

# Making Sense of COVID-19

## (Some observations)

Dr. William Ghali  
University of Calgary

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# My FAVOURITE article on COVID...

- Available at: <https://www.theglobeandmail.com/opinion/article-this-is-the-most-important-science-lesson-of-our-lives/>

# Jacob Berkowitz – in the Globe and Mail

*“Because, if your kids come out of this pandemic knowing in their bones that science is as much about what we currently don’t know, as what we do, it will be the most important science lesson of their lives.”*



# COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins ...



Global Cases

## 40,344,310

Cases by Country/Region/Sovereignty

8,212,767 US

7,550,273 India

5,250,727 Brazil

1,406,667 Russia

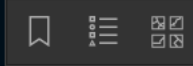
1,002,662 Argentina

974,449 Spain

965,883 Colombia

952,600 France

868,675 Peru



Esri, FAO, NOAA

- Cumulative Cases
- Active Cases
- Incidence Rate
- Case-Fatality Ratio
- Testing Rate

Global Deaths

## 1,117,539

220,110 deaths US

154,176 deaths Brazil

114,610 deaths India

86,338 deaths Mexico

43,816 deaths United Kingdom

Global Dea...

US State Level

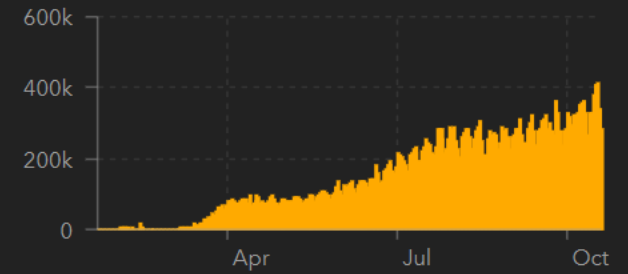
### Deaths, Recovered

33,366 deaths, **78,442** recovered  
New York US

17,481 deaths, **729,762** recovered  
Texas US

16,982 deaths, **recovered**  
California US

US Deaths,...



Daily Cases 4

## 189

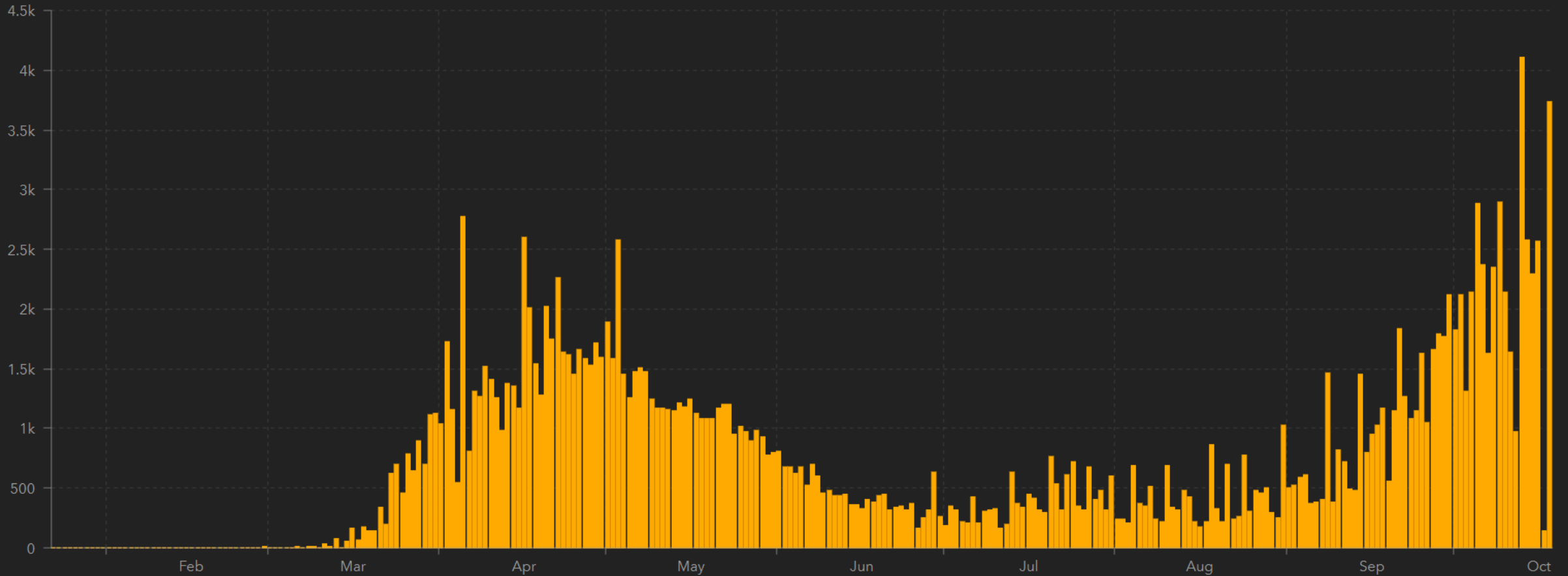
countries/regions

Lancet Inf Dis Article: [Here](#). Mobile Version: [Here](#). Data sources: [Full list](#). Downloadable database: [GitHub](#), [Feature Layer](#).  
Lead by [JHU CSSE](#). Technical Support: [Esri Living Atlas team](#) and [JHU APL](#). Financial

