

Learning and adapting through COVID-19

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March 19, 2020

Slides are accurate as
of March 19, 2020



**Unceded territories of the Coast Salish peoples
Indigenous scholars and leaders in health protection**

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Presentation overview



Pandemics and epidemics



Social determinants of health and pandemics



Community preparedness and protection



Q & A



Helpful resources

Key messages

- ▶ Language matters
- ▶ Learn from community
- ▶ Be prepared
- ▶ Promote a calm and caution



A few key terms to describe disease events

Sporadic

- ▶ A disease or infectious agent that occurs *infrequently* and *irregularly*.
- ▶ May lead to a few cases.



Sporadic example: Polio in Tajikistan, 2010

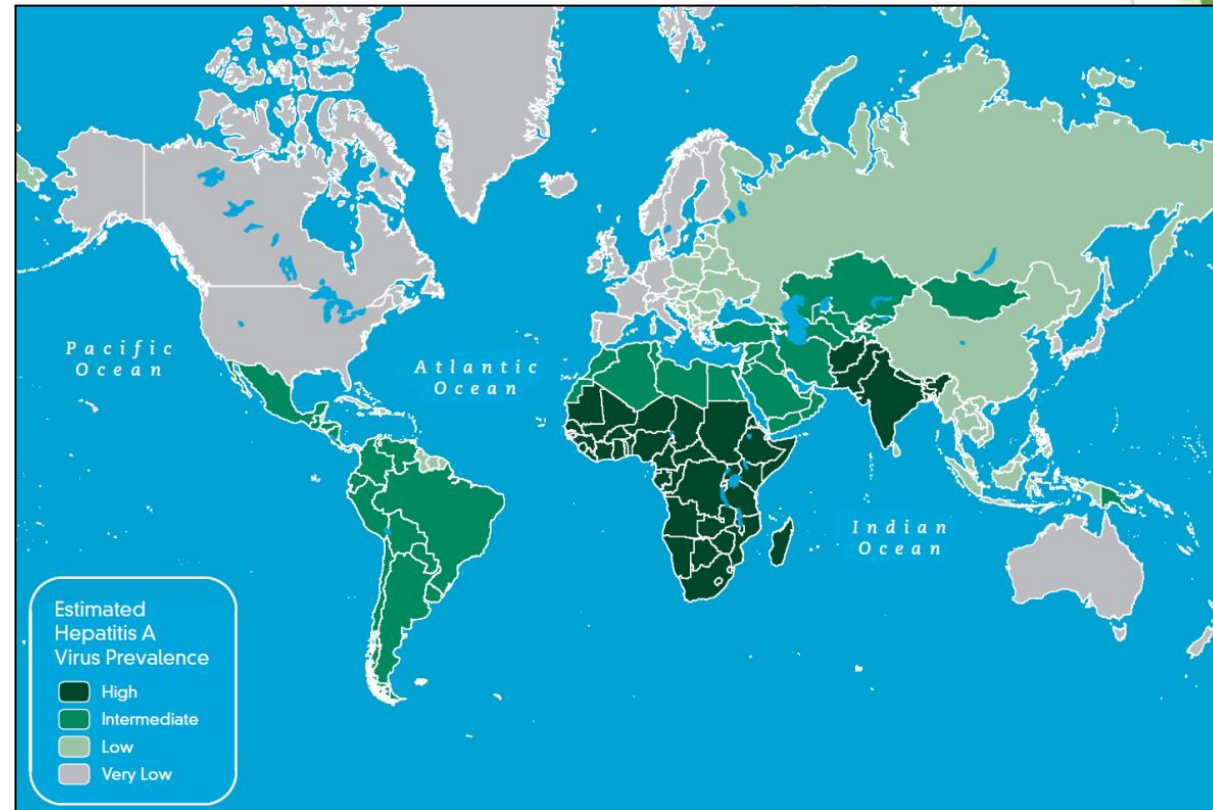
Centers for Disease Control and Prevention,
<https://www.cdc.gov/csels/dsepd/ss1978/lesson1/section11.html>

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A few key terms to describe disease events

Endemic

- ▶ *Constant* presence and/or usual prevalence of a disease or infectious agent in a population within a geographic area
- ▶ *Expected* frequency of disease.



