

COVID-19 101: Information and Impact

Indian Health Service COVID-19 CHR Training Series

Presented by the Indian Health Service in partnership with
Johns Hopkins Center for American Indian Health



Series Dates:

May 7, 2020
May 14, 2020
May 21, 2020
May 28, 2020

COVID-19 101: Information and Impact
Home Visiting During Social Distancing
CHR COVID-19 Best Practices
Individual and Community Resiliency



Webinar Series Objectives

Understand

Understand COVID-19
and its impacts

Support

Support CHRs in
delivering holistic
services during COVID-
19

Provide

Provide tools to CHRs
that create an
empowered response
to community needs

Presenters



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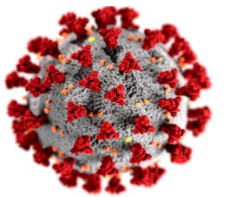
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Objectives of today's webinar: COVID-19 101



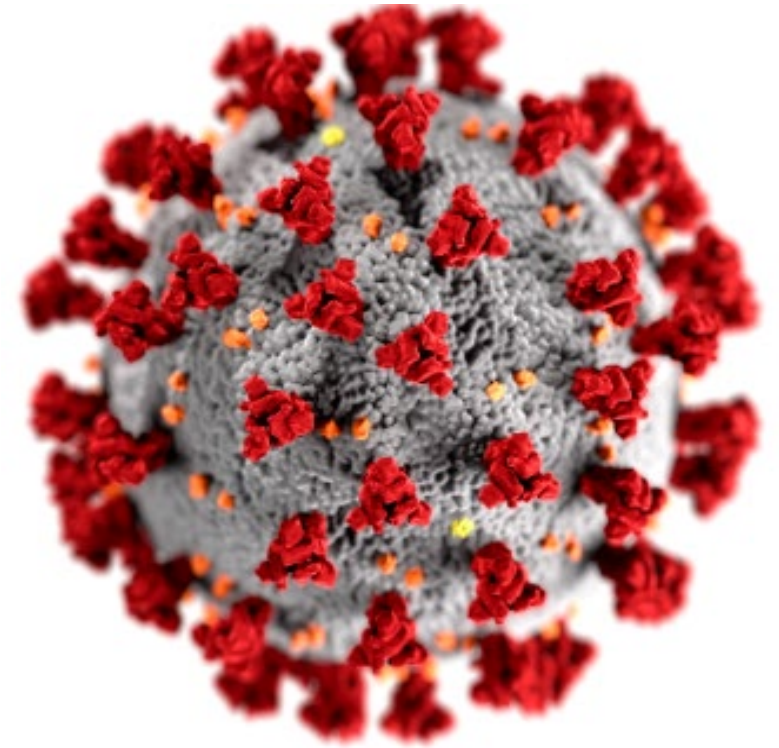
- Understand the current state of COVID-19 disease
 - Background on COVID-19
 - Case counts, transmission and epidemiology
 - Risk factors, symptoms and testing
 - Preventive measures and policies
- Highlight the impact of COVID-19 in tribal communities
 - Case counts and comparison to other regions
 - Key issues around COVID-19 in tribal communities
 - Overview of pandemics in tribal communities
 - Responding to COVID-19 in tribal communities

The Epidemiology of COVID-19



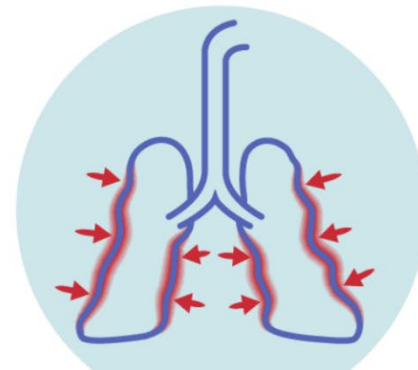
What are coronaviruses?

- Coronaviruses are a large family of viruses that cause disease in animals and humans
- Usually respiratory disease; sometimes GI involvement
- Four common coronaviruses circulate globally and cause mild respiratory illness (~30% of common colds) – 229E, NL63, OC43, HKU1
- Three more severe coronaviruses:
 - SARS (2002-2003)
 - MERS (2012)
 - The 'novel coronavirus' first detected in China in November and December 2019 → **SARS CoV-2**

