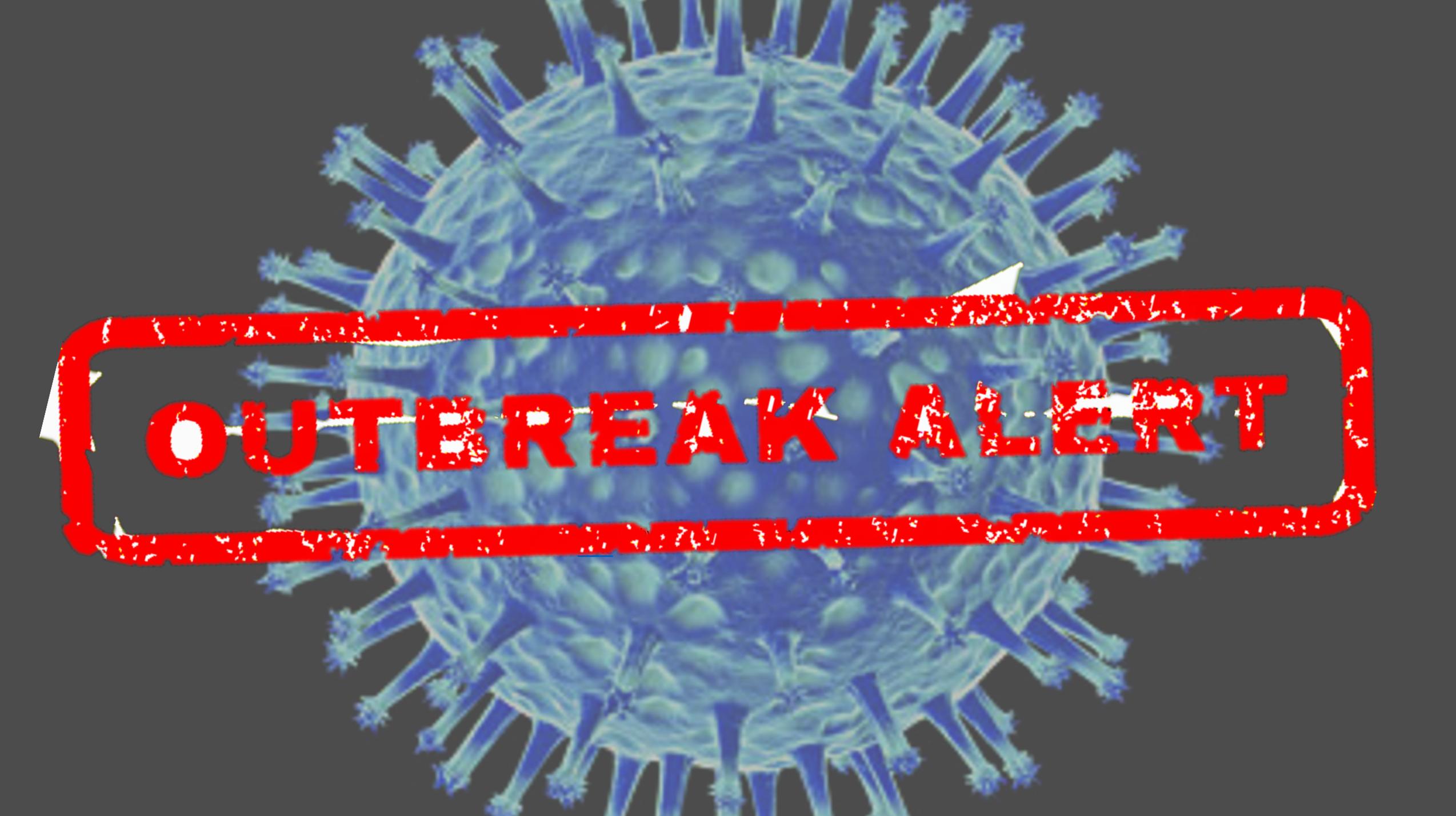
Earlier quarantining could save 232 – 279 mil CAD. Quarantining always lowered costs during outbreaks.

YES!
Quarantine Works

Quarantining reduced incidence and mortality (low or very low certainty of evidence) in people exposed to COVID-19. The magnitude of the effect is unclear given most studies were mathematical models that made different assumptions.

Nussbaumer-Streit *et al.*, 2020
[https:// doi.org/10.1002/14651858.CD013574](https://doi.org/10.1002/14651858.CD013574)

Creators: Sahil Angelo, MD (@angelo_sahil) & Wint Thu Saung, MD (@wintessential)
 Editors: Angel Xiao (@an_xiao) & Caroline Coleman, MD (@cg_coleman)
 Reviewer: Sarah Hodgkinson, PhD.



OUTBREAK ALERT

Character 1:

Environment:

- DGHI graduate student
- Currently living in the USA
- Currently not sick with coronavirus

- Currently sitting in Trent 124 (pumped about this activity)
- Free as a bird to leave as you please

What purpose does quarantine serve to you?



Must be from
CHARACTER 1's
perspective



Both Positives
and Negatives



Write thoughts down
on the sticky notes –
1 thought per note (2
mins)



Discuss common
themes within your
group (5 min)

Character 2:

Environment:

- Human being
- Travelled home
- Quarantined

- Quarantined in 1 room
- You can no longer leave (we are serious please pretend you are quarantined for this brief part of the exercise.)

What purpose does quarantine serve to you?



Must be from
CHARACTER 2's
perspective



Positives and
negatives



Write thoughts down
on the sticky notes –
1 thought per note (2
mins)



Discuss common
themes within your
group (5 min)

Compare your answers as character 1 and 2



Common positives and negatives from both characters?

A circular frame containing a photograph of Gene Wilder as Gene Wilder. He is wearing a purple suit jacket, a white shirt, a tan bow tie, and a purple patterned vest. He is also wearing a brown top hat. He has his right hand resting on his chin and is looking slightly to the right with a thoughtful expression. The background is a blurred indoor setting.

SO... WHAT TO DO
NOW?

Quarantine when asked to!