Endemic example: Hepatitis A
in Northern India

A few key terms to describe disease events

Epidemic

- ▶ An increase in the number of cases of a disease above what is expected in the population.
- ▶ Increase in new cases happens relatively quickly.

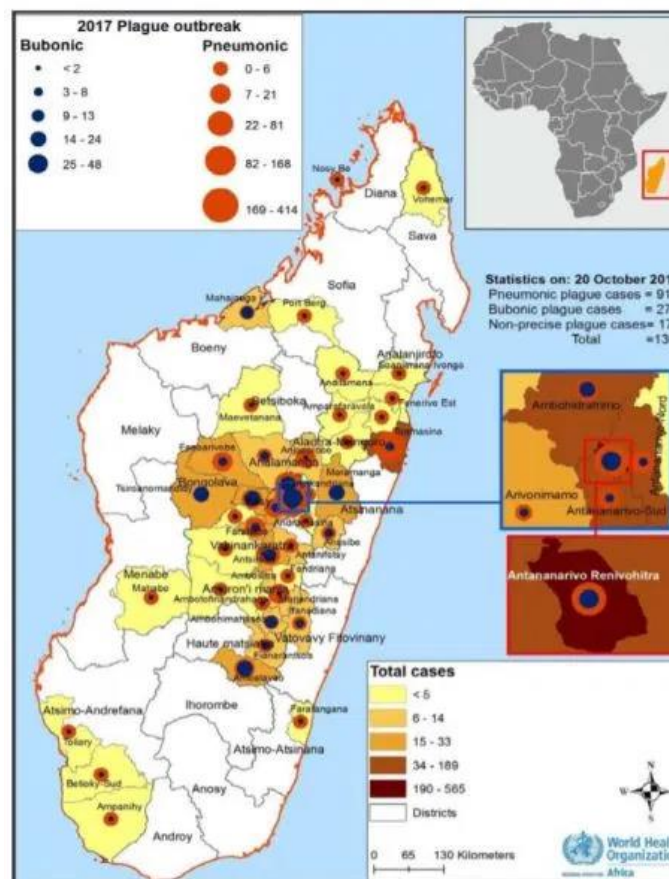


Epidemic example:
Ebola in West Africa, 2014

A few key terms to describe disease events

Outbreak

- ▶ An increase in the number of cases of a disease above what is expected in the population.
- ▶ Increase in new cases happens relatively quickly.
- ▶ Cases are specific to a geographic area



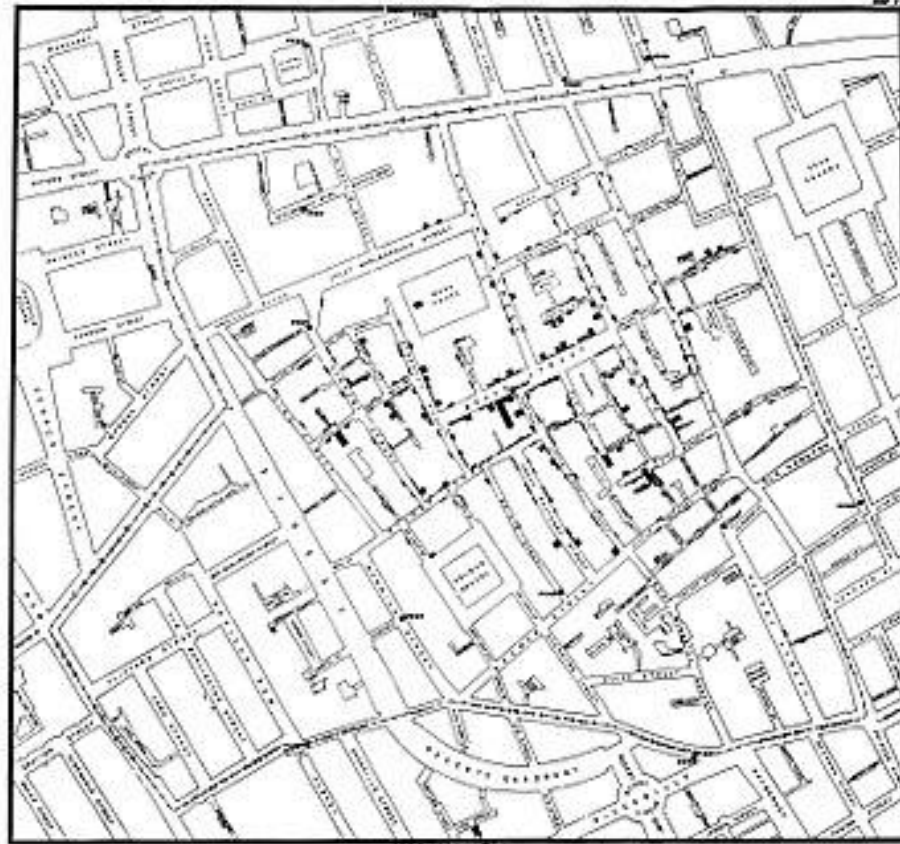
Outbreak example:
Plague in Madagascar, 2017