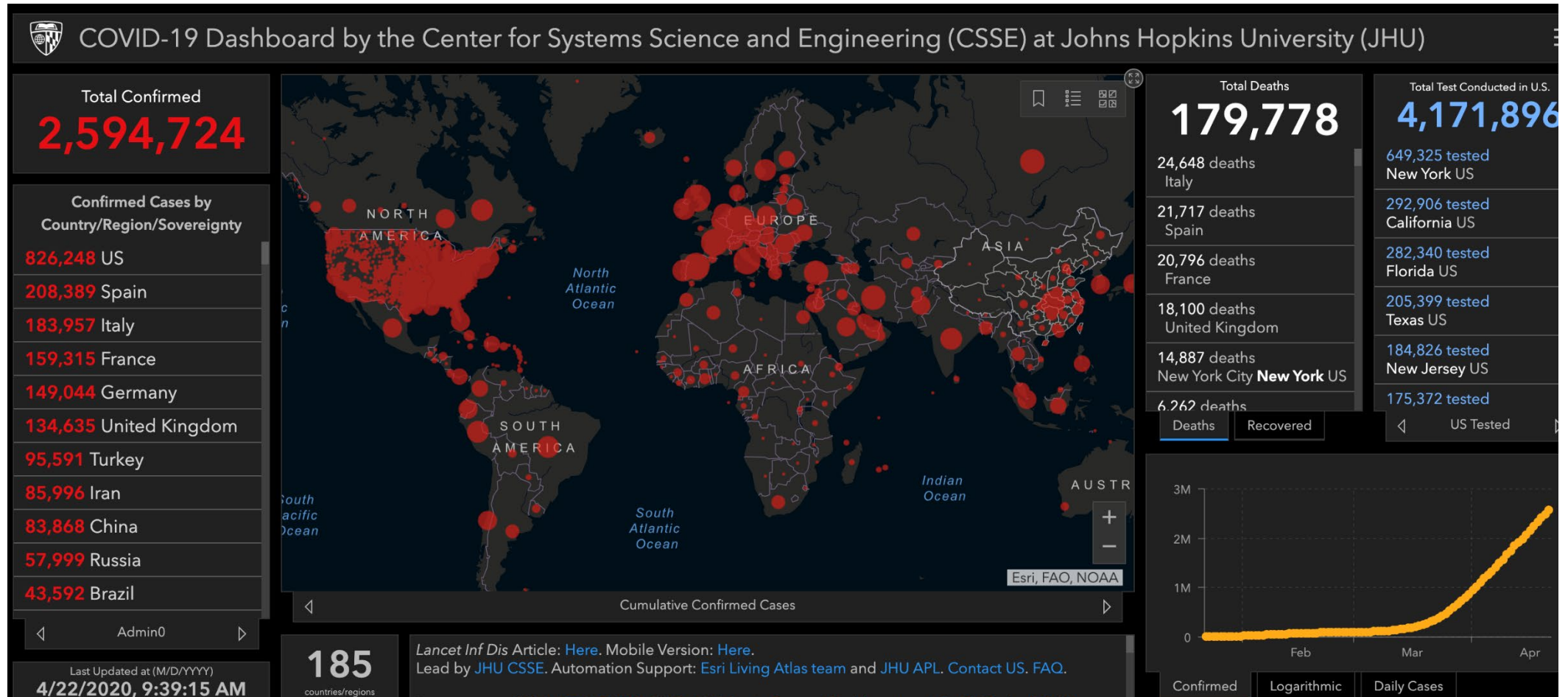


What is COVID-19?

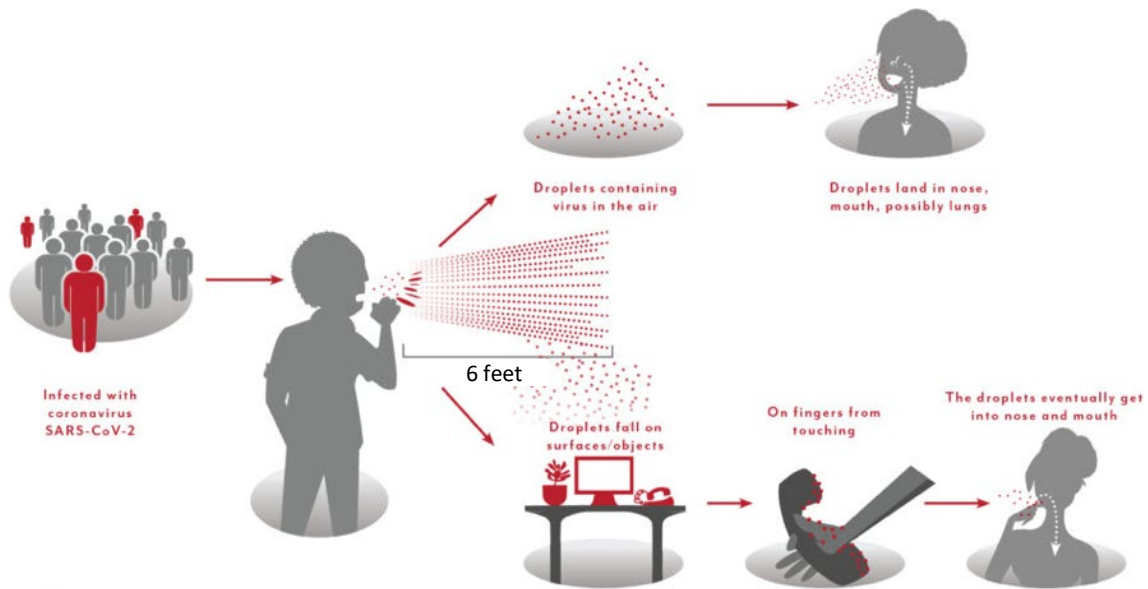
- Coronavirus disease 2019 or '**COVID-19**' is the disease caused by the novel coronavirus now known as **SARS CoV-2**
- Symptoms of COVID-19 include:
 - Fever
 - Cough
 - Shortness of breath or difficulty breathing
 - Chills
 - Sometimes:
 - Muscle aches and pains
 - Headache
 - Sore throat
 - New loss of taste or smell
 - Diarrhea
- Not everyone will have symptoms



Case Counts: Global



How does the virus spread?



- Mostly spread person to person via respiratory droplets (droplet transmission)
 - Coughing; surfaces contaminated with droplets
- People with mild or no symptoms can still be infectious (asymptomatic or pre-symptomatic transmission)

[Covid-19 Transmission – Infographic , World Heart Federation](#)

How long does the virus survive on surfaces?

- The virus may live on surfaces for a few hours or up to several days
- This will depend on the type of surface, temperature, humidity, etc.
- If you think a surface may be infected, clean it with simple disinfectant, then wash or clean your hands
- High-touch surfaces should be cleaned regularly



How long does it take to get sick after being exposed to COVID-19?

