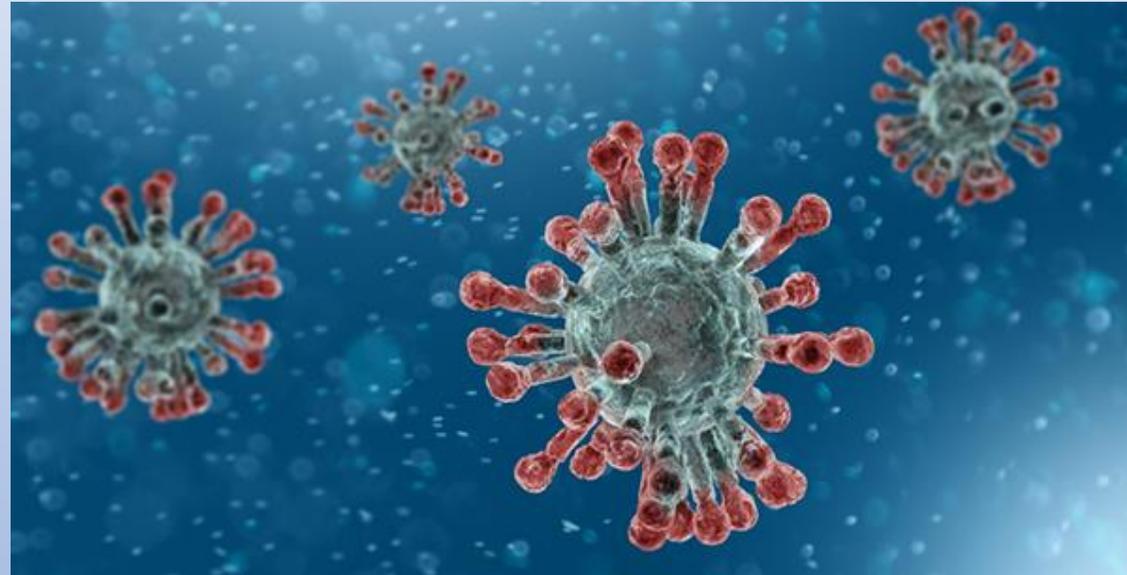


COVID-19 in Boone County and how you can help



Albert Hsu, MD

President-elect, Boone County Medical Society

April 22, 2020

Disclosures / Disclaimers

- Please understand that data is limited, preliminary, **constantly-evolving**.
 - Pandemics are difficult to model and predict.
 - Some “facts” stated just last week, may now already be out-of-date.
- **I AM NOT YOUR DOCTOR.**
 - Please see your primary care provider for any personal medical questions.
- Today’s town hall is a general informational session to the Mizzou student community.
 - We will direct you to official websites (like CDC) for public health recommendations.

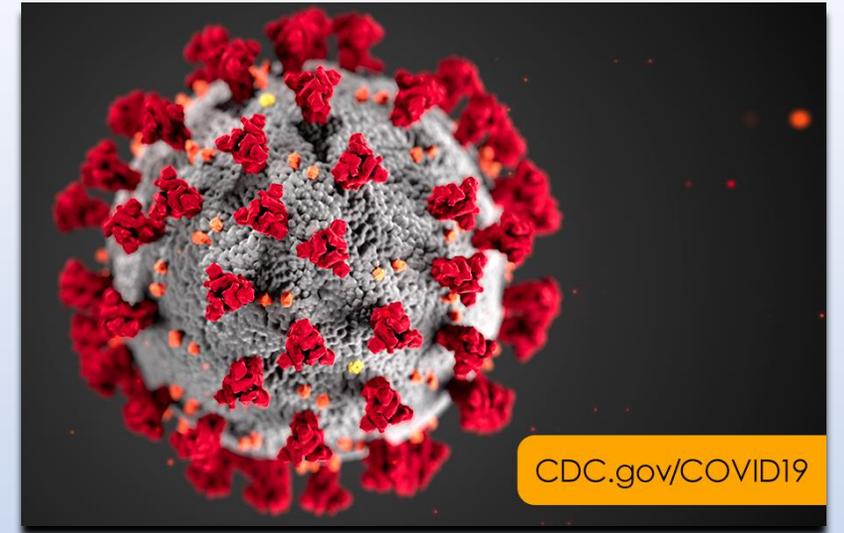
Outline

- What is COVID-19?
- Am I at risk?
- #FlattenTheCurve
- Please don't be afraid to access medical care!
- How to Help



Outline

- **What is COVID-19?**
- Am I at risk?
- #FlattenTheCurve
- Please don't be afraid to access medical care!
- How to Help

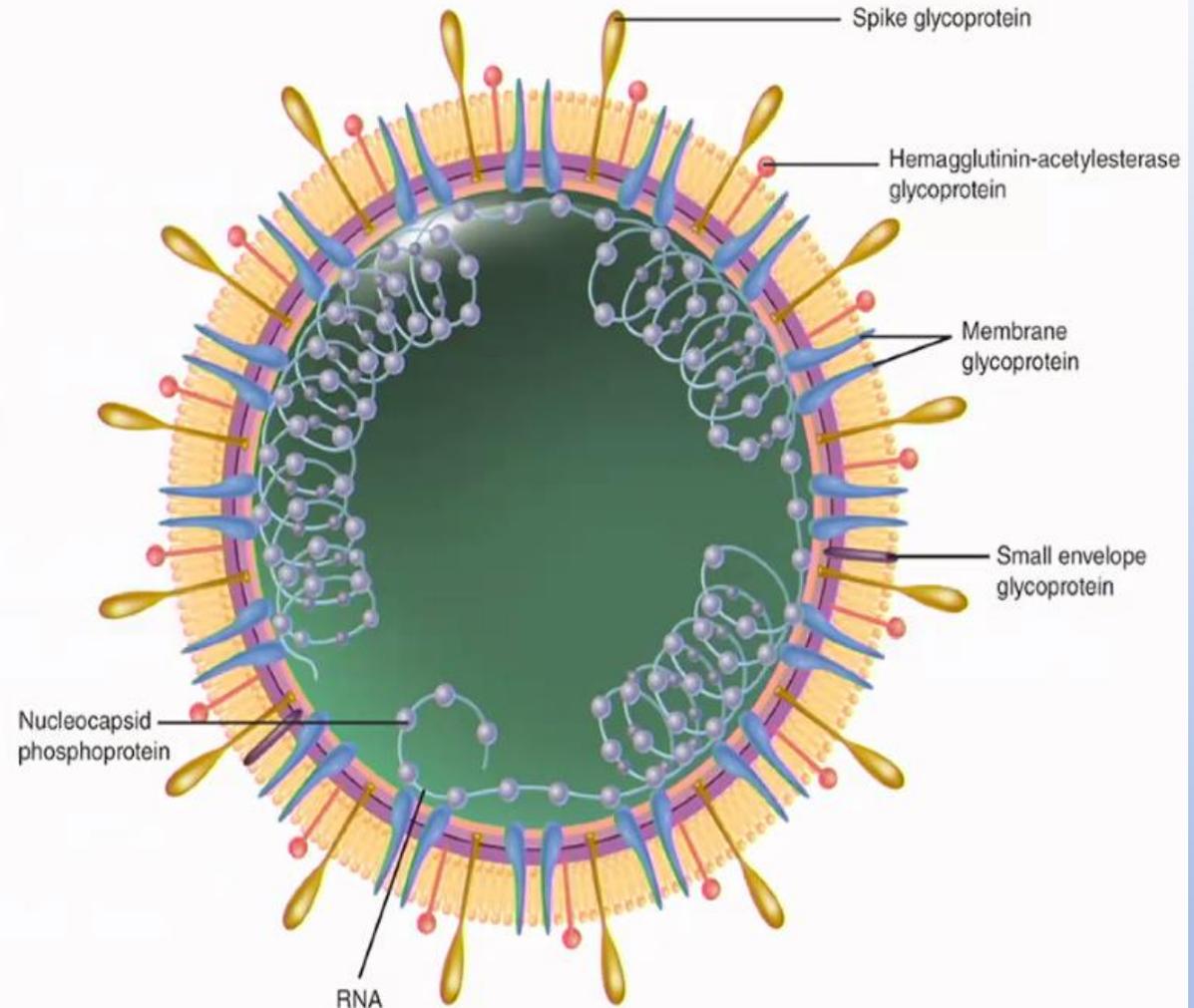


Coronaviruses

Coronavirus particle is shown to contain a single-stranded, positive-sense RNA genome bound to a nucleoprotein (helical nucleocapsid) surrounded by a lipid bilayer envelope.