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A few key terms to describe disease events

Cluster

- ▶ A few cases grouped in a place and time that are *suspected* to be greater than the expected number, even if the expected number is unknown



Cluster example:
Cholera in London, 1854

A few key terms to describe disease events

Pandemic

- ▶ An epidemic that has spread over *several countries or continents*.
- ▶ Usually affecting a large number of people.



Pandemic example: global HIV

Epidemics vs. Pandemics



Epidemic

- Event in which a disease is actively spreading
- Often used to describe problem that has grown out of control



Pandemic

- Relates to geographic spread
- Describes disease that affects a whole country or the entire world

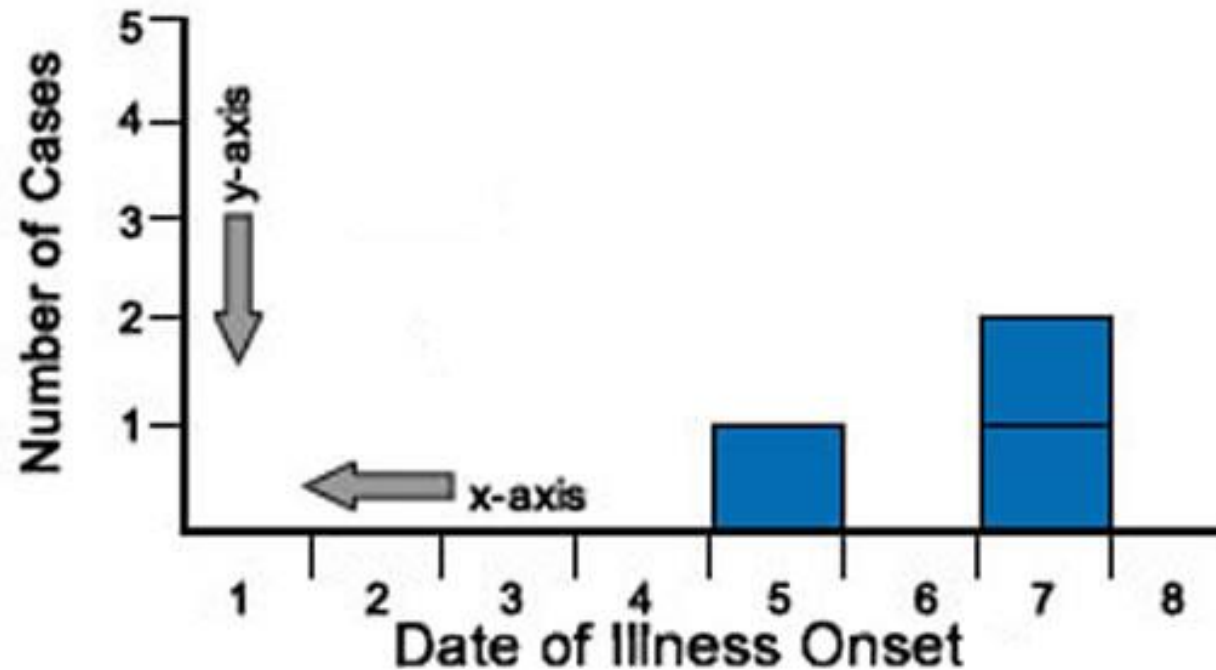
Torrey, T. (2020).