Incubation Period: The time between when someone is infected with the virus and when they start having symptoms

Average: 5 days

Range: 1-14 Days

Who is most at risk for COVID-19?

- People over 60 years old
- People with **underlying medical problems**
 - High blood pressure
 - Heart disease
 - Lung problems
 - Diabetes
- **Low risk isn't no risk**

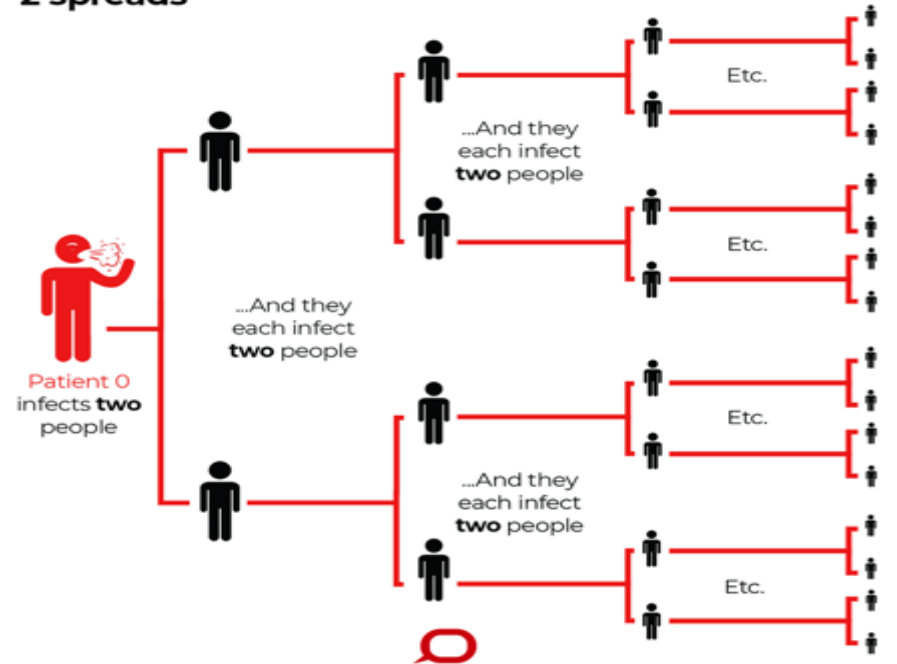


Help elders and people at high risk to be able to stay home and away from ill people

How quickly does the virus spread?

- R_0 : the number of secondary cases that arise from a primary case when everyone is susceptible
 - About 2.5
 - Which means every person will infect, on average, 2.5 other people

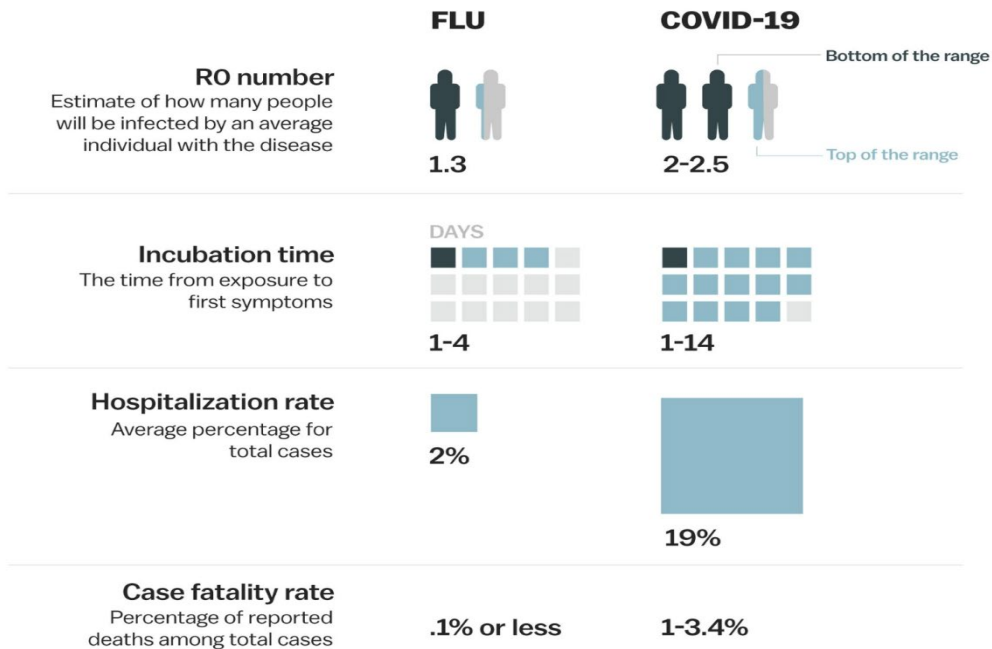
How a virus with a reproduction number (R_0) of 2 spreads



R_0 : How scientists quantify the intensity of an outbreak like coronavirus and predict the pandemic's spread – The Conversation, Infographic, [How a Virus with a \$R_0\$ of 2 spreads](#)

How does that compare to other viruses?

