

# Making Sense of COVID-19 – Part 2

## (Some observations)

Dr. William Ghali  
University of Calgary

December 1, 2020



# My favorite article on COVID...

## OPINION

# This is the most important science lesson of our lives

JACOB BERKOWITZ

CONTRIBUTED TO THE GLOBE AND MAIL

PUBLISHED JULY 26, 2020

102 COMMENTS

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*Jacob Berkowitz is an author and playwright in Almonte, Ont. He is the writer-in-virtual-residence at the University of Ottawa's Institute for Science, Society and Policy.*

As parents worry about the school lessons kids have missed because of the pandemic, there's one dinner conversation about COVID-19 that can make-up for any lost science lessons. Talk about all the uncertainty and doubt, from changing rules about wearing masks to efforts to create a vaccine. Explain that what we're living through is science in action.

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.

If this feels counterintuitive, it's because most of us leave high school, and any study of science, with a fundamentally skewed vision of science's nature. We tend to think of science as a noun, as facts in textbooks, but not also as a verb, as the

## TRENDING

1 Ottawa set to declare plastics as toxic in blow to Alberta 🔑

2 Canada begins accepting Hong Kong pro-democracy activists as refugees

3 Toronto anti-masker, wife face jail time for violating Quarantine Act

4 ANALYSIS  
Tuesday's TSX breakouts: A stock with a unanimous buy recommendation and an anticipated return of 43% 🔑

5 Airbus unveils new luxury jet to rival Bombardier 🔑



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# 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

63,229,355

Cases by  
Country/Region/Sovereignty

13,540,684 US

9,462,809 India

6,335,878 Brazil

2,275,936 Russia

2,275,016 France

1,648,187 Spain

1,633,733 United Kingdom

1,601,554 Italy

1,424,533 Argentina



Admin0



Last Updated at (M/D/YYYY)

11/30/2020, 9:26 PM

191

countries/regions



Cumulative Cases

Active Cases

Incidence Rate

Case-Fatality Ratio

Testing Rate

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

Global Deaths

1,467,673

268,023 deaths  
US173,120 deaths  
Brazil137,621 deaths  
India105,655 deaths  
Mexico58,545 deaths  
United Kingdom

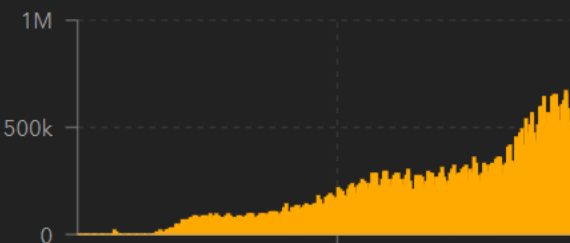
◀ Global Dea... ▶

US State Level

Deaths, Recovered

34,605  
deaths, 85,556  
recovered  
New York US21,896  
deaths, 962,639  
recovered  
Texas US19,173 deaths,  
recovered  
California US