Last Updated at (M/D/YYYY)  
**10/19/2020, 9:24 PM**



# COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins ...



Daily Cases

Daily Deaths

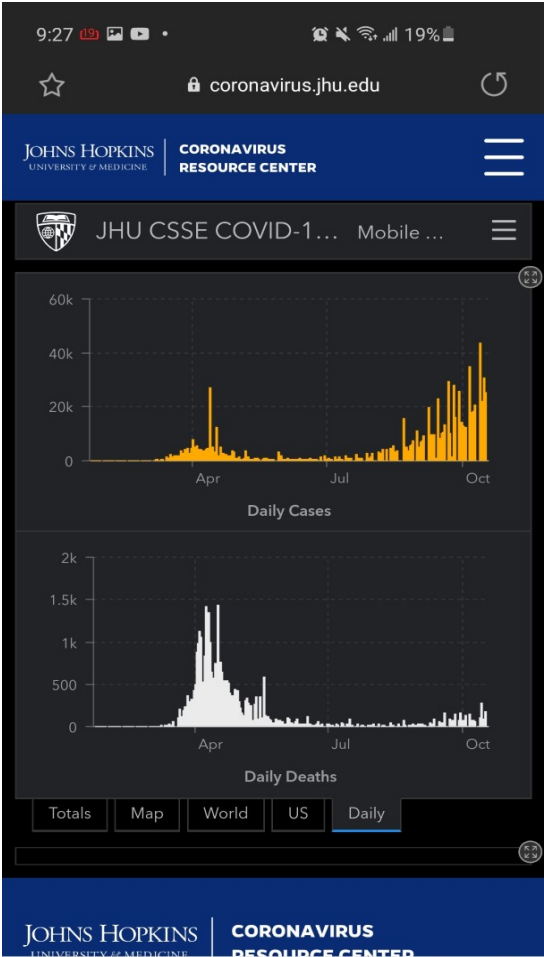
Cumulative Cases