How seasonal flu and Covid-19 compare



Sources: CDC, WHO, NCBI

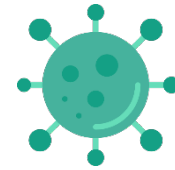
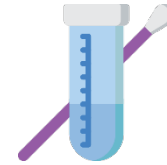
Vox

We can reduce the spread with mitigation, like social (or physical) distancing

[How Seasonal Flu and Covid-19 compare - Vox](#)

Testing – Two main types of tests

- Tests to determine if you are currently sick
 - These look for the **virus** in your nose or throat



- Tests to determine if you have been infected before
 - These look for **antibodies** to the virus in your blood



- Who should get tested?
 - Speak with your healthcare provider

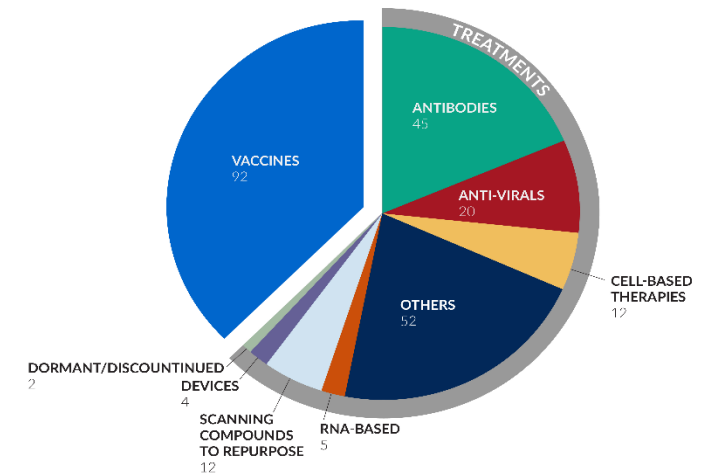


Treatments and Vaccine development

- Some medicines and therapies that could help with symptoms
- No medicines or vaccines to prevent COVID-19 currently
- Many clinical trials and studies have started
 - Vaccines
 - Antivirals
 - Antibodies