Petal- or club-shaped spikes (spike glycoprotein) project from the surface of the envelope giving the appearance of a solar corona.

There are several other surface proteins, including hemagglutinin-acetyesterase glycoprotein, membrane glycoprotein, and small envelope glycoprotein.



Source: Kenneth J. Ryan:
Sherris Medical Microbiology, Seventh Edition
Copyright © McGraw-Hill Education. All rights reserved.

SARS-CoV-1

2002-2003



Often accused but never proven

- Severe Acute Respiratory Syndrome

- First case was retrospectively recognized as having occurred in Nov 2002
- By July 2003, international spread of SARS-CoV resulted in 8098 SARS cases in 26 countries, with 774 deaths

- WHO reported the last human chain of transmission, and that the epidemic had been broken on 5 July 2003
- The etiological agent, the SARS coronavirus (SARS-CoV) is believed to be an animal virus that crossed the species barrier, or changes in human behavior increased opportunities for human exposure to the virus. Virus adaptation enabled human-to-human transmission.

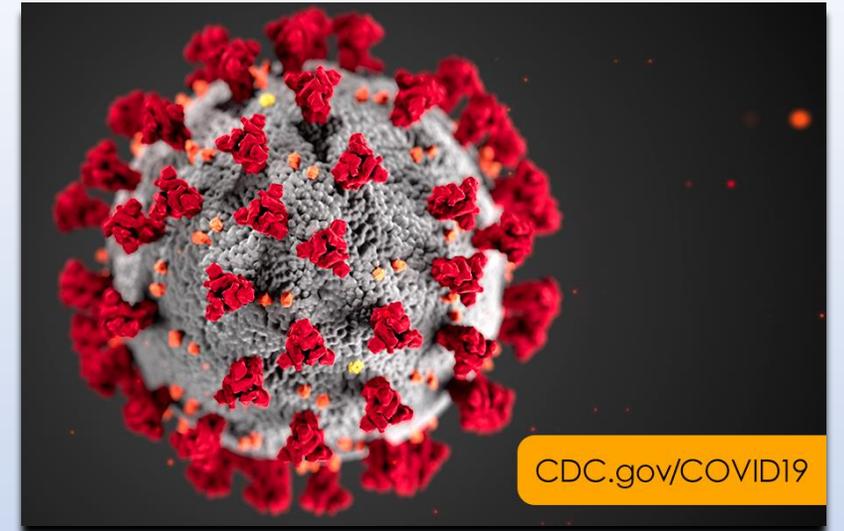
SARS-CoV-2 2019



- SARS-COV-2 is the virus that causes COVID-19 disease
- Symptoms:
 - Fever
 - Cough
 - Shortness of breath
 - GI disturbance
- Warning signs
 - *Trouble breathing*
 - *Persistent pain or pressure in the chest*
 - *New confusion or inability to arouse*
 - *Bluish lips or face*

Outline

- What is COVID-19?
- **Am I at risk?**
 - Of **death**? (probably not)
 - Of critical illness? (possibly!)
- #FlattenTheCurve
- Please don't be afraid to access medical care!
- How to Help



Summary

- 1.) For those panicked about COVID-19, people your age are unlikely to **die** from this.

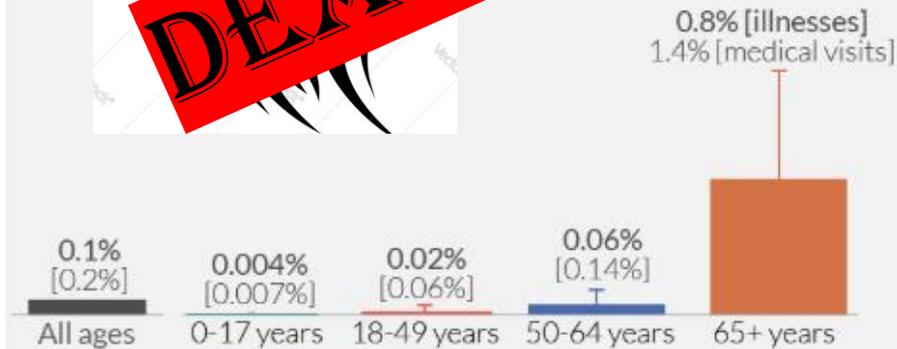
Case fatality rates: COVID-19 vs. US Seasonal Flu

Case fatality rate (CFR) is specific to a location and time. It is calculated by dividing the total number of deaths from a disease by the number of confirmed cases.

Seasonal Flu

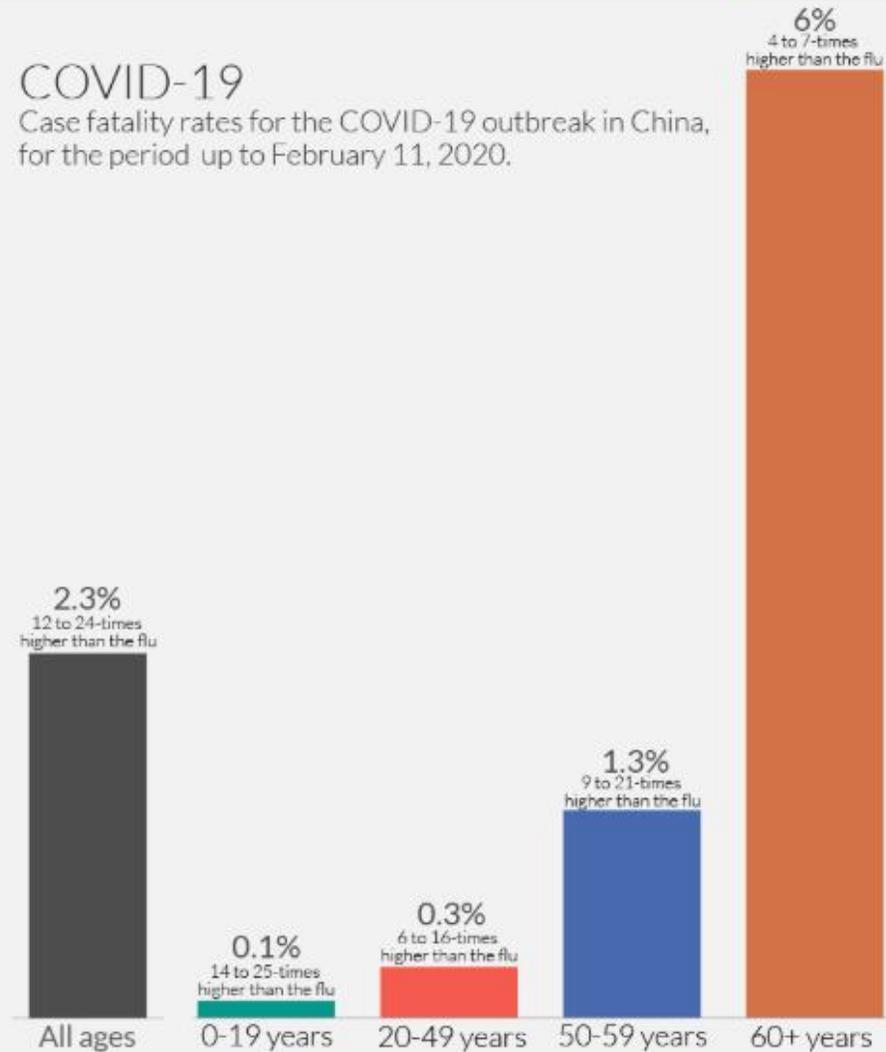
Case fatality rates for the influenza season 2018-19 in the USA.