<https://www.verywellhealth.com/difference-between-epidemic-and-pandemic-2615168>

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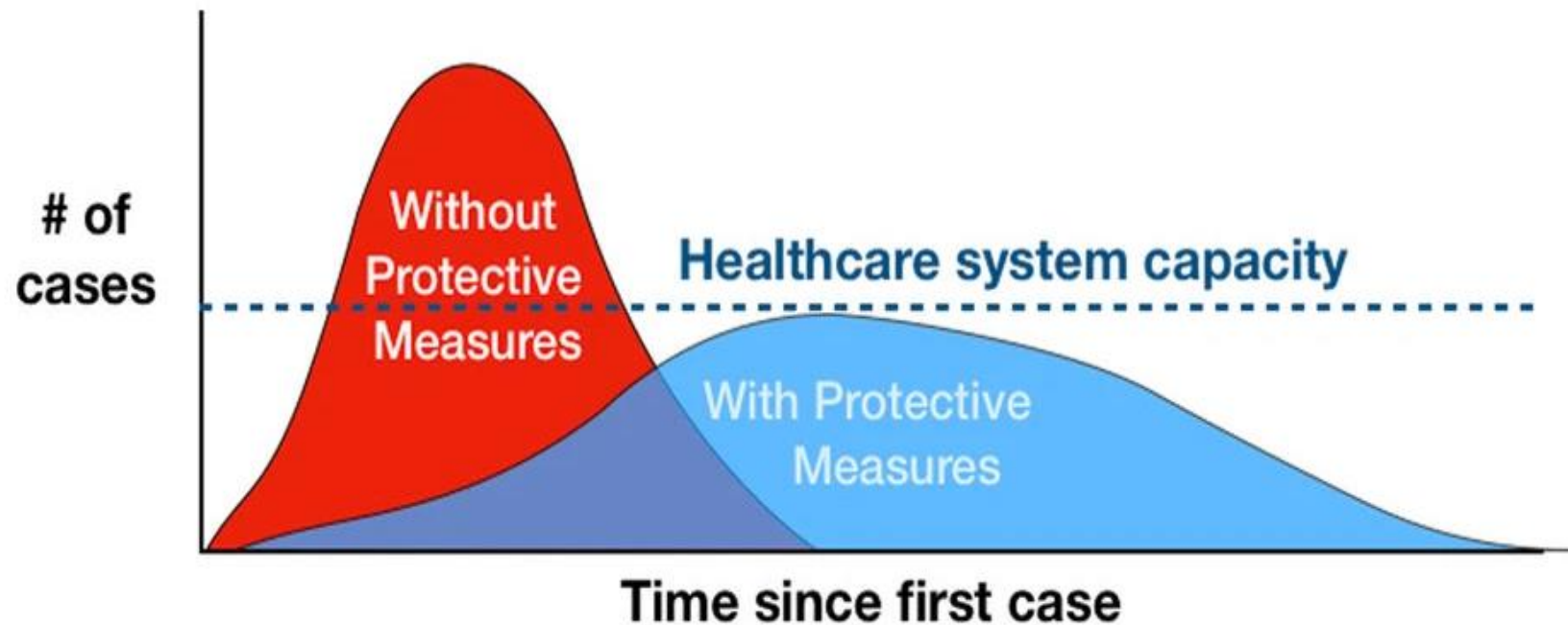
Some key tools to understand epidemics

The “Epi Curve”



A few key tools to understand epidemics

The “Epi Curve”



<https://www.nytimes.com/2020/03/11/science/coronavirus-curve-mitigation-infection.html>

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Why and how to “flatten the curve”

Why:

- ▶ The health system does not get overwhelmed
- ▶ Patients receive effective treatment

How:

At the person level:

- ▶ Be calm and cautious
- ▶ Wash hands
- ▶ Don't touch face
- ▶ Stay home if sick