Potential COVID-19 Treatments and Vaccines in Research Pipeline

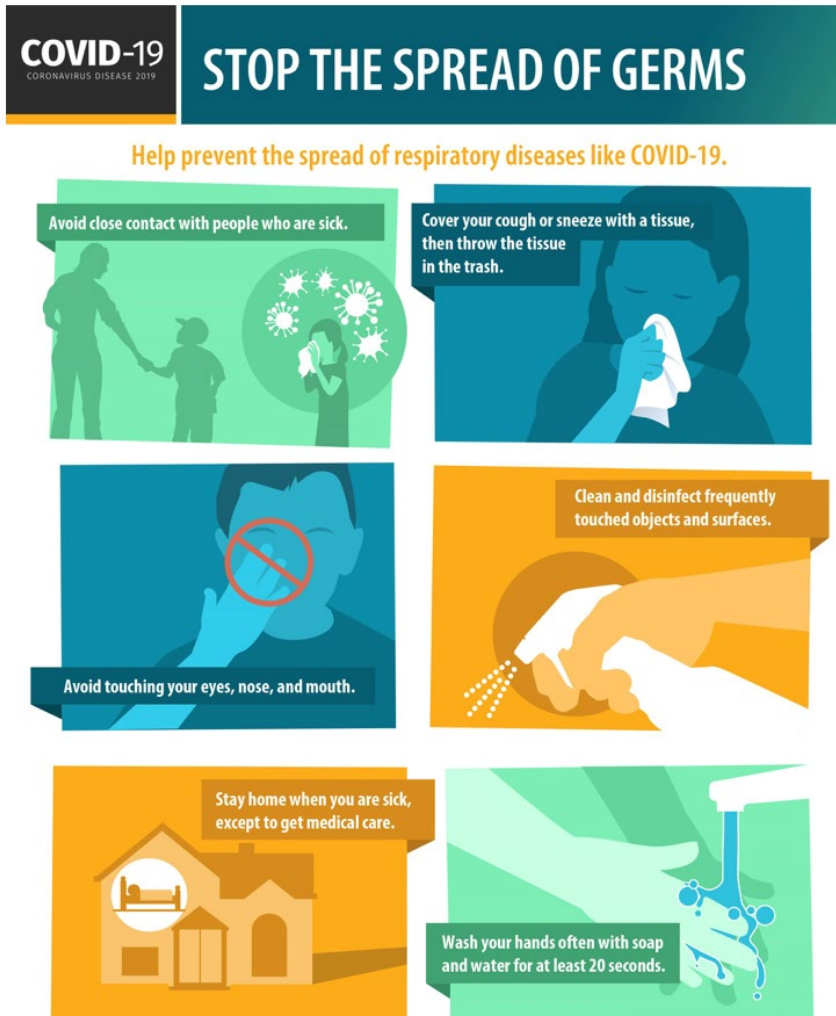


Updated: April 20, 2020

Protecting yourself and your community
from COVID



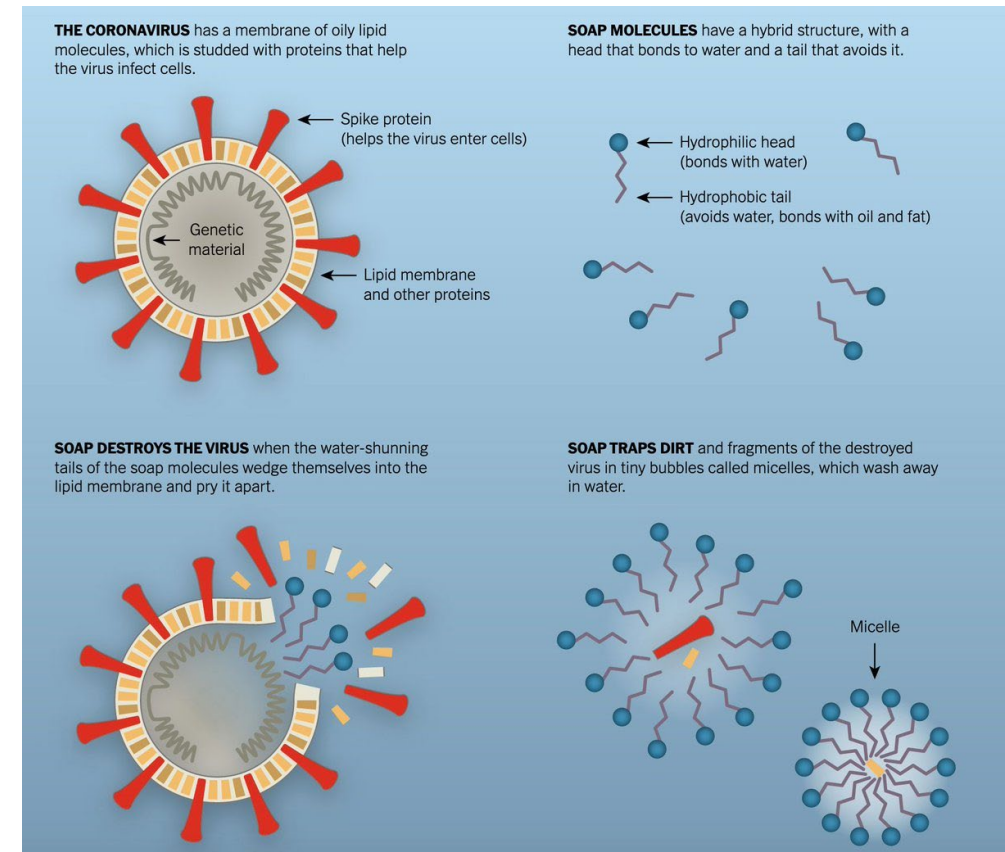
What can be done to limit spread?



- Stay home if you are sick
- Cover your cough
- Disinfect surfaces
- Avoid touching eyes, nose, mouth
- Wash hands frequently with soap and water
- Social (or physically) distance!

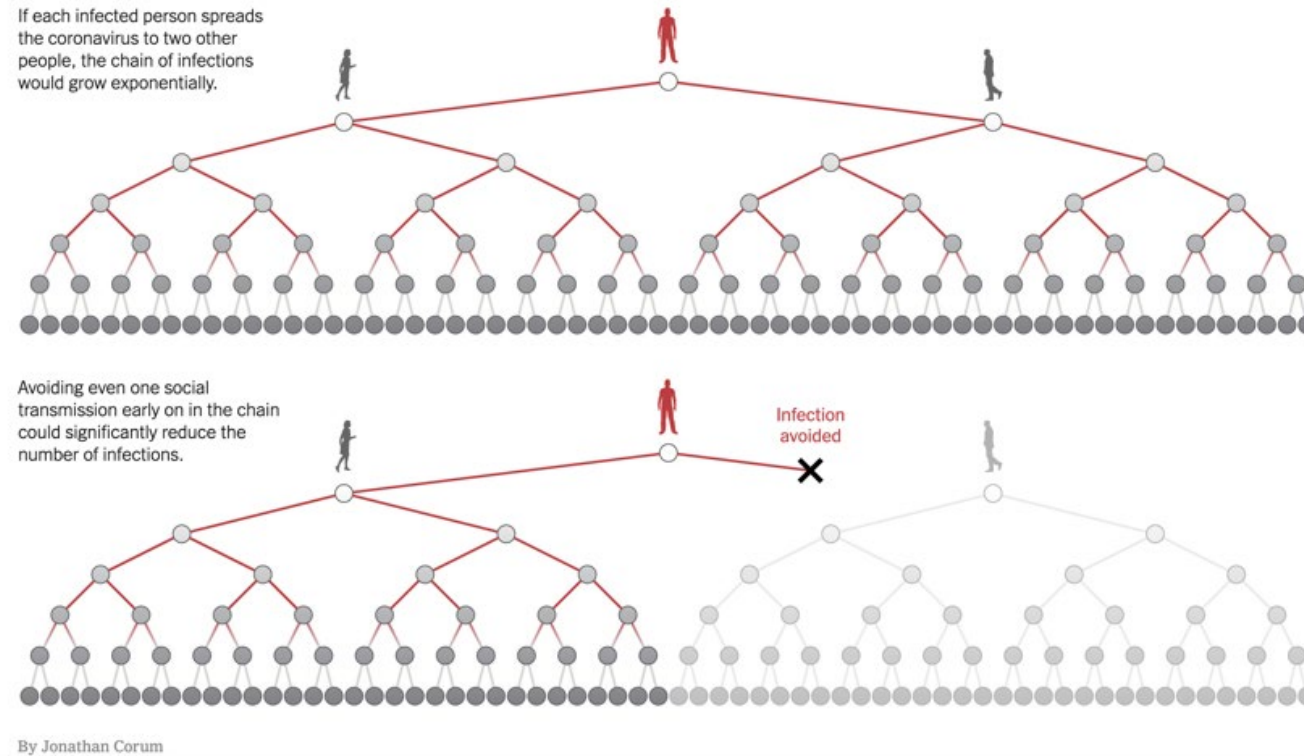
[Covid-19: Stop the Spread of Germs - CDC Flyer](#)

Why is soap so important?