Symptomatic cases are calculated based on models which aim to account for underreporting – figures based on medical visits are therefore also shown in square brackets, which may be a closer comparison to COVID-19 case fatality rates.



COVID-19

Case fatality rates for the COVID-19 outbreak in China, for the period up to February 11, 2020.



Data: Novel Coronavirus Pneumonia Emergency Response Epidemiology Team. *Vital surveillances: the epidemiological characteristics of an outbreak of 2019 novel coronavirus diseases (COVID-19)—China, 2020*. China CDC Weekly
US Influenza data is sourced from the US Centers for Disease Control and Prevention (CDC).

OurWorldinData.org – Research and data to make progress against the world's largest problems.

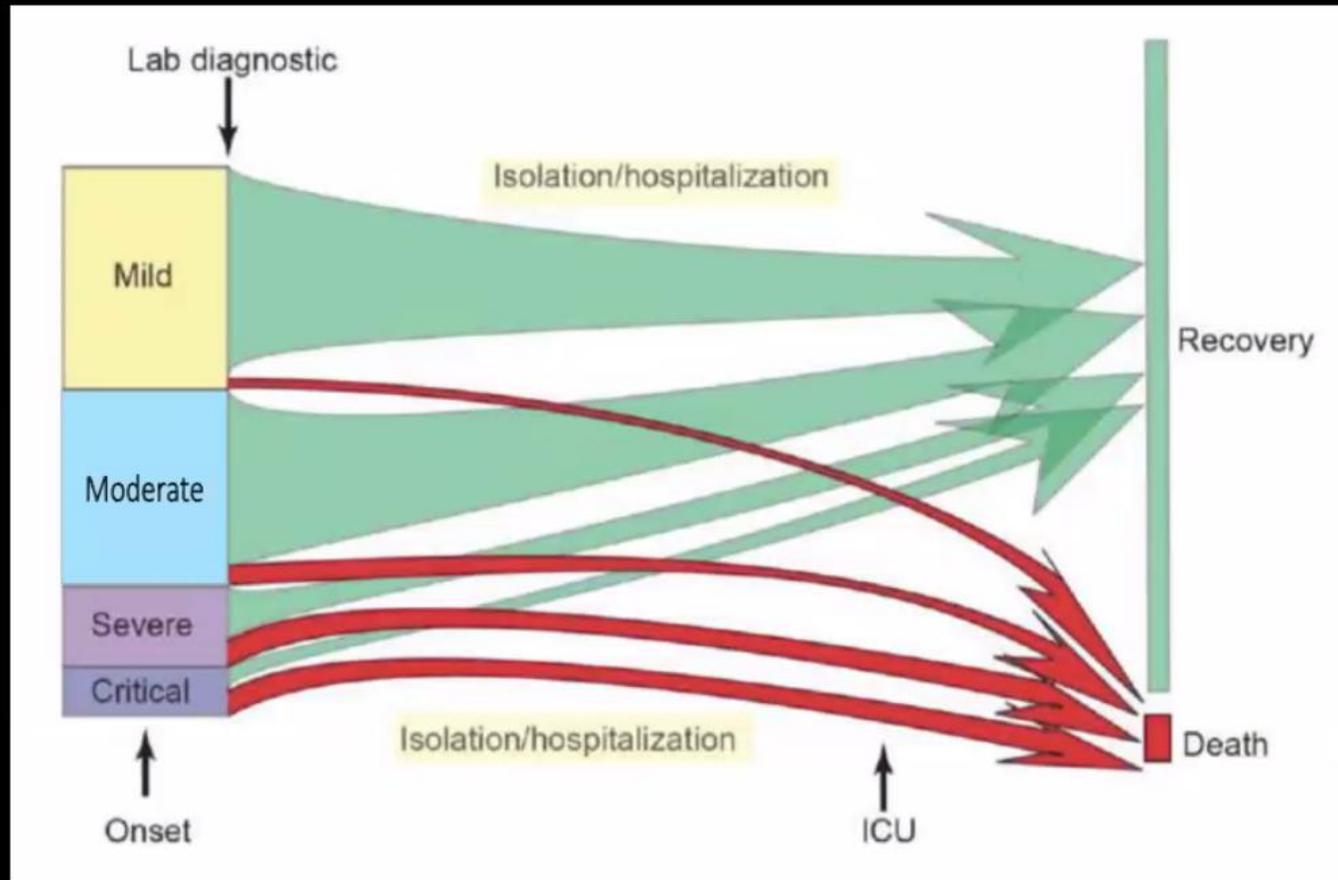
Licensed under CC-BY by the authors Hannah Ritchie and Max Roser.



CoVID-19: Progression of Disease

.....