Cumulative Deaths

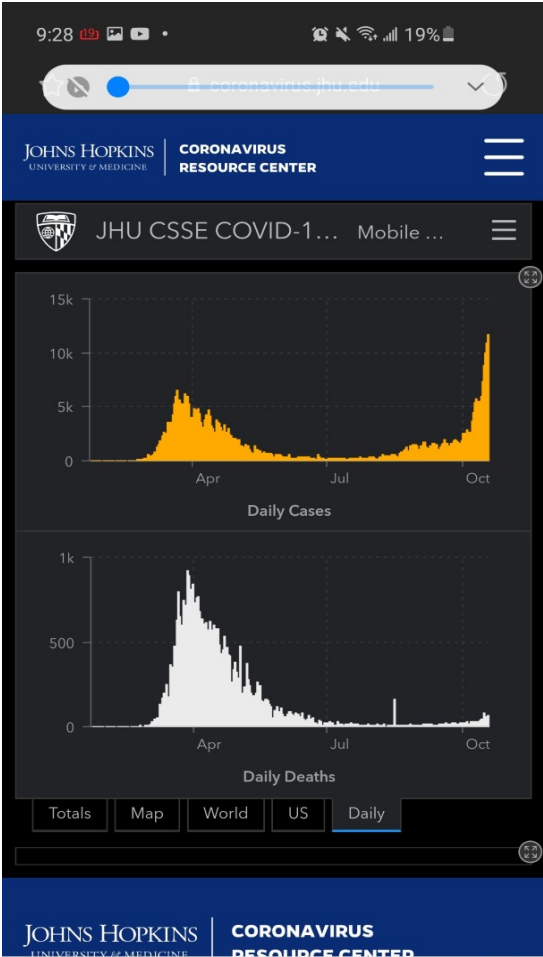
Log Cases

# Second Waves Around the World...

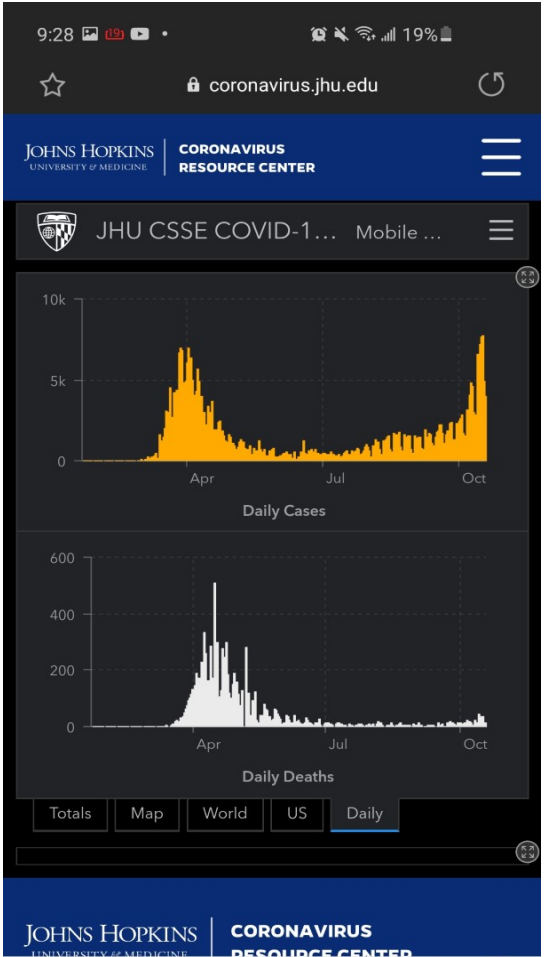
## France



## Italy

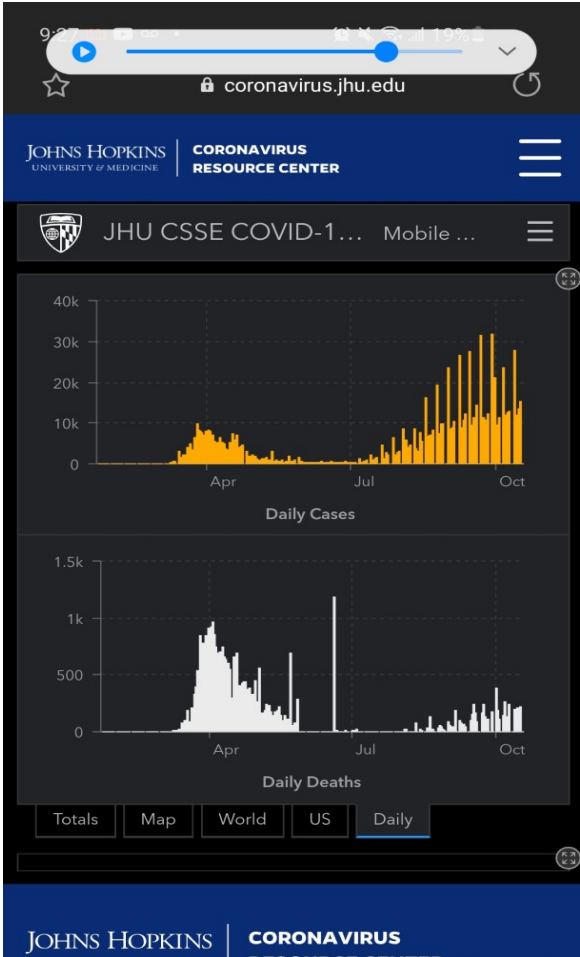