At the government level:

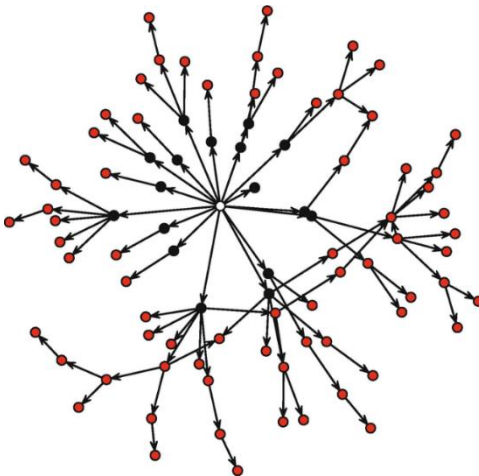
- ▶ Test people who are showing symptoms
- ▶ Limit gatherings and travel
- ▶ Track infections

A few key tools to understand epidemics

Reproduction number:

R_0 (pronounced R-naught)

how contagious is the disease?



Disease	Reproduction number - R_0
Ebola, 2014	1.51 to 2.53
H1N1 influenza, 2009	1.46 to 1.48
Seasonal influenza	2.0 to 3.0
Measles	12 to 18
SARS	1 to 3
COVID-19	1.5 to 3.5

A few key tools to understand epidemics

Case Fatality Rate (CFR):

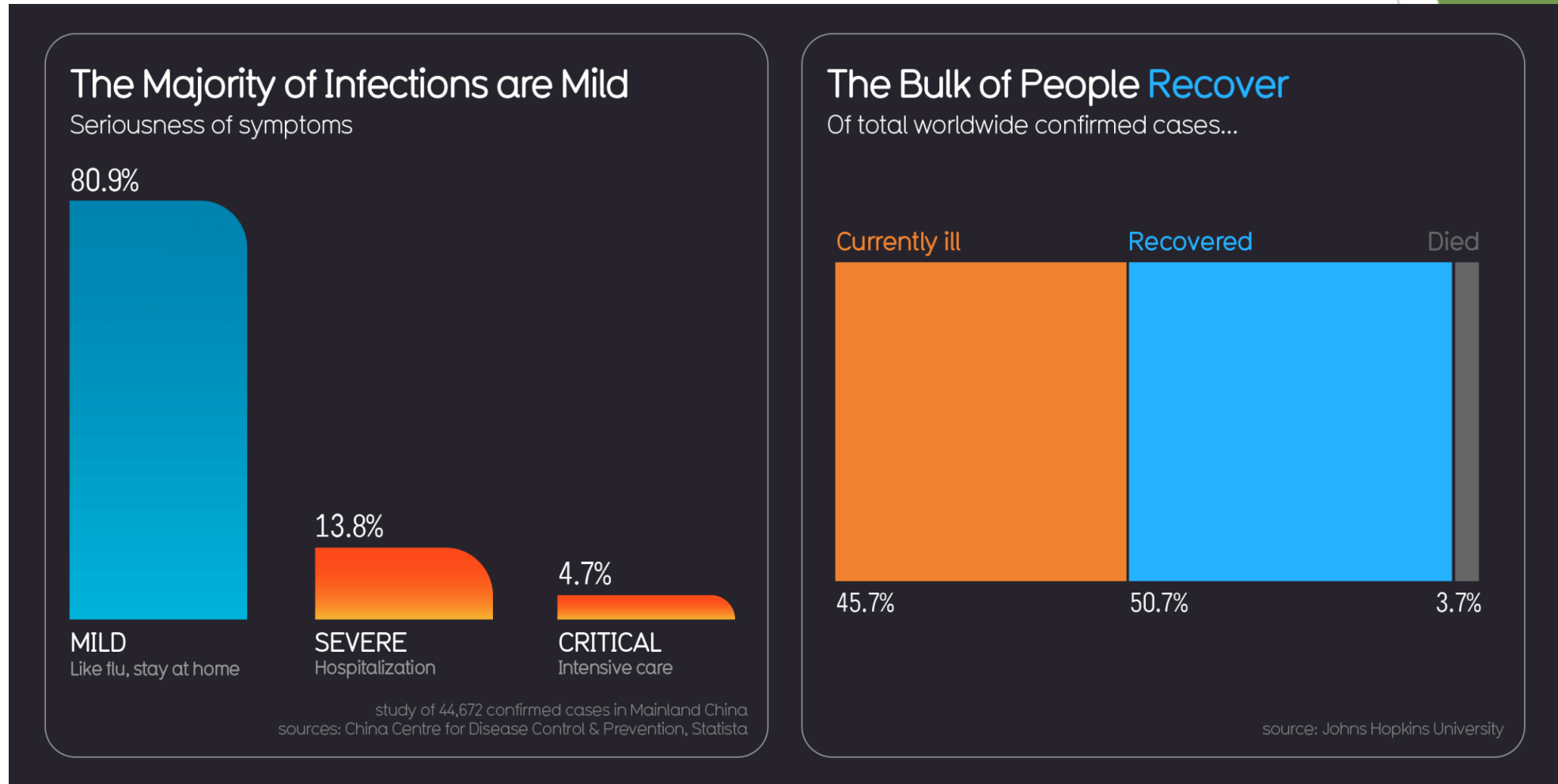
How many people die as a result of being infected?