Onset

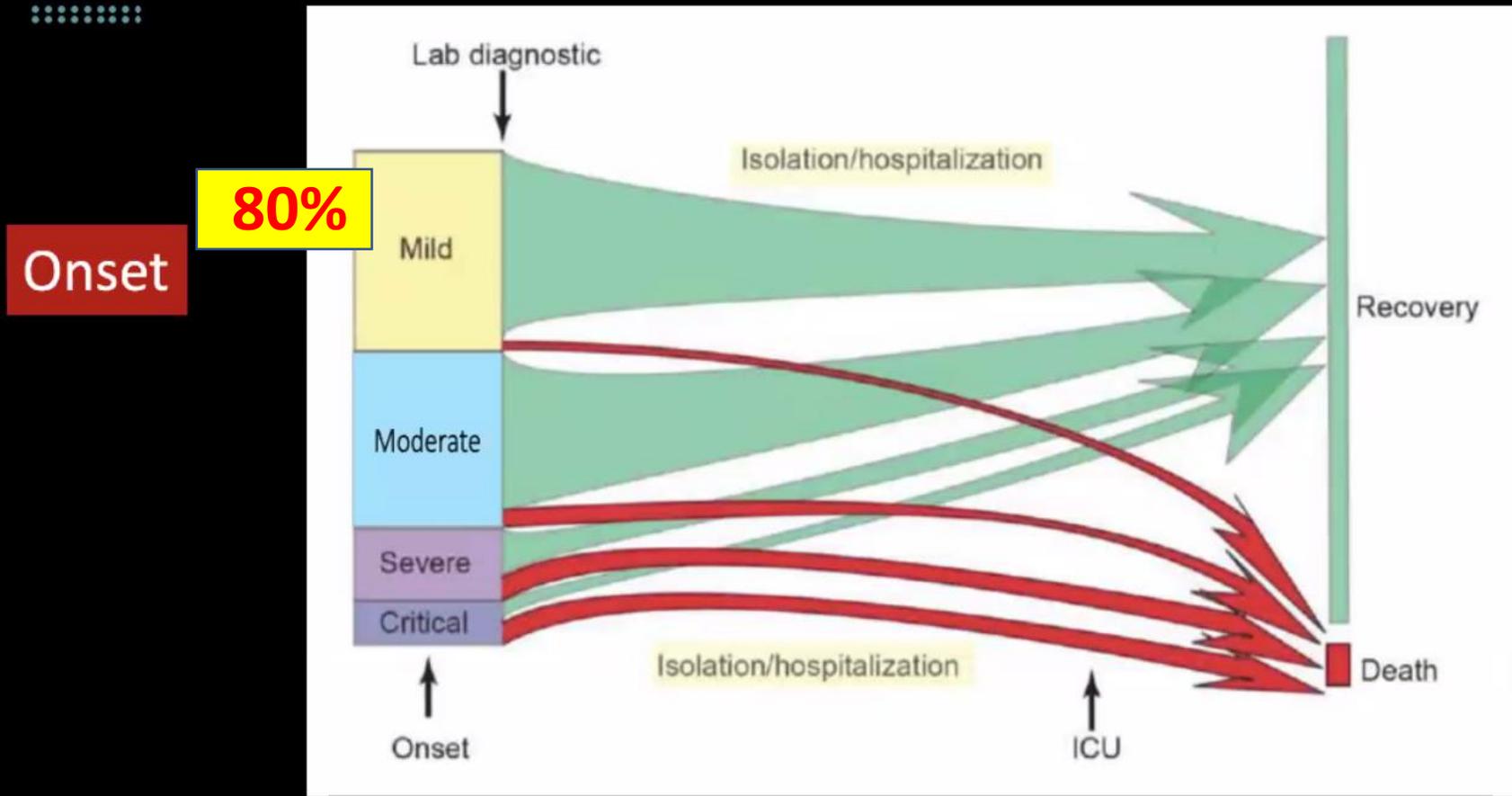


Recovery



CoVID-19: Progression of Disease

.....

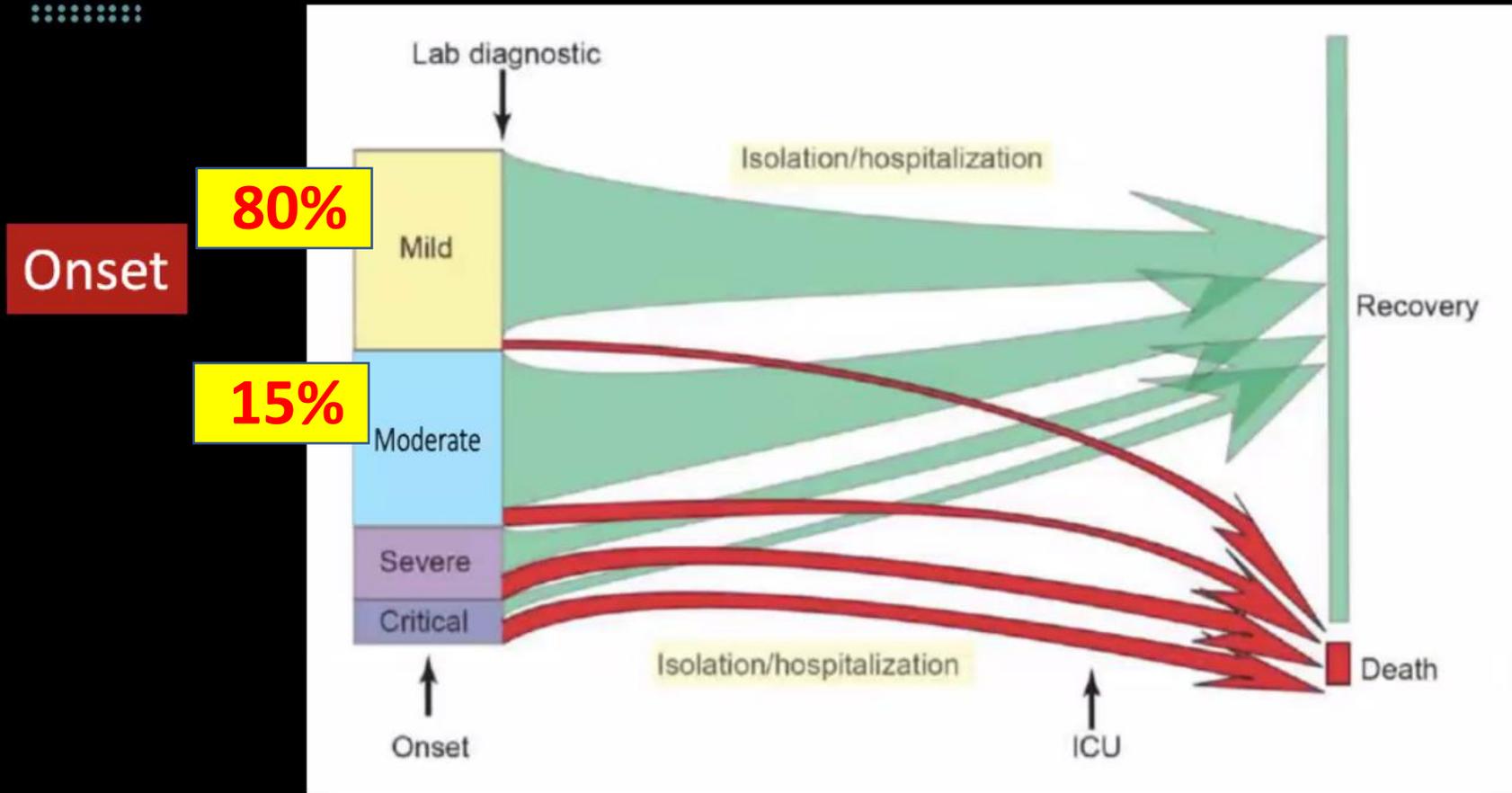


Recovery



CoVID-19: Progression of Disease

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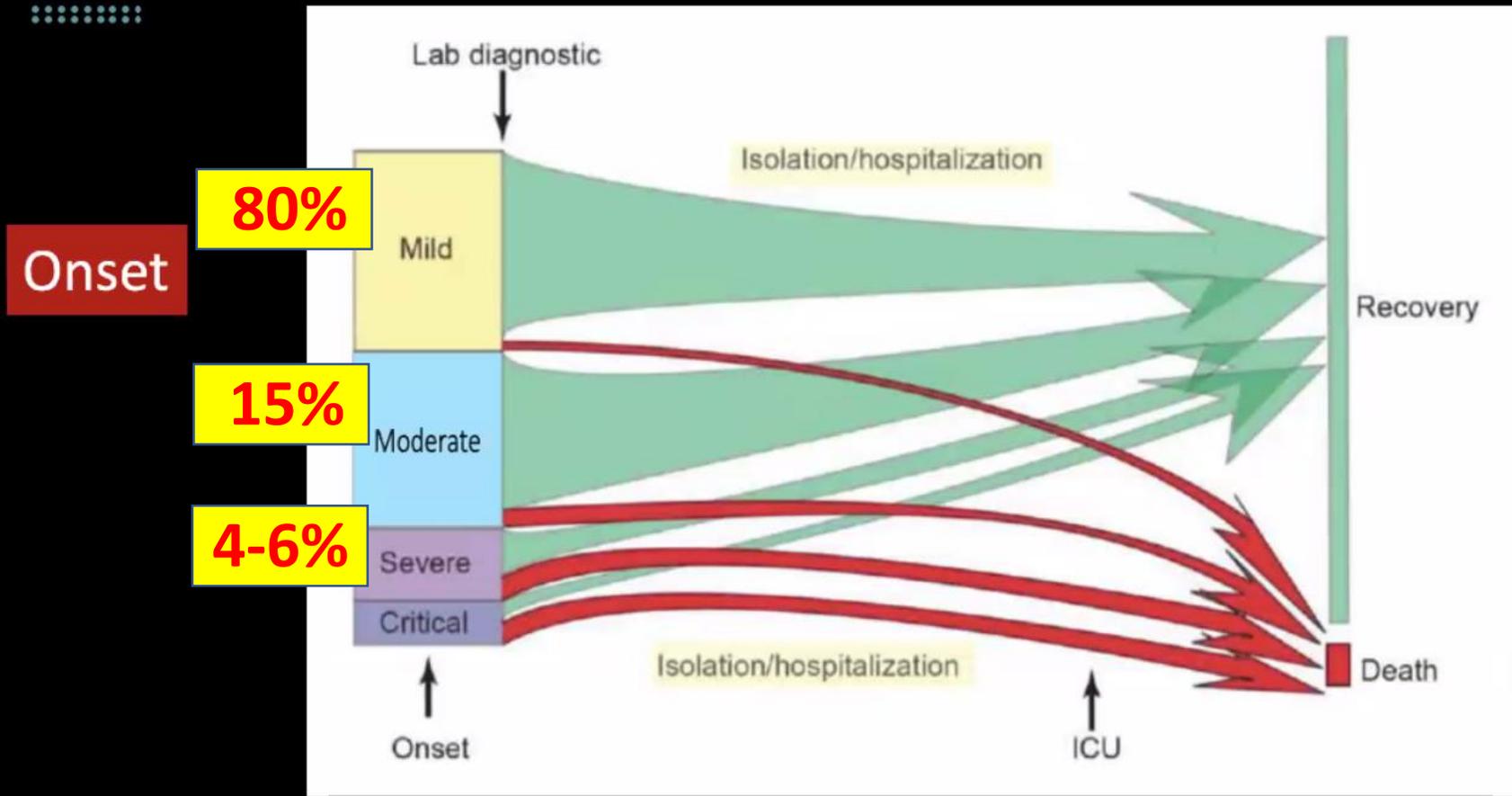