## Germany

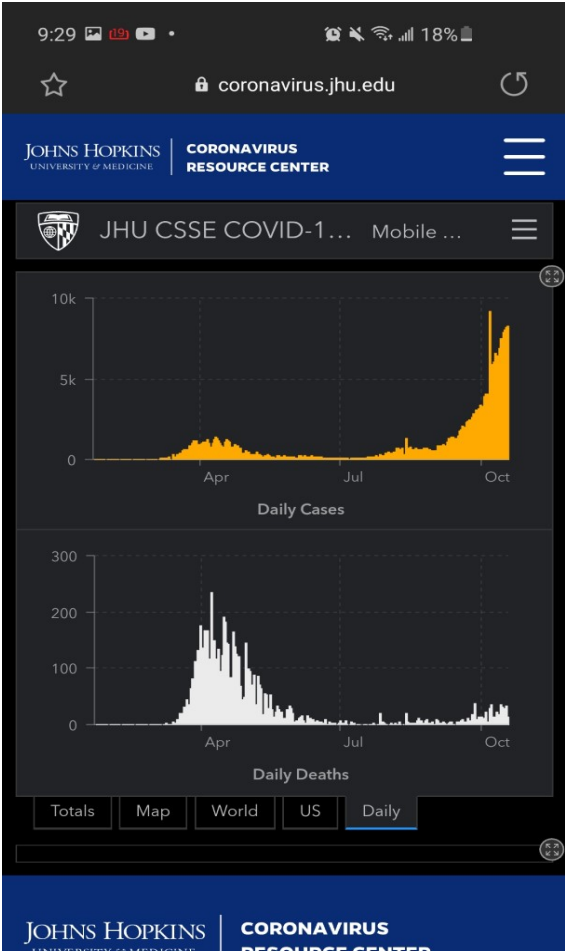


# Second Waves Around the World...

## Spain

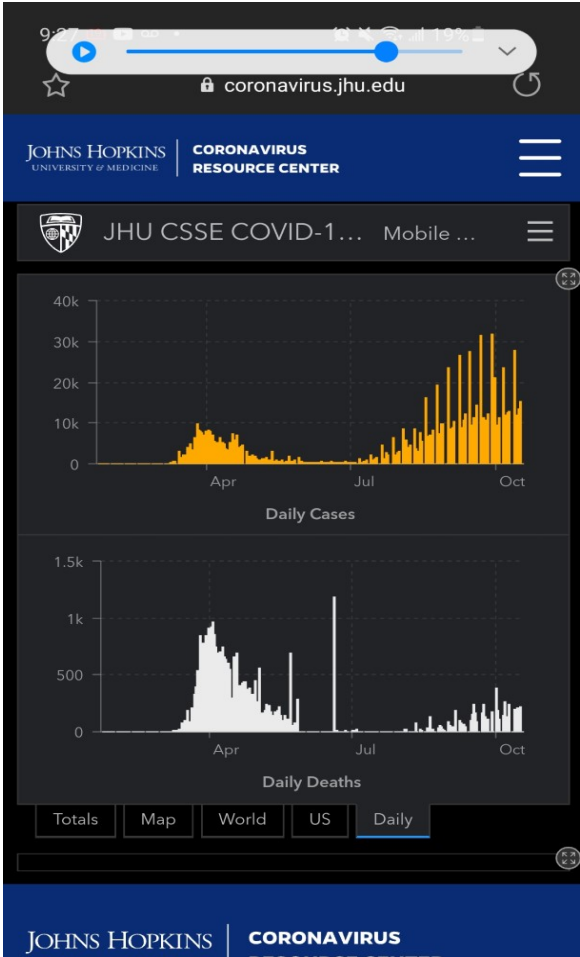


## Netherlands

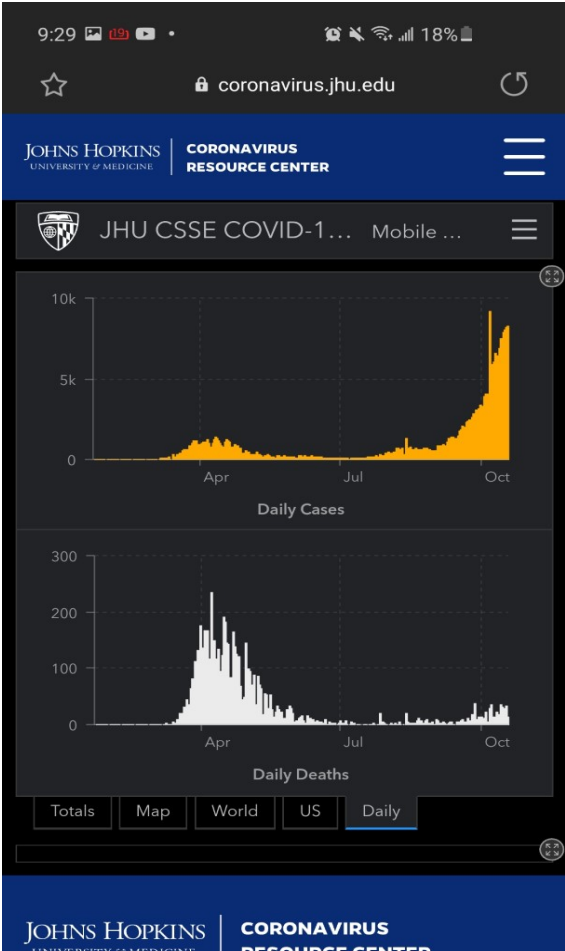