$$\text{CFR} = \frac{\text{Number of deaths due to disease } x}{\text{Number of cases diagnosed with disease } x}$$

Disease	Case Fatality Rate
Ebola, 2013-2016	40%
H1N1 influenza, 2009	0.4%
Seasonal influenza	0.1%
Measles	15%
SARS, 2003	9%
COVID-19	2.3% to 3.7%

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Recovery rate of COVID-19 (as of March 16th)



Causes of epidemics and pandemics

- ▶ Population density
- ▶ Mass displacement
- ▶ Global mobility
- ▶ Environmental degradation
- ▶ Closer contact with animals



“Health to us is actually the result of having a sense of belonging, of knowing who you are, of knowing who your relatives were, of knowing what your place is in community. It’s about social responsibility, it’s about a whole complex network of relationships. So, health is not the absence or presence of disease. It’s a way of relating...and of being.”

- Gwen Philips, Ktunaxa Nation (First Nations Health Council, 2010).



There’s Blood in the Rocks, Video Installation
Still, Dr. Marianne Nicolson (Kwakwaka’wakw),
2017.

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Social determinants of health and epidemics

- ▶ Economic equity
 - ▶ Gender/sex equity
 - ▶ Sustainable environmental practices
 - ▶ Connection to culture
 - ▶ Strong education system
-
- ▶ Safe access to excellent health care
 - ▶ Social connection, relational health
 - ▶ Safe and affordable housing
 - ▶ Spiritual freedom
 - ▶ Community cohesion and safety

Lessons from 2009 H1N1 pandemic in BC

What was done

- ▶ Action plan between governments early in the outbreak phase
- ▶ Coordination between the multiple levels of government
- ▶ Diagnostic kits sent out early to remote areas - expedited process
- ▶ Mobilization of additional staff and resources, daily monitoring of patient numbers, infection control measures
- ▶ Quick response with treatment

What was learned

- Need stronger social policies to address determinants of health
- Need immediate measures to address structural barriers to protection
- Need for community-level response plans
- Need community-led surveillance
- Need integration of culture and traditions into pandemic prevention and response

Stigma, racism, and the spread of disease

'Nothing has changed': The roots of Saskatchewan's HIV crisis

"People can live with the virus, but they can't live with the stigma and the discrimination."