◀ US Deaths,... ▶

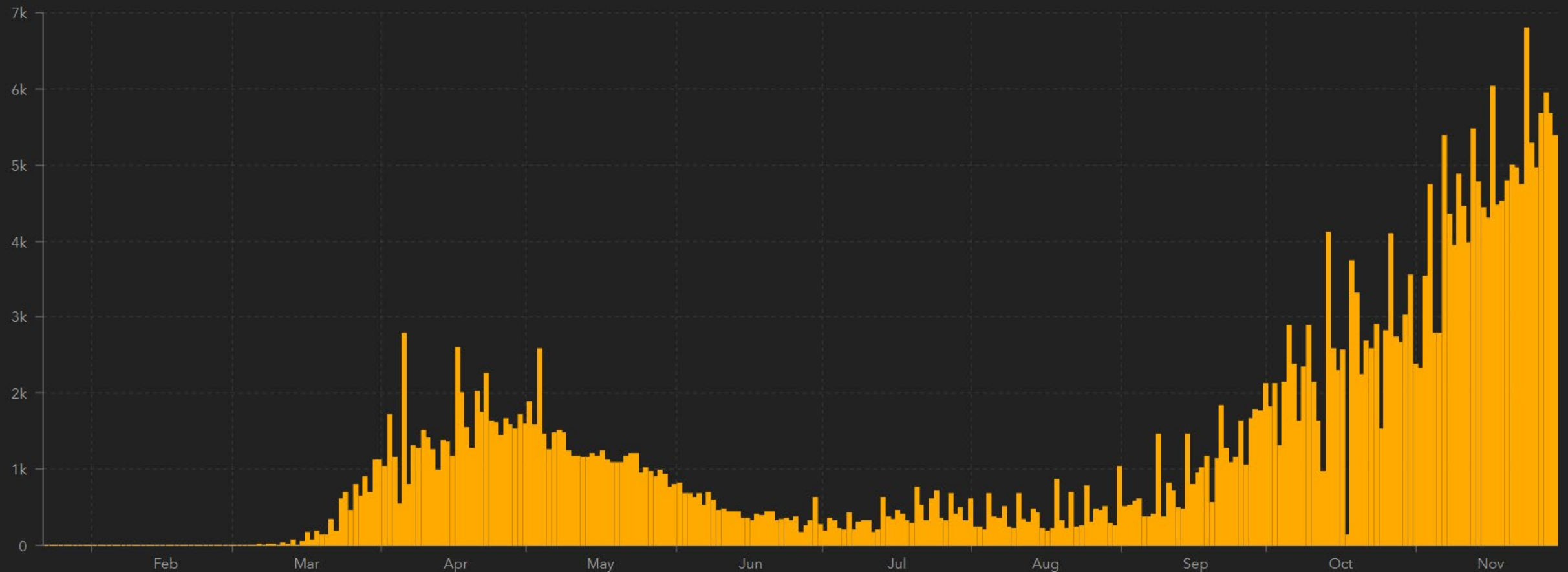


Daily Cases





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



Daily Cases

Daily Deaths

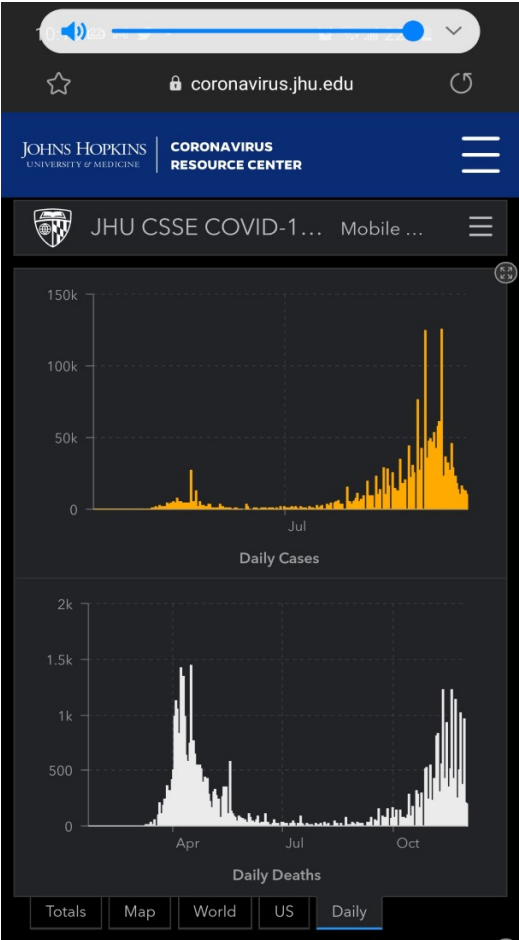
Cumulative Cases

Cumulative Deaths

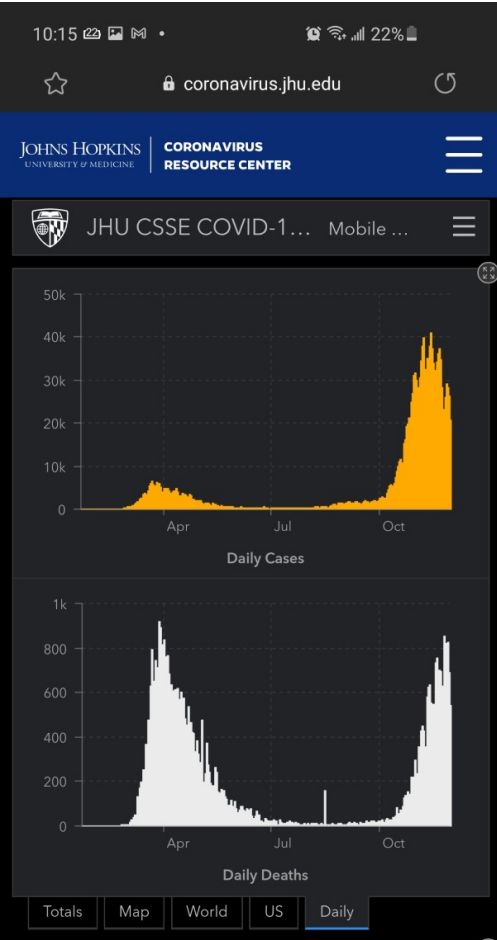
Log Cases

# Second Waves Around the World...

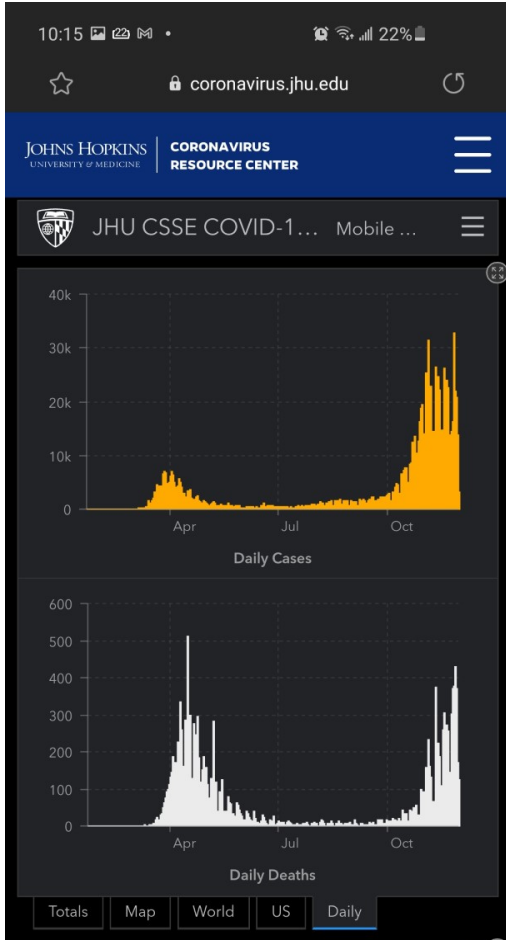
## France



## Italy



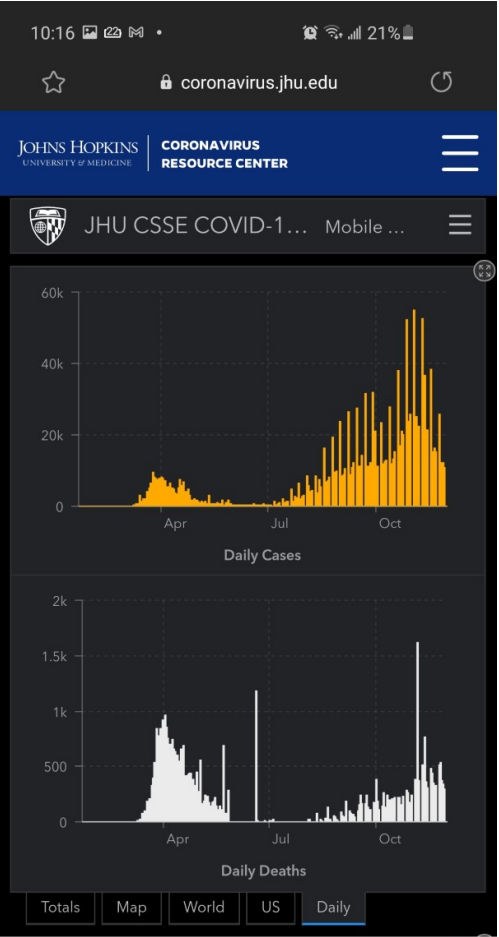