# Second Waves Around the World...

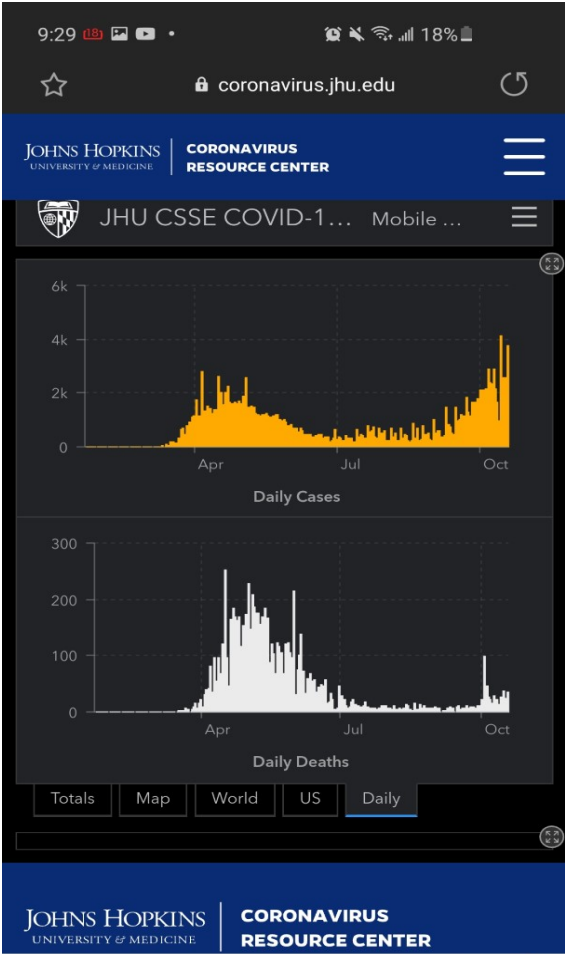
## Spain



## Netherlands



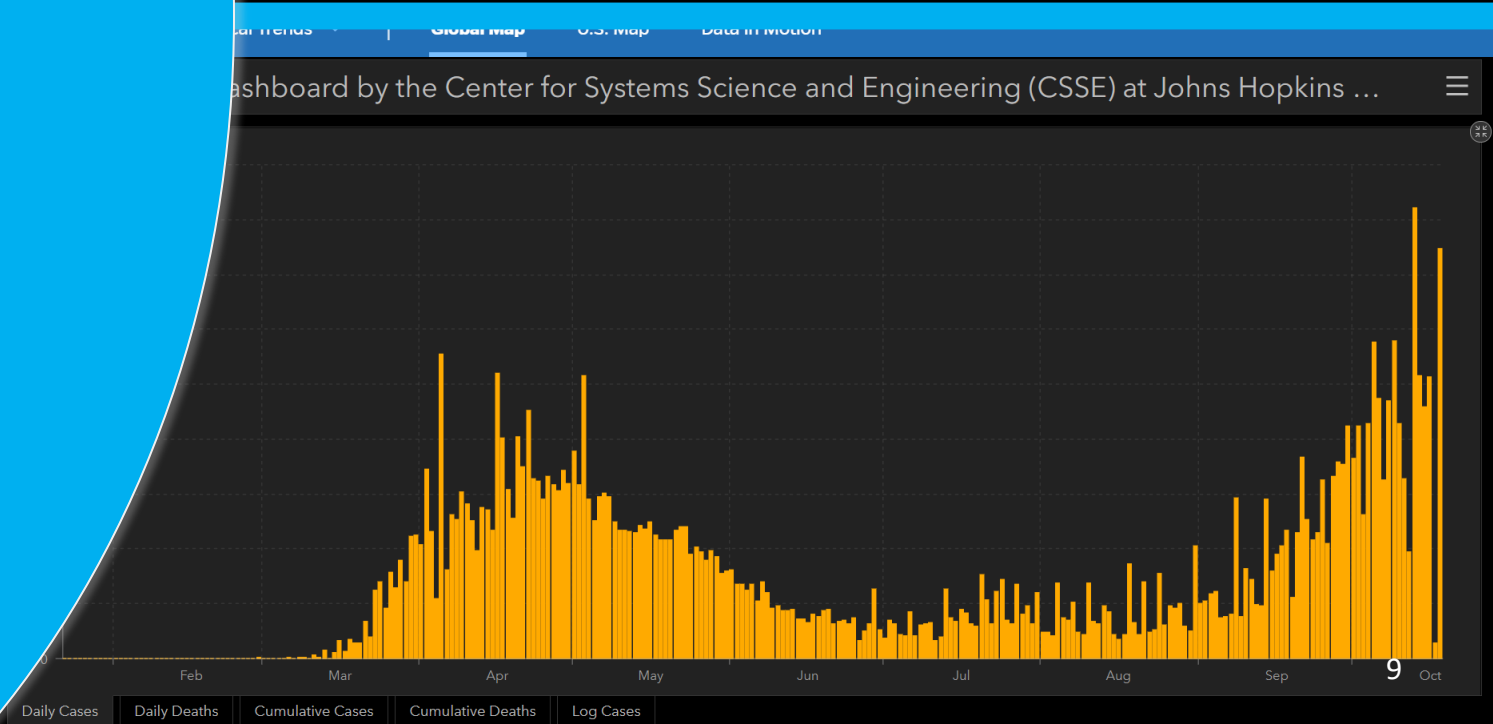
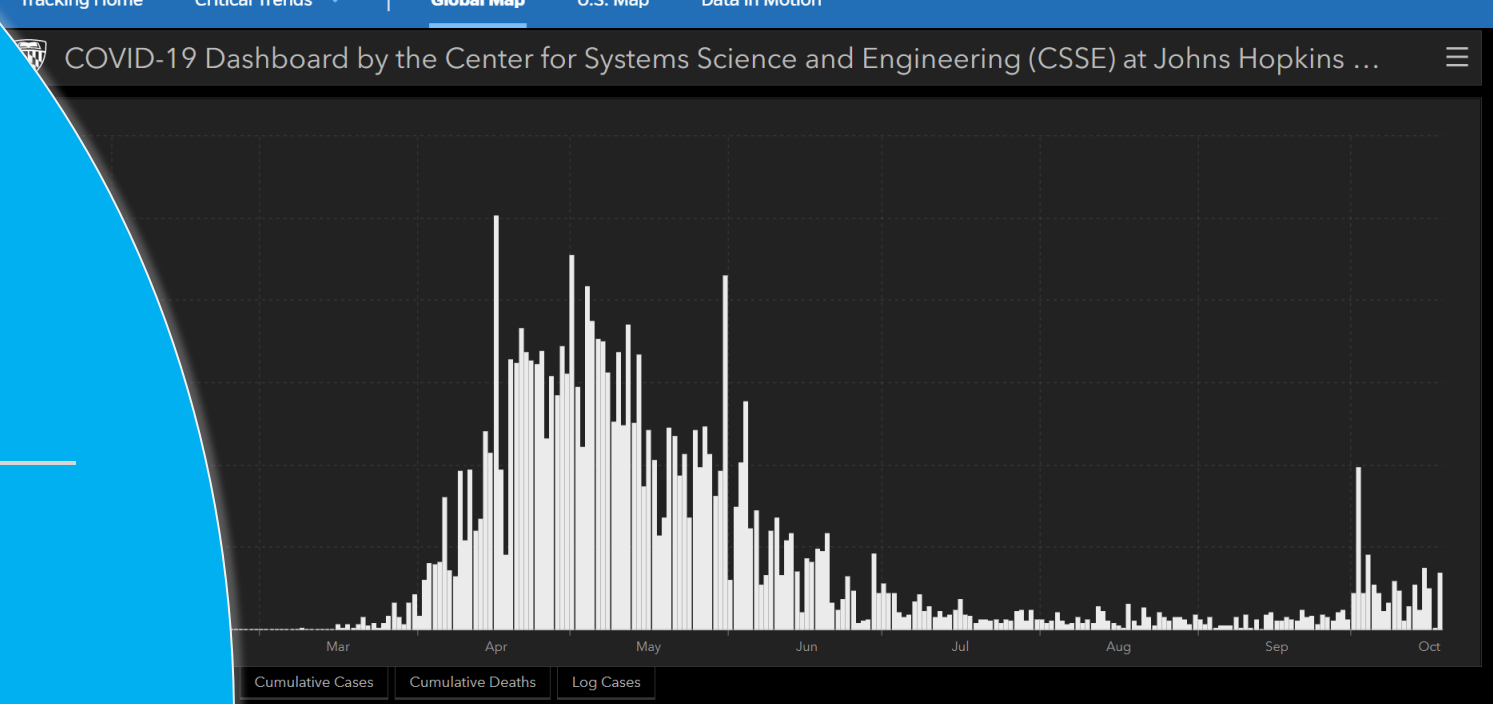
## Canada