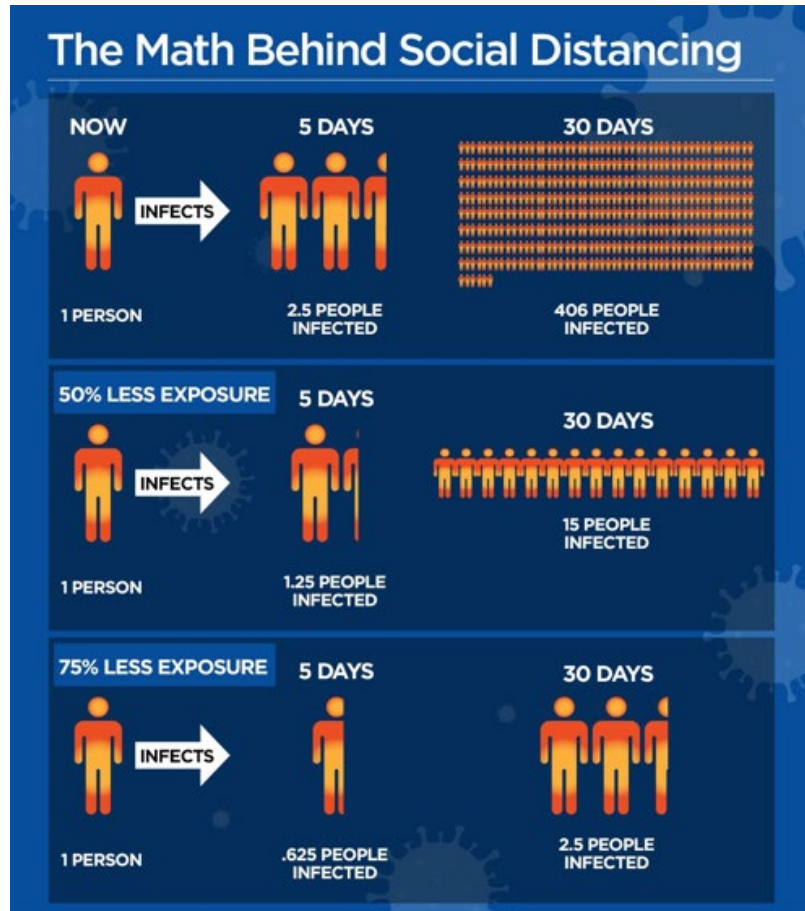


[How Soap Works](#) – The New York Times, Infographic by Jonathan Corum and Ferris Jabr

Why is 'social distancing' so important?



[Cutting a Link in the Chain of Transmission](https://www.nytimes.com/2020/03/19/health/coronavirus-distancing-transmission.html)—The New York Times, Infographic
by Jonathan Corum

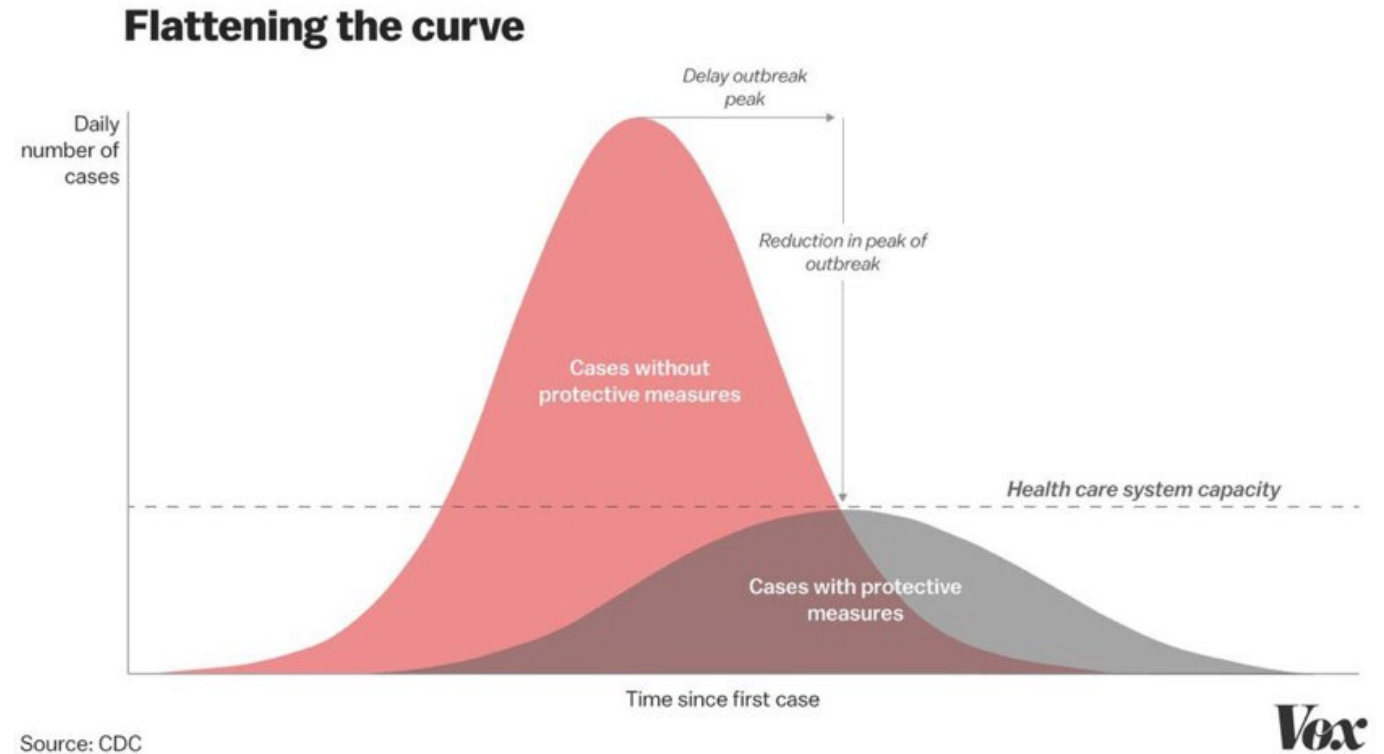


Credit:
Robert A.J. Signer Ph.D.,
Assistant professor of Medicine at the University of California, San Diego
Gary Warshaw, Art Director