COMMENTARY »

Insanity over COVID-19 inflicts real pain on Chinese-owned businesses in Metro Vancouver

by Charlie Smith on February 22nd, 2020 at 7:49 AM



Opinion Coronavirus outbreak

Sensationalist media is exacerbating racist coronavirus fears. We need to combat it

People of east Asian appearance are being abused and attacked as #coronaracism becomes a pandemic

Jing Zeng

Fri 28 Feb 2020 01:20 GMT



152 89



Lifestyle

How the Ebola outbreak turned into a racism and responsibility debate

GlobalPost

August 07, 2014 - 4:50 AM UTC

By Tristan McConnell



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As Turkey opens border, conditions for migrants in Europe are 'unacceptable'

London's Dazzle Club uses makeup to protest police use of facial recognition technology

Lawyers struggle to remotely represent asylum-seekers in 'Remain in Mexico' program

Swine flu on NBCNEWS.com

Amid swine flu outbreak, racism goes viral

Anti-immigrant hatred spreads on talk radio, Web sites

Next story in Swine flu
300 hospitalized in Britain's ICUs with flu

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Addressing fear and confusion about COVID-19

- ▶ Check in on community members who may be struggling
- ▶ Limit time spent on social media and COVID news
- ▶ Prioritize self-care
- ▶ Try to stick with routines
- ▶ Keep to the facts
- ▶ Ask for help

www.cdc.gov/coronavirus/2019-ncov/prepare/managing-stress-anxiety.html

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ASK approach for effective communication

- Acknowledge your client's concerns
 - Acknowledge
 - Clarify to understand your client's needs
- Steer the conversation
 - Refute the myth(s)
 - Continue your conversation
- Knowledge-know the facts well!
 - Provide further knowledge, tailored to your client's needs
 - Provide further reading materials (websites)



Community preparedness and protection

- ▶ Stay informed with information from reputable sources
- ▶ Be prepared to support vulnerable community members
- ▶ Promote family communication plans, buddy system, alternative care arrangements
- ▶ Promote gathering essential supplies

BC COVID-19 Response Plan

1. Protecting the population
2. Protecting vulnerable citizens
3. Protecting health care workers
4. Supporting BC's health care capacity



PHAC resources on Coronavirus disease (COVID-19)

(Information is accurate as of March 19, 2020)

- Outbreak updates
- Preparation guides
- Awareness resources
- Guidance documents
- **Information for Indigenous communities**

<https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19.html>

Want to know more?

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PHAC COVID-19 information for Indigenous communities

<https://www.sac-isc.gc.ca/eng/1581964230816/1581964277298>

PHAC COVID-19 information in Indigenous languages

<https://www.sac-isc.gc.ca/eng/1583781906998/1583781926813>

BC specific information on COVID-19

[http://www.bccdc.ca/health-info/diseases-conditions/coronavirus-\(novel\)](http://www.bccdc.ca/health-info/diseases-conditions/coronavirus-(novel))

VCH Regional Pandemic Response Plans

<https://sneezediseases.com/resource/vch-regional-pandemic-outbreak-response-plans>

PHAC fact sheets

<https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19.html>

Want to know more?

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Free toolkits for public health & emergency response

<https://www.who.int/emergencies/diseases/managing-epidemics-interactive.pdf>

<https://hsl.uw.edu/toolkits/public-health/>

Free global health courses

<https://www.fic.nih.gov/Global/Pages/training-resources.aspx>

Want to know more?

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Harm reduction during COVID-19

http://www.bccdc.ca/resource-gallery/Documents/Educational%20Materials/Final_BCCDC_COVID19_HR_Mar18.pdf

<https://harmreduction.org/miscellaneous/covid-19-guidance-for-people-who-use-drugs-and-harm-reduction-programs/>

<https://medium.com/@danielraymond/harm-reduction-in-the-time-of-coronavirus-553e16c76623>

<https://twitter.com/CovidEquity>

<https://twitter.com/CPwud>

Want to know more?

(Information is accurate as of March 19, 2020)

Caring for mental health during COVID-19

<https://www.anxietycanada.com/articles/what-to-do-if-you-are-anxious-or-worried-about-coronavirus-covid-19/>

<https://www.who.int/docs/default-source/coronaviruse/mental-health-considerations.pdf>

<https://www.weforum.org/agenda/2020/03/covid19-coronavirus-mental-health-expert-insights/>

Want to know more?