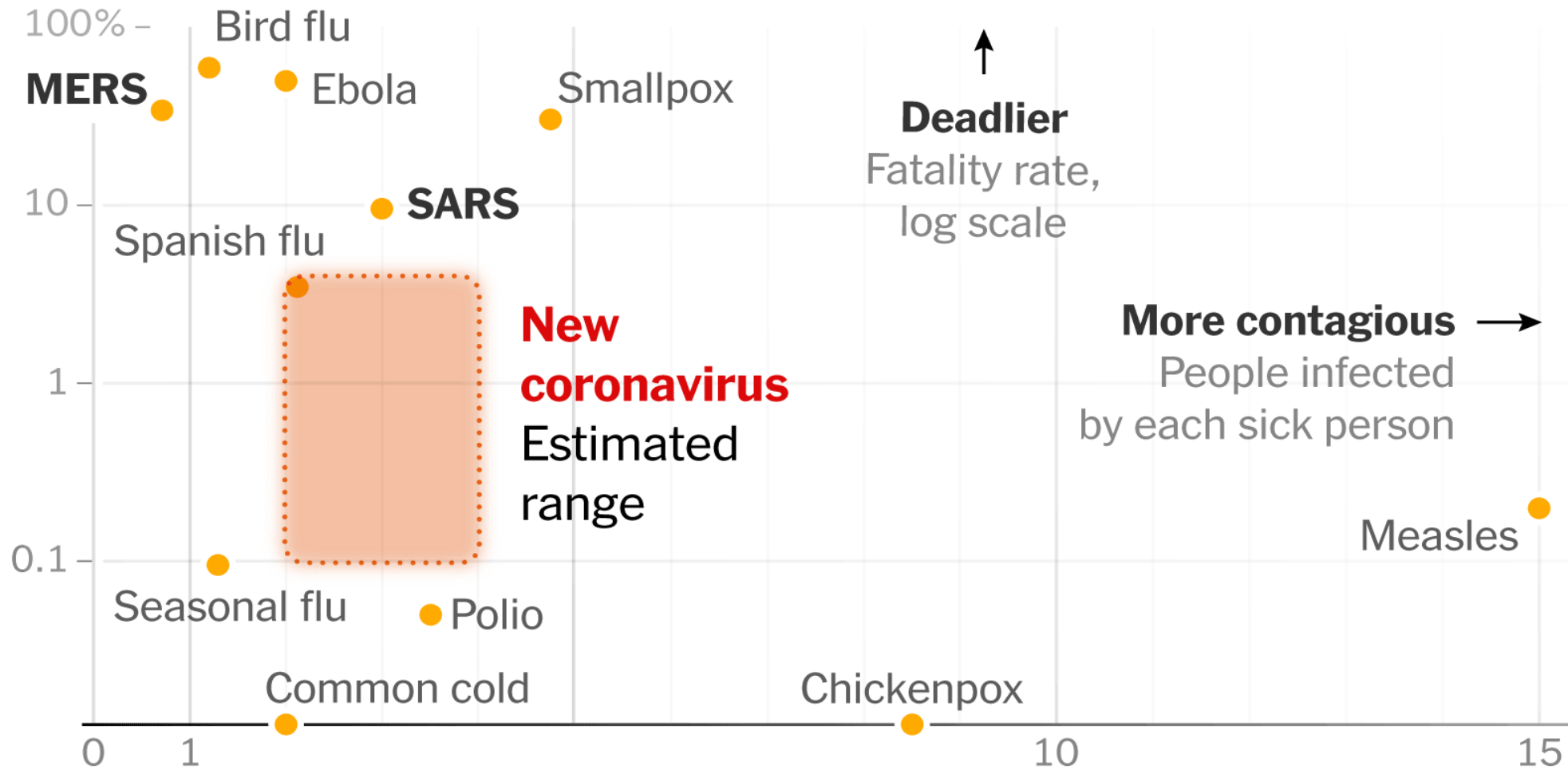


# A changing picture

- Demographics?
- Virulence of the virus?
- Inoculum effects?
- More diagnostic testing?
- Better treatment?
- Other?