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[The Math Behind Social Distancing](#) – Global News,
Infographic by Robert A.j. Signer, Phd

‘Flattening the curve’
to keep the health care
system functional

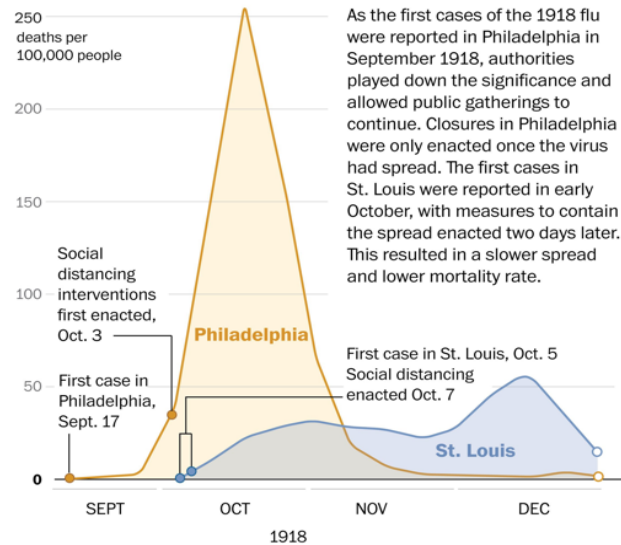


[How canceled events and self-quarantines save lives, in one chart](#)

Infographic by Christina Animashaun/Vox

Historical precedent Flattening the curve in 1918

Effects of social distancing on 1918 flu deaths



Sources: "Public health interventions and epidemic intensity during the 1918 influenza pandemic" by Richard J. Hatchett, Carter E. Mecher, Marc Lipsitch, Proceedings of the National Academy of Sciences May, 2007. Data derived from "Public health interventions and epidemic intensity during the 1918 influenza pandemic" by Richard J. Hatchett, Carter E. Mecher, Marc Lipsitch, Proceedings of the National Academy of Sciences May, 2007.

TIM MEKO/THE WASHINGTON POST

[Effects of Social distancing on 1918 Flu deaths](#)
Infographic, Tim Meko, The Washington Post

Slow the spread: wear a facemask

- Cloth (handsewn) masks
 - Used by individuals who are in public spaces
 - Used by individuals who are caring for COVID-19 patients at home
 - Used by COVID-19 patients at home if surgical masks are not available
- N95 masks
 - Used by healthcare workers who are taking care of COVID-19 patients and performing aerosolizing procedures
- Surgical masks
 - Used by patients infected by COVID-19 if they are around other people
 - Used by healthcare workers for all activities (unless an N95 mask is required)



Why all these public health policies are important: Slowing the Spread

- Although it's difficult, closing schools and businesses and asking people to stay home is important to slow the spread of disease
- This will give public health officials and health care systems time to prepare and put plans into place so that we can better manage people who are sick and better control transmission in communities
- This will also give us time to understand this brand-new virus, how it works, and how we can defeat it
- Wearing masks, using soap, not touching our faces, and staying 6 feet apart limits the virus's chances of getting inside our bodies



Impact in Tribal Communities

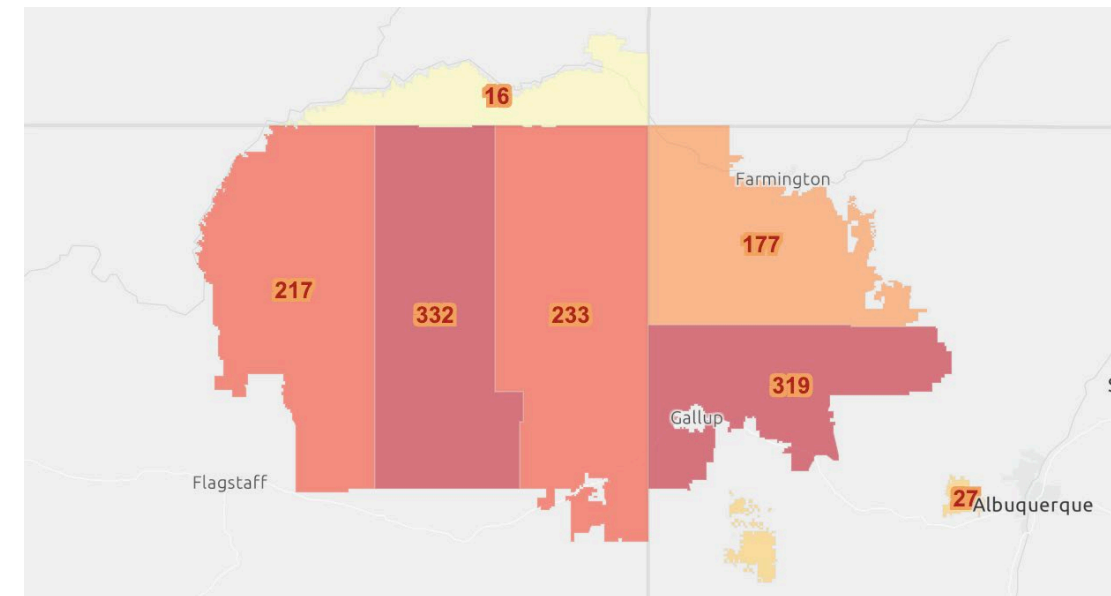


COVID-19 Cases in Indian Country

IHS Area	Tested	Positive	Negative
Alaska	1,767	12	1,146
Albuquerque	1,996	215	924
Bemidji	150	17	120
Billings	1,902	21	1,748
California	779	45	587
Great Plains	353	24	300
Nashville	1,214	60	947
Navajo	5,225	1,045	3,547
Oklahoma City	2,758	101	2,203
Phoenix	909	153	620
Portland	786	77	674
Tucson	552	11	449
Total	18,391	1,781	13,265