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Free short online public health courses in epidemiology and emergency response

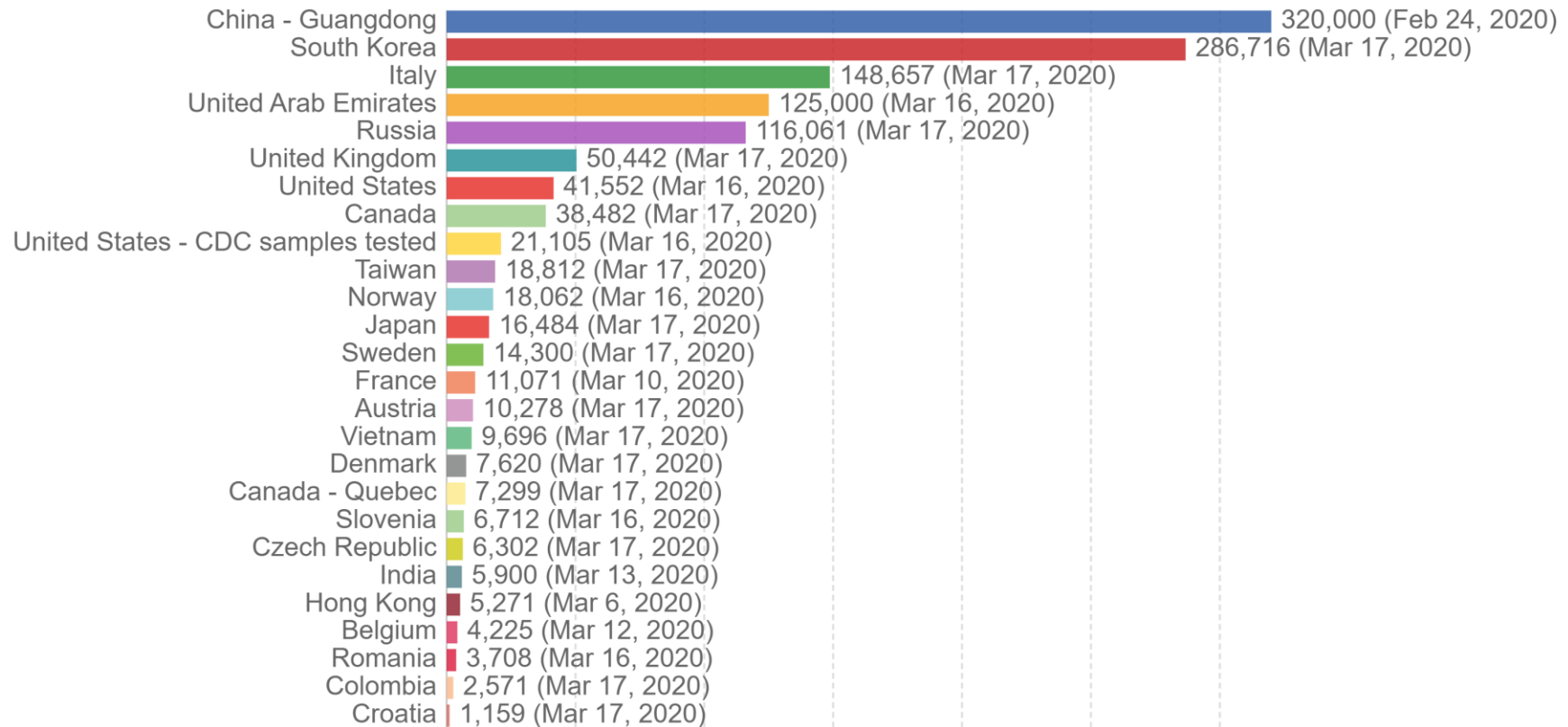
<https://mphprogramslist.com/awesome-free-online-public-health-courses/>

<https://www.coursera.org/lecture/epidemic-pandemic-outbreak/week-1-video-1-what-are-epidemics-pandemics-outbreaks-szvx0>

<https://www.extension.harvard.edu/course-catalog/courses>

Total COVID-19 tests performed by country

Most recent data as of 17 March 2020 - 18.30GMT. Estimates were collected by Our World in Data from official country reports. In some cases the total number of tests may correspond to the number of individuals who have been tested, rather than the number of samples.



Total COVID-19 tests performed per million people

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