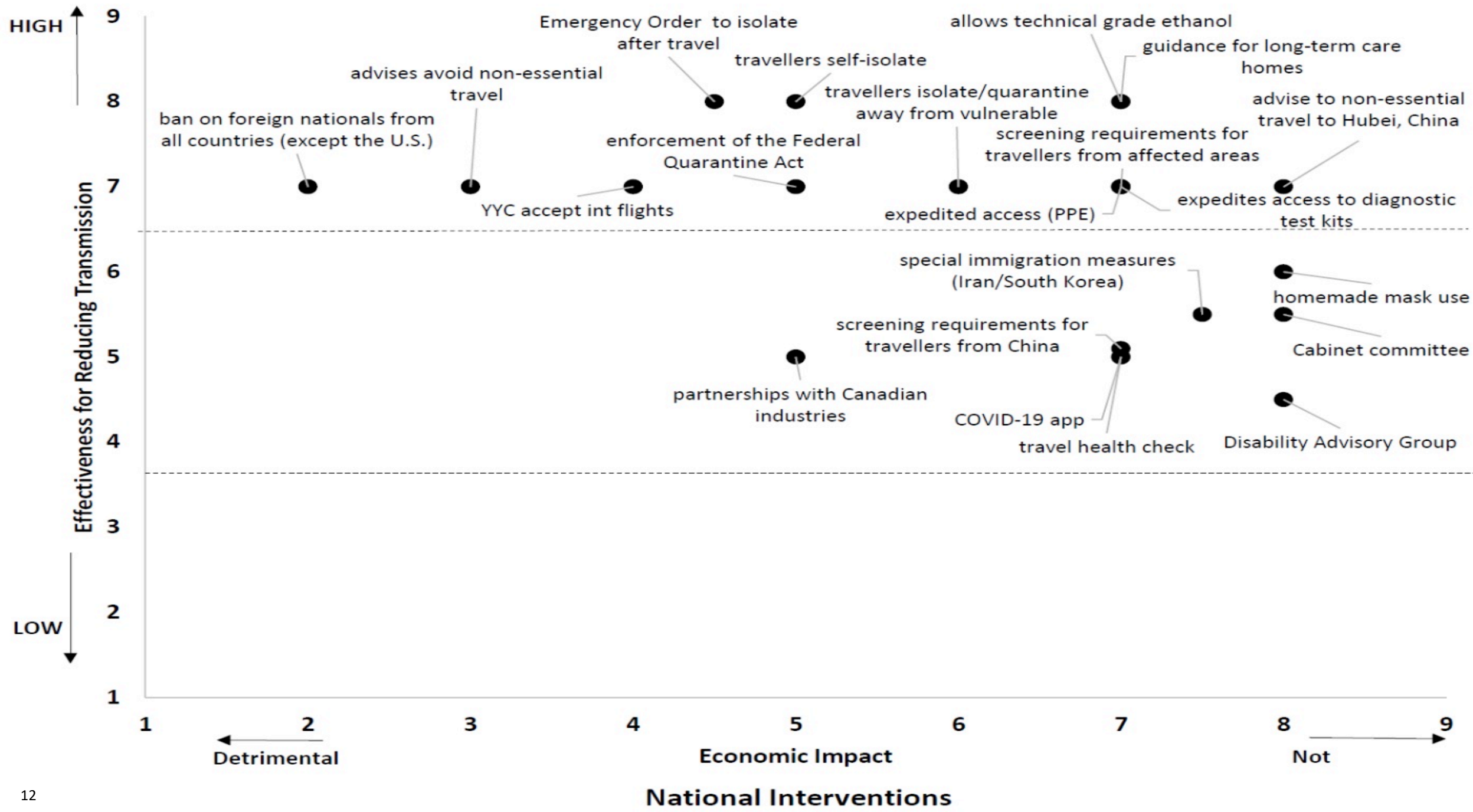


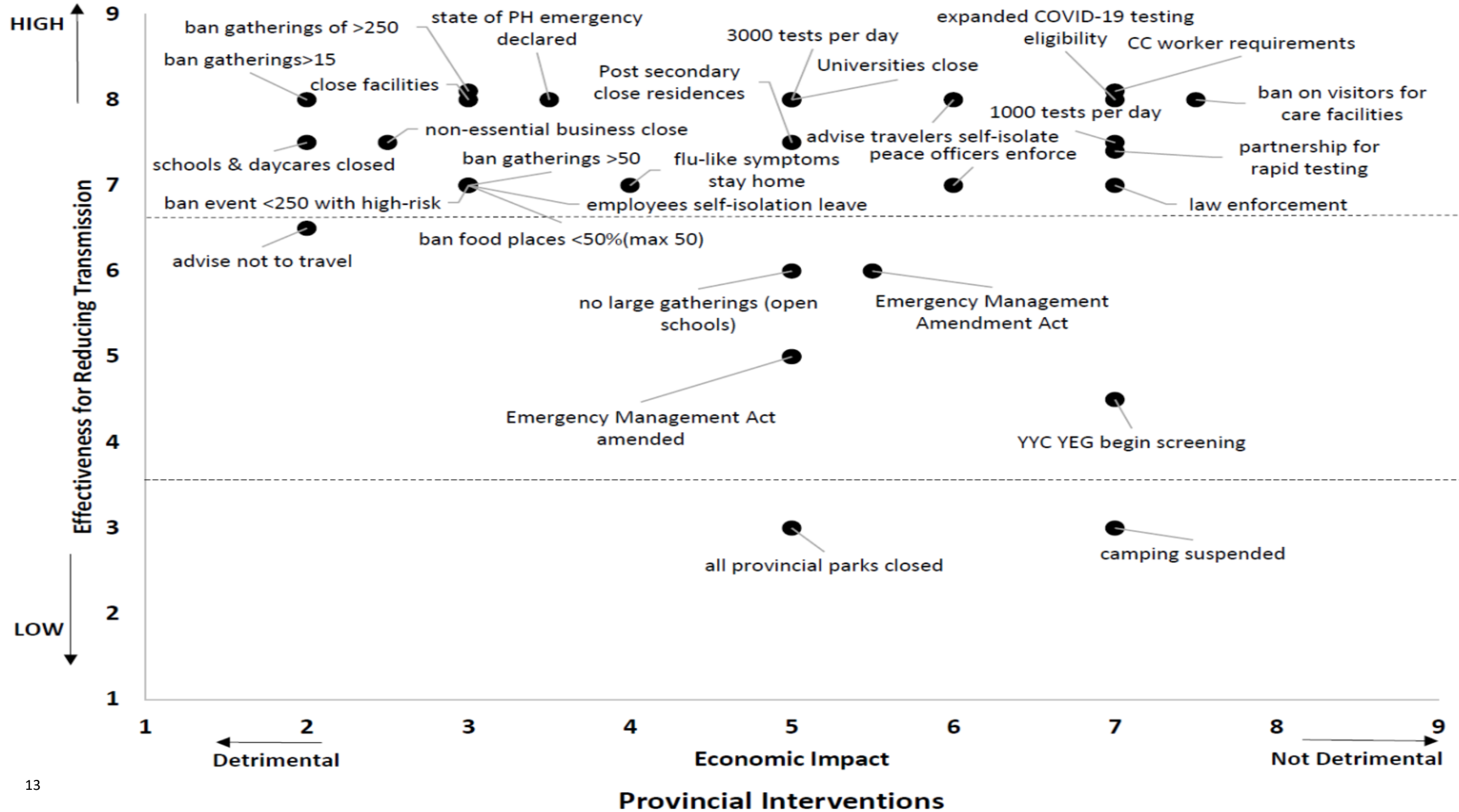
# How deadly...and how contagious?