Recovery



CoVID-19: Progression of Disease

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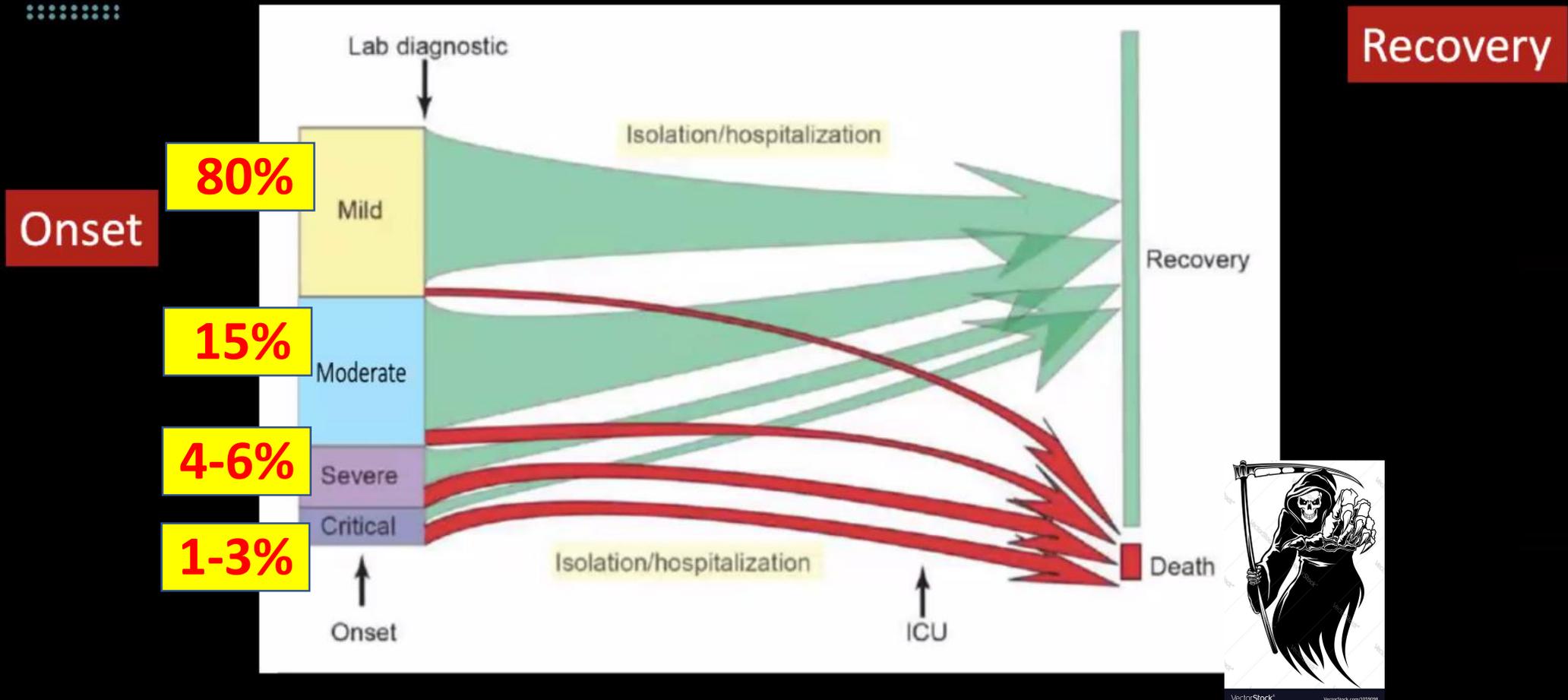


Recovery



CoVID-19: Progression of Disease

.....



CoVID-19: Case Fatality Rates

EMERGING INFECTIOUS DISEASES®

- China (3.5%)
- China, excluding Hubei Province (0.8%)
- 82 countries, territories, and areas (4.2%)
- Cruise ship (0.6%)
- **Broad range of 0.25%–3.0%**