## Germany



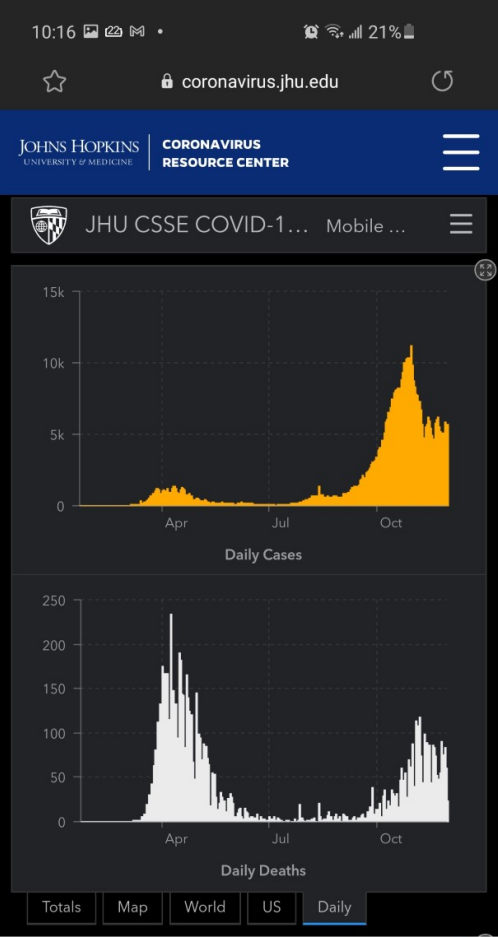


# Second Waves Around the World...

## Spain

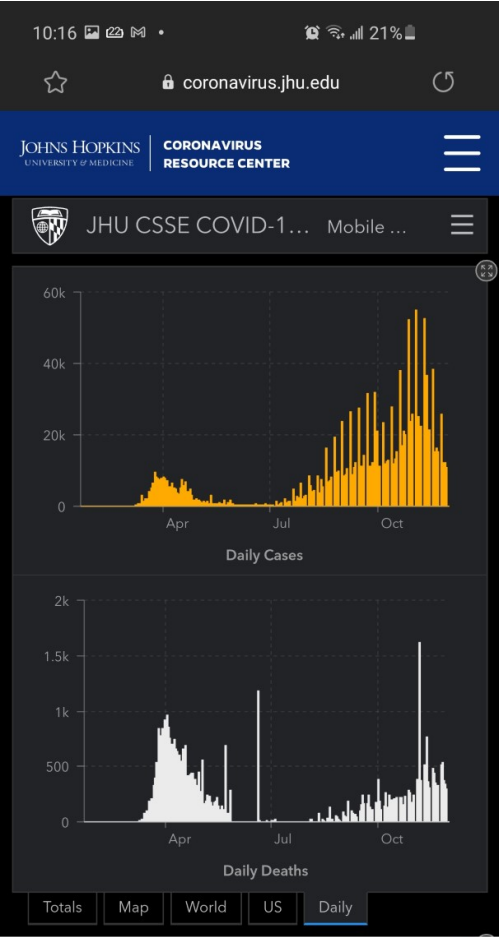


## Netherlands

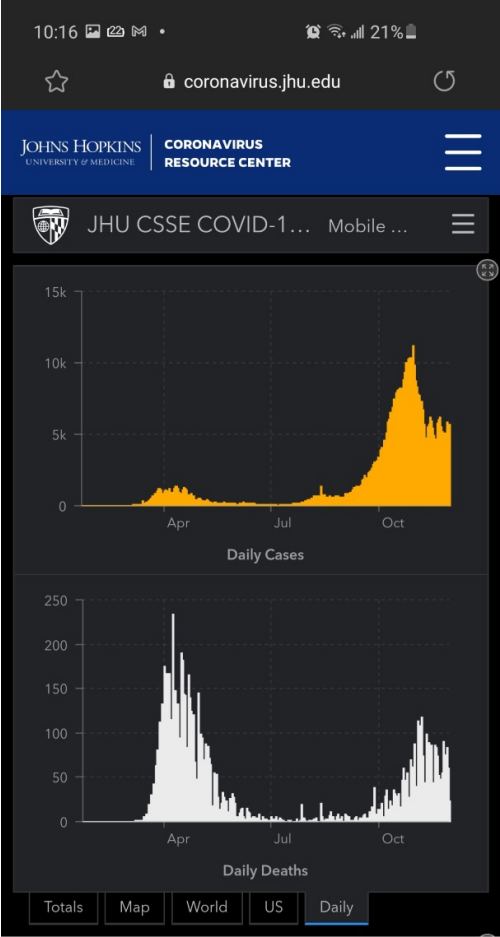


# Second Waves Around the World...

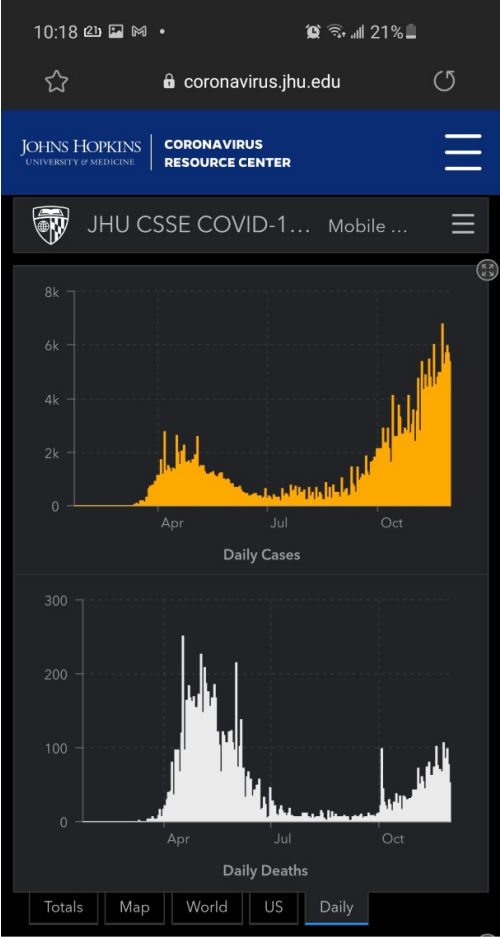
## Spain



## Netherlands

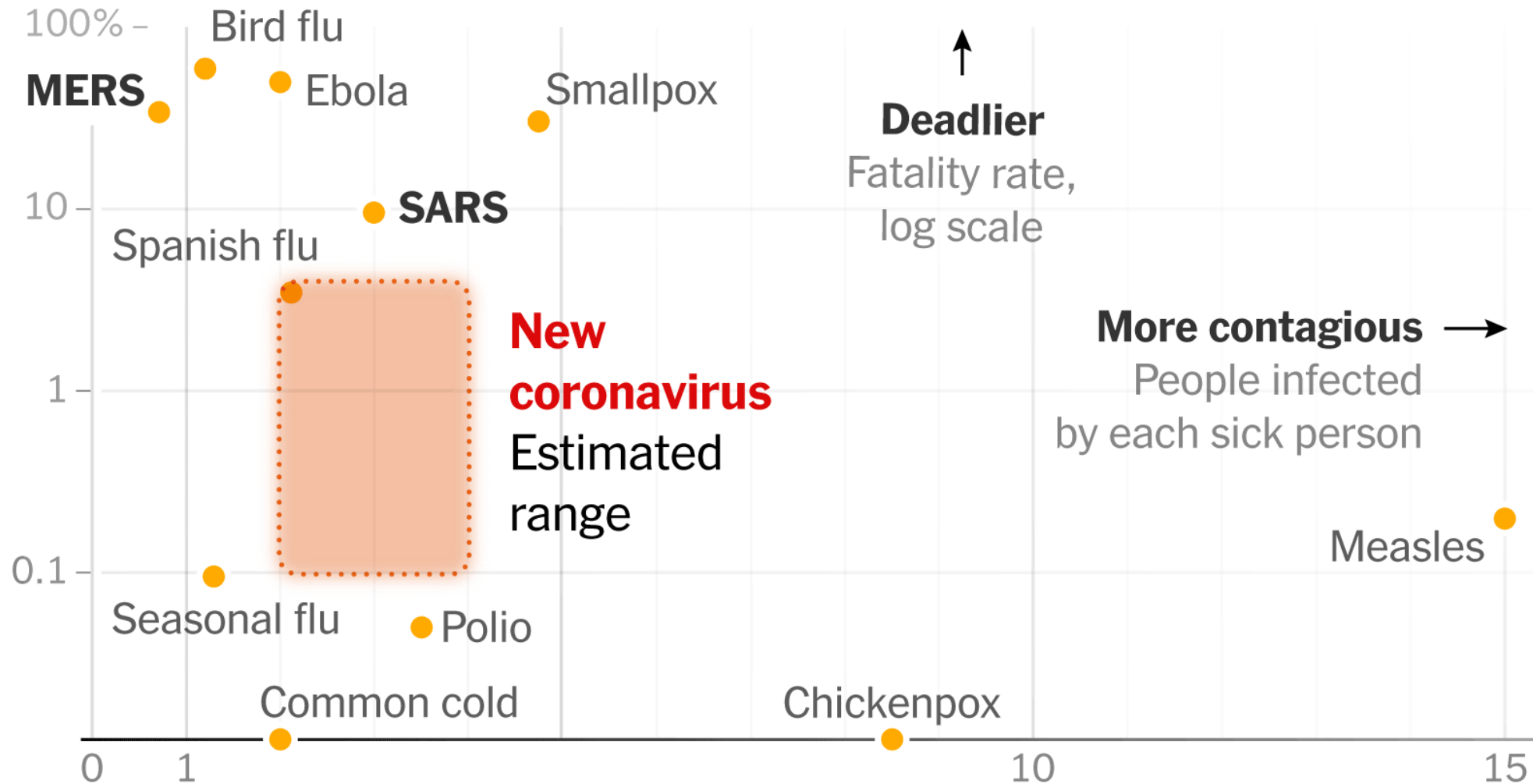


## Canada





# How deadly...and how contagious?



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# Five rules for evidence communication

Avoid unwarranted certainty, neat narratives and partisan presentation; strive to inform, not persuade.

Michael Blastland, [Alexandra L. J. Freeman](#) , Sander van der Linden, Theresa M. Marteau & [David Spiegelhalter](#)



### QUICK TIPS FOR SHARING EVIDENCE

The aim is to ‘inform but not persuade’, and – as the philosopher of trust Onora O’Neill says – “to be accessible, comprehensible, usable and assessable”.

- Address all the questions and concerns of the target audience.
- Anticipate misunderstandings; pre-emptively debunk or explain them.
- Don’t cherry-pick findings.
- Present potential benefits and possible harms in the same way so that they can be compared fairly.
- Avoid the biases inherent in any presentation format (for example, use both ‘positive’ and ‘negative’ framing together).
- Use numbers alone, or both words and numbers.
- Demonstrate ‘unapologetic uncertainty’: be open about a range of possible outcomes.
- When you don’t know, say so; say what you are going to do to find out, and by when.
- Highlight the quality and relevance of the underlying evidence (for example, describe the data set).
- Use a carefully designed layout in a clear order, and include sources.

# Thank you.

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(for any follow-up inquiries)

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