<https://www.ihs.gov/coronavirus/>

1,206
Positive Cases of COVID-19
on Navajo Nation
Last Updated April 21, 2020



<https://www.ndoh.navajo-nsn.gov/COVID-19>

Comparing COVID-19 on Navajo Nation to other U.S. areas

- Navajo Nation has the sixth highest COVID-19 infection rate in the U.S. (behind NY, NJ, MA, CT, RI, and DC).
- Over 13% of Arizona's COVID-19 cases are on Navajo Nation, which is home to only 1.4% of Arizona's population.
- Navajo Nation has experienced more COVID-19 deaths than 13 U.S. states combined.



Impact of pandemics on resource-limited, rural settings

- Limited medical capacity
 - Challenges with surveillance
 - Shortages of medical equipment and PPE
- Unequal access to health services
 - Far distances to health facilities
 - Too few health workers to serve the population
- Sociodemographic and structural factors
 - Economic impact of pandemics on poverty
 - Access to services like clean water
 - Resource-limited systems and preparedness plans



Photo: Stéphane Paul

History of pandemics in tribal communities

Historically, pandemics have had a significant burden on AI/AN populations.

Higher mortality rates

- In the 2009 H1N1 pandemic, Native populations across 12 states in the U.S. had 4 times higher mortality rates compared to other populations.
- 1918 Influenza pandemic: Mortality rates among American Indian populations were 4 times higher than rates in larger U.S. cities.
- 1918 Influenza pandemic: Across the U.S. and other countries, there were increased mortality rates in indigenous populations, compared to other populations

Higher hospitalization rates

- 2009 H1N1 pandemic: American Indians in the Southwest U.S., and particularly children under 5 years, had higher hospitalization rates during the H1N1 pandemic than other populations in the U.S

Increased role of risk factors:

- 2009 H1N1 pandemic: Diabetes among adults and asthma among children were independent risk factors for hospitalization with H1N1



Key issues in context

- Limited **testing** availability
- Limited **hospital capacity**, especially in areas with high COVID-19 case counts
- **Water insecurity** and challenges with frequent hand washing
- Prevalence of **underlying conditions**, like diabetes, that make people higher risk for COVID-19 complications
- **Multi-generational homes** could put elders at greater risk



Community health workers have been critical in stopping past outbreaks

In the 2014 Ebola outbreak in West Africa, the CHW networks helped engage communities to stop the spread.

- CHWs acted as community- level educators, organizers, and mobilizers and made the response efforts more effective.
- CHWs conducted community surveillance activities and reported suspected Ebola cases to public health authorities.

In the 2015 Zika outbreak in South America, CHWS helped distribute culturally-appropriate health information and supplies.

Today's COVID-19 community health representatives could become our epidemic response corps of the future – always ready to help us fight the next epidemic.

Prevent

Detect

Treat

Recover

1. Prevent

- Organize and **carry out social media campaigns** to promote social distancing and advocate for timely policies.
- Encourage strategies in their communities and online to **promote mental and physical health and resilience**.
- **Deliver food and medications** to the elderly and other vulnerable residents.
- **Make masks** at home and donate them to supplement the stock of personal protective equipment at local hospitals.

2. Detect

- Learn the signs and symptoms of COVID-19 and **help staff hotlines** run by hospitals and public health departments to answer questions from the public.
- **Refer possible COVID-19 patients** to their nearest testing center and organize transportation.

Today's COVID-19 community health representatives could become our epidemic response corps of the future (cont'd)

3. Treat

- Call people with COVID-19 who are in self-isolation with mild symptoms, and **monitor them for worsening symptoms**.
- **Provide moral support** and **organize food deliveries** for people with COVID-19 at home.
- Monitor patients for worsening symptoms and **support rapid referral** of people who require hospitalization with nurse care team.
- With public health officers, support **contact tracing**, symptom reporting, and monitoring of contacts of COVID-19 patients.
- **Ensure access to testing and treatment** for people who develop signs and symptoms.
- Help hospitals and non-profits **raise funds** for the most vulnerable.

Today's COVID-19 community health representatives could become our epidemic response corps of the future (cont'd)

4. Recover

- Assist with the **coordination to support Tribal and urban communities** with health care services (e.g., medical supplies, prescriptions, staffing, etc.)
- Support the coordination of **health, social, and counseling services** (e.g. development of toolkits, comprehensive resource hub, promoting self-care for staff and community members, elder mental health, etc.)
- Assist in the development of recovery timeframe to **set bench marks, evaluate and monitor outcomes**. (Tribal Epi centers, State Health Departments, CHR Data Mart).
- **Share best practices** (e.g., develop a blue print of crisis/risk communication for future use).
- Partner with health care system to ensure patients **resume health care appointments** with their providers.
- Support **local economic recovery** (e.g., Buy Indian support contracts, Indian businesses and vendors).

Resources for COVID-19 information

- [CDC.gov/coronavirus](https://www.cdc.gov/coronavirus)
- [HHS.gov/coronavirus](https://www.hhs.gov/coronavirus)
- <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>
- <https://www.nihb.org/covid-19/>
- <http://www.ncai.org/initiatives/partnerships-initiatives/resources-for-indian-country-coronavirus>
- <https://coronavirus.jhu.edu/>
- <https://nachw.org/covid-19-resources/>

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- Navajo and White Mountain Apache tribal members
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