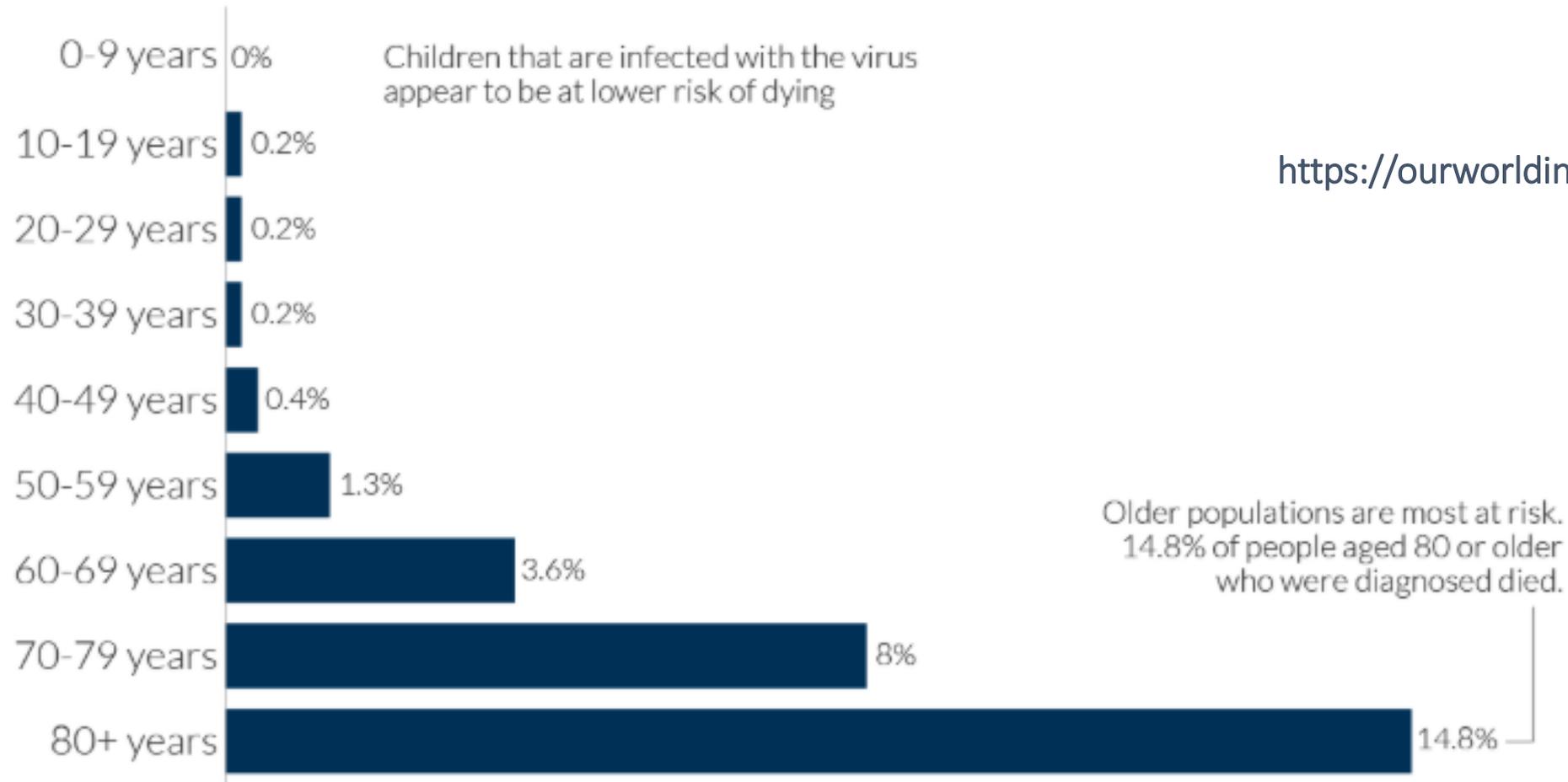


VectorStock®

VectorStock.com/1059098

Coronavirus: early-stage case fatality rates by age-group in China

Case fatality rate (CFR) is calculated by dividing the total number of deaths from a disease by the number of confirmed cases. Data is based on early-stage analysis of the COVID-19 outbreak in China in the period up to February 11, 2020.



<https://ourworldindata.org/coronavirus>

Data source: Novel Coronavirus Pneumonia Emergency Response Epidemiology Team. *Vital surveillances: the epidemiological characteristics of an outbreak of 2019 novel coronavirus diseases (COVID-19)—China, 2020*. China CDC Weekly.

Table. Case-Fatality Rate by Age Group in Italy and China^a

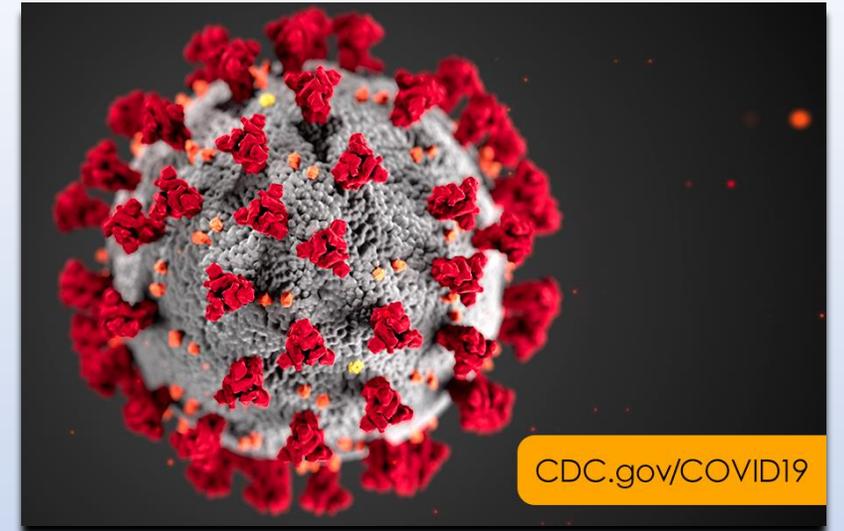
	Italy as of March 17, 2020		China as of February 11, 2020	
	No. of deaths (% of total)	Case-fatality rate, % ^b	No. of deaths (% of total)	Case-fatality rate, % ^b
All	1625 (100)	7.2	1023 (100)	2.3
Age groups, y				
0-9	0	0	0	0
10-19	0	0	1 (0.1)	0.2
20-29	0	0	7 (0.7)	0.2
30-39	4 (0.3)	0.3	18 (1.8)	0.2
40-49	10 (0.6)	0.4	38 (3.7)	0.4
50-59	43 (2.7)	1.0	130 (12.7)	1.3
60-69	139 (8.6)	3.5	309 (30.2)	3.6
70-79	578 (35.6)	12.8	312 (30.5)	8.0
≥80	850 (52.3)	20.2	208 (20.3)	14.8



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Outline

- What is COVID-19?
- **Am I at risk?**
 - Of death? (probably not)
 - Of **critical illness**? (possibly!)
- #FlattenTheCurve
- Please don't be afraid to access medical care!
- How to Help