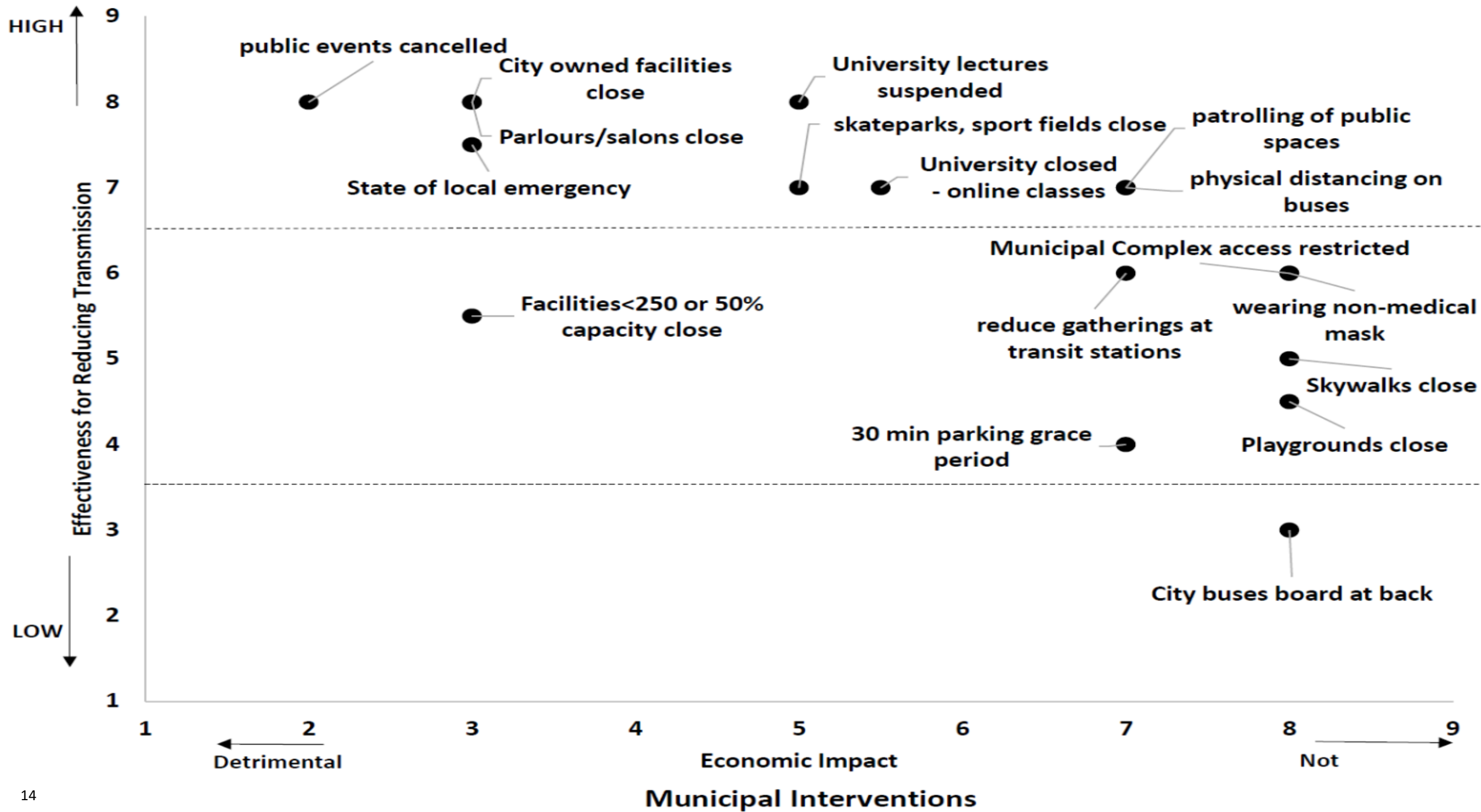




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# CORONAVIRUS

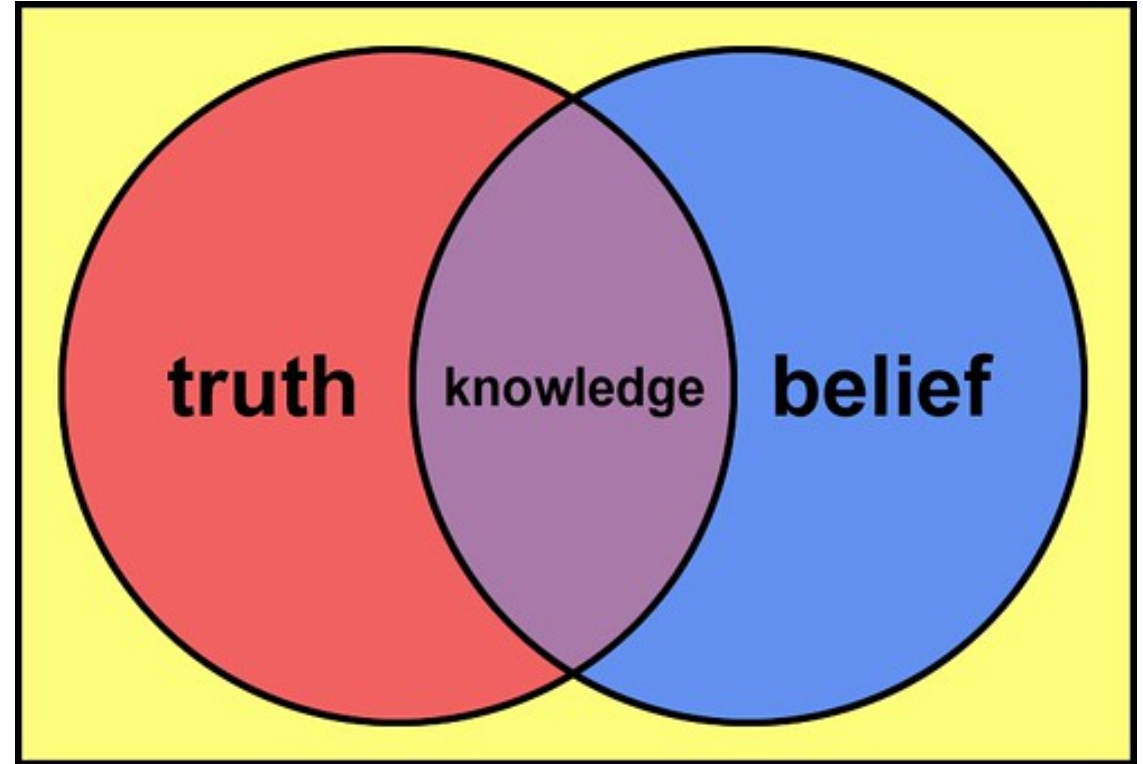
## COVID-19: The Science Lesson of 2020

- A new virus and illness
- No one knew anything in December
- Now -- 57,600 PubMed results
- Swirling public health messages
- Swirling information in social media
- +++ public debate
- +++ controversies

# Epistemology

**Epistemology**, the philosophical study of the nature, origin, and limits of human knowledge.

The term is derived from the Greek *epistēmē* (“knowledge”) and *logos* (“reason”), and accordingly the field is sometimes referred to as the theory of knowledge.



<https://search.creativecommons.org/photos/be6a1568-2e31-4ea8-93f6-bdd86becd32c>



**Thank you.**

**[wghali@ucalgary.ca](mailto:wghali@ucalgary.ca)**

**(for any follow-up inquiries)**

William Ghali  
Vice President (Research)  
University of Calgary