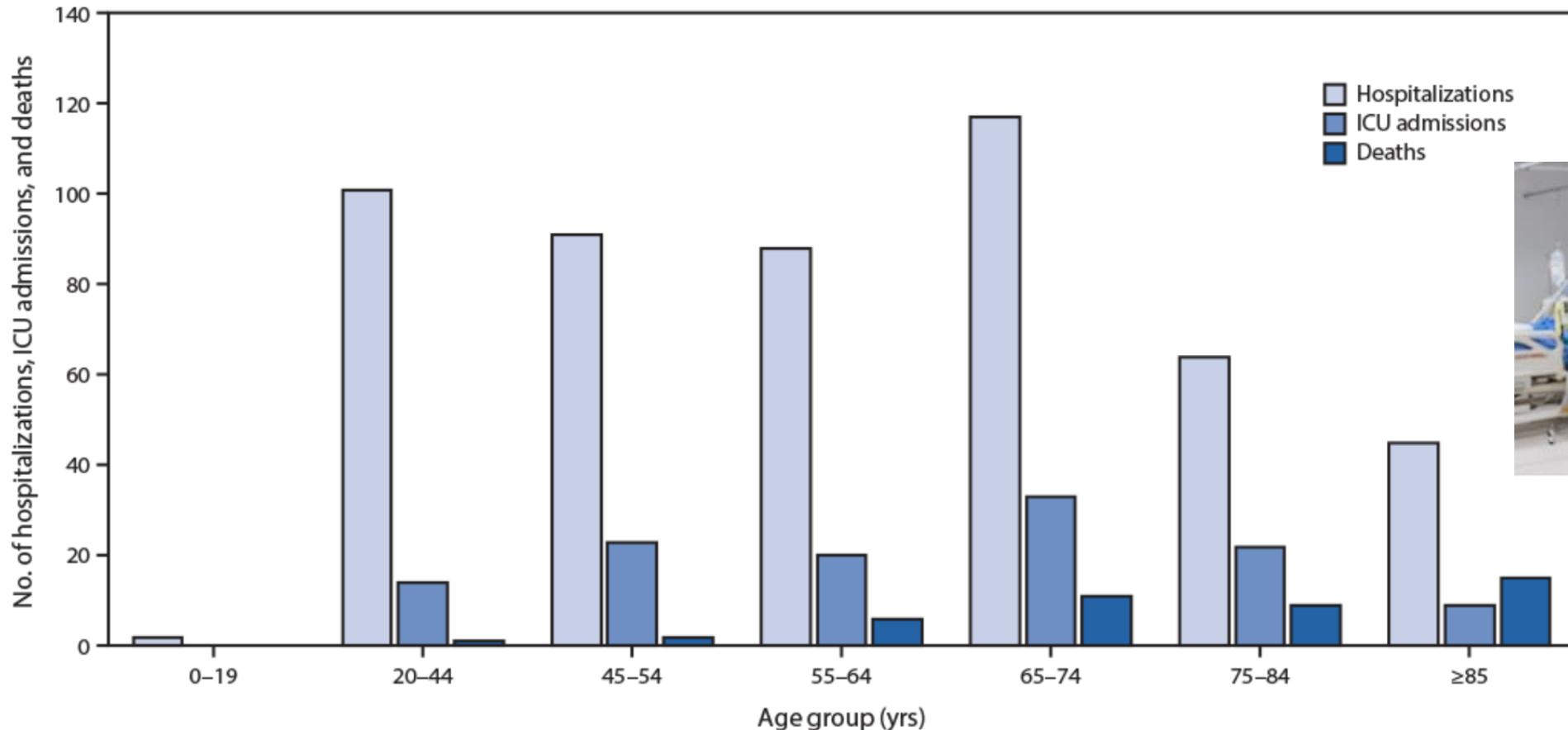


Summary

- 1.) For those panicked about COVID-19, people your age are unlikely to **die** from this.
- 2.) For those who are nonchalant and overly complacent about this **worldwide pandemic**, please be aware that some unlucky younger folks are sometimes getting critically ill and needing oxygen or even ICU-level care from COVID-19.

But even if you're not at risk of death, you may be at some risk of critical illness....

FIGURE 2. Coronavirus disease 2019 (COVID-19) hospitalizations,* intensive care unit (ICU) admissions,† and deaths,§ by age group — United States, February 12– March 16, 2020



shutterstock.com • 1427561408

Outline

- What is COVID-19?
- Am I at risk?
- **#FlattenTheCurve**
- Please don't be afraid to access medical care!
- How to Help

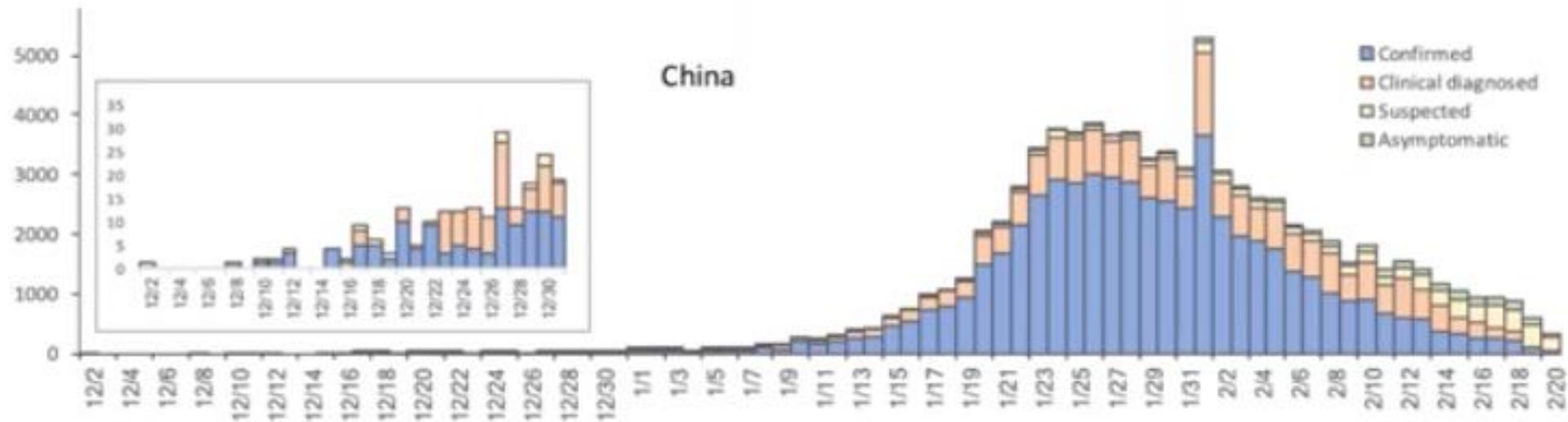


Summary

- 1.) For those panicked about COVID-19, people your age are unlikely to **die** from this.
- 2.) For those who are nonchalant and overly complacent about this **worldwide pandemic**, please be aware that some unlucky younger folks are sometimes getting critically ill, and needing oxygen or even ICU-level care from COVID-19.
- **3.) We need to #FlattenTheCurve – and it's going well so far**

- From Tue 3/10/20 webinar, Medical Society of Virginia:

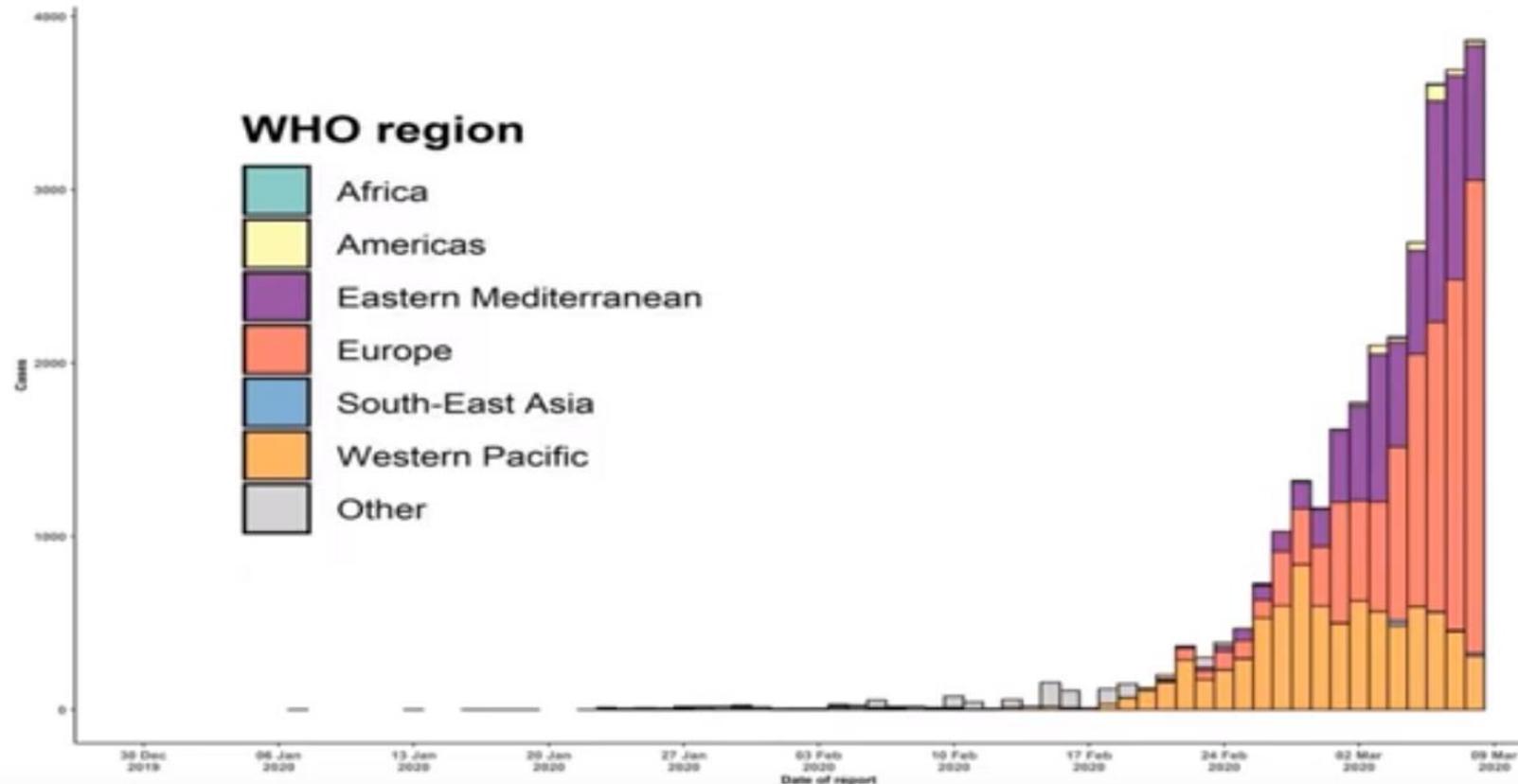
Epidemic Curve of COVID-19 Cases in China



**Epidemic curve of COVID-19 cases reported in China
by date of onset of illness, as of 20 February 2020**

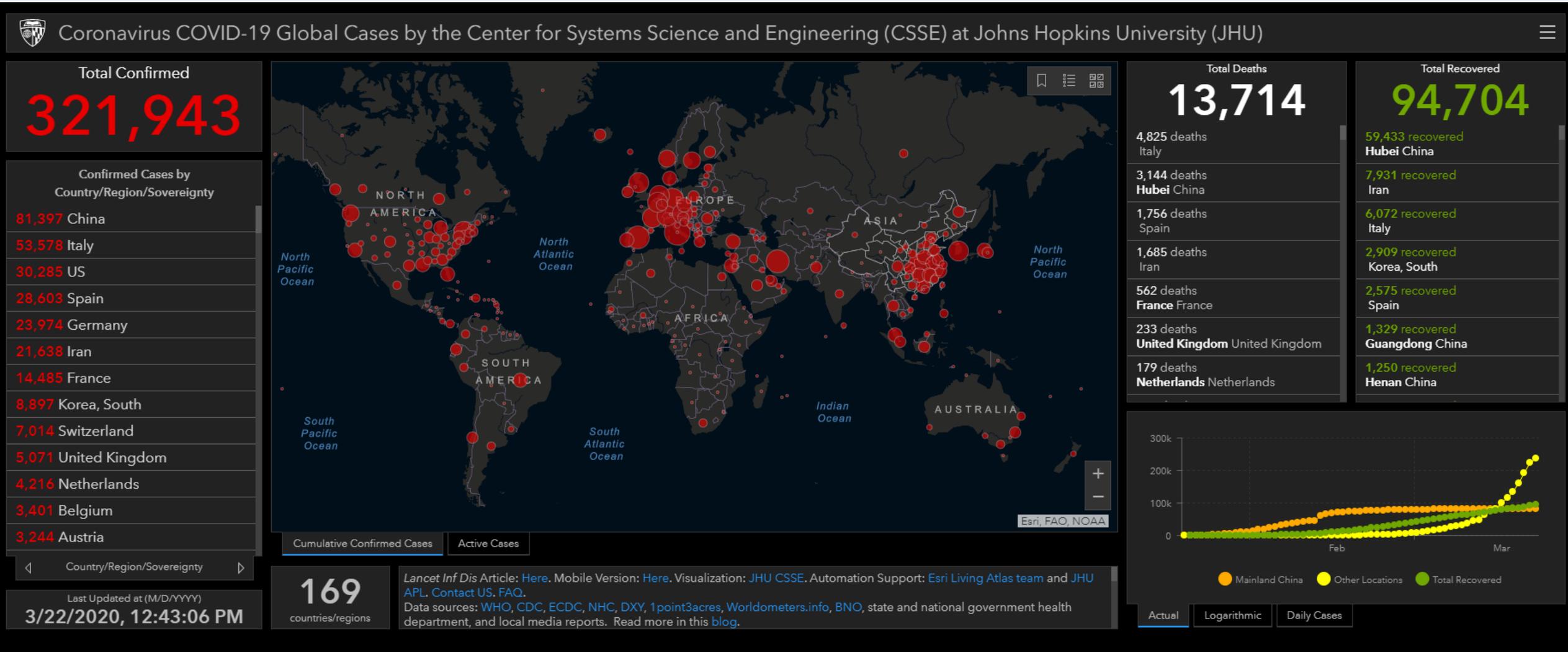
- From Tue 3/10/20 webinar, Medical Society of Virginia:

Epidemic Curve of COVID-19 Cases Outside of China by Date and WHO Region



As of March 9, 2020

- As of Sun 3/22/20



• As of Wed 4/1/20



Coronavirus COVID-19 Global Cases by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU)

Total Confirmed

911,308

Confirmed Cases by Country/Region/Sovereignty

203,608	US
110,574	Italy
102,136	Spain
82,361	China
76,544	Germany
52,870	France
47,593	Iran
29,854	United Kingdom
17,137	Switzerland
15,679	Turkey
13,964	Belgium
13,696	Netherlands
10,663	Austria



Cumulative Confirmed Cases

Active Cases

180

countries/regions

Lancet Inf Dis Article: [Here](#). Mobile Version: [Here](#). Visualization: [JHU CSSE](#). Automation Support: [Esri Living Atlas team](#) and [JHU APL](#). Contact [US](#). [FAQ](#).

Data sources: [WHO](#), [CDC](#), [ECDC](#), [NHC](#), [DXY](#), [1point3acres](#), [Worldometers.info](#), [BNO](#), state and national government health departments, and local media reports. [Read more in this blog.](#)

Total Deaths

45,371

13,155	deaths	Italy
9,053	deaths	Spain
3,523	deaths	France
3,193	deaths	Hubei China
3,036	deaths	Iran
2,352	deaths	United Kingdom
1,173	deaths	Netherlands

Total Recovered

190,710

76,405	recovered	China
22,647	recovered	Spain
18,700	recovered	Germany
16,847	recovered	Italy
15,473	recovered	Iran
9,561	recovered	France
8,400	recovered	US



Confirmed

Logarithmic

Daily Increase

Last Updated at (M/D/YYYY)

4/1/2020, 1:20:57 PM

• As of Wed 4/22/20

World Map

NEW

U.S. Map

Critical Trends

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

Total Confirmed

2,582,529

Confirmed Cases by Country/Region/Sovereignty

- 825,306 US
- 208,389 Spain
- 183,957 Italy
- 159,300 France
- 148,704 Germany
- 130,184 United Kingdom
- 95,591 Turkey
- 85,996 Iran
- 83,868 China
- 57,999 Russia
- 43,368 Brazil
- 41,889 Belgium
- 39,405 Canada



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

185

countries/regions

Lancet Inf Dis Article: [Here](#). Mobile Version: [Here](#). Lead by JHU CSSE. Automation Support: [Esri Living Atlas team](#) and [JHU APL](#). [Contact US](#). [FAQ](#).

Data sources: WHO, CDC, ECDC, NHC, DXY, 1point3acres, Worldometers.info, BNO, the COVID Tracking Project (testing)

Total Deaths

178,481

- 24,648 deaths Italy
- 21,717 deaths Spain
- 20,796 deaths France
- 17,337 deaths United Kingdom
- 14,887 deaths New York City **New York US**
- 6,262 deaths Belgium

Deaths Recovered

Total Test Conducted in U.S.

4,163,464

- 649,325 tested New York US
- 292,906 tested California US
- 282,340 tested Florida US
- 205,399 tested Texas US
- 184,826 tested New Jersey US
- 175,372 tested Massachusetts US
- 166,851 tested

US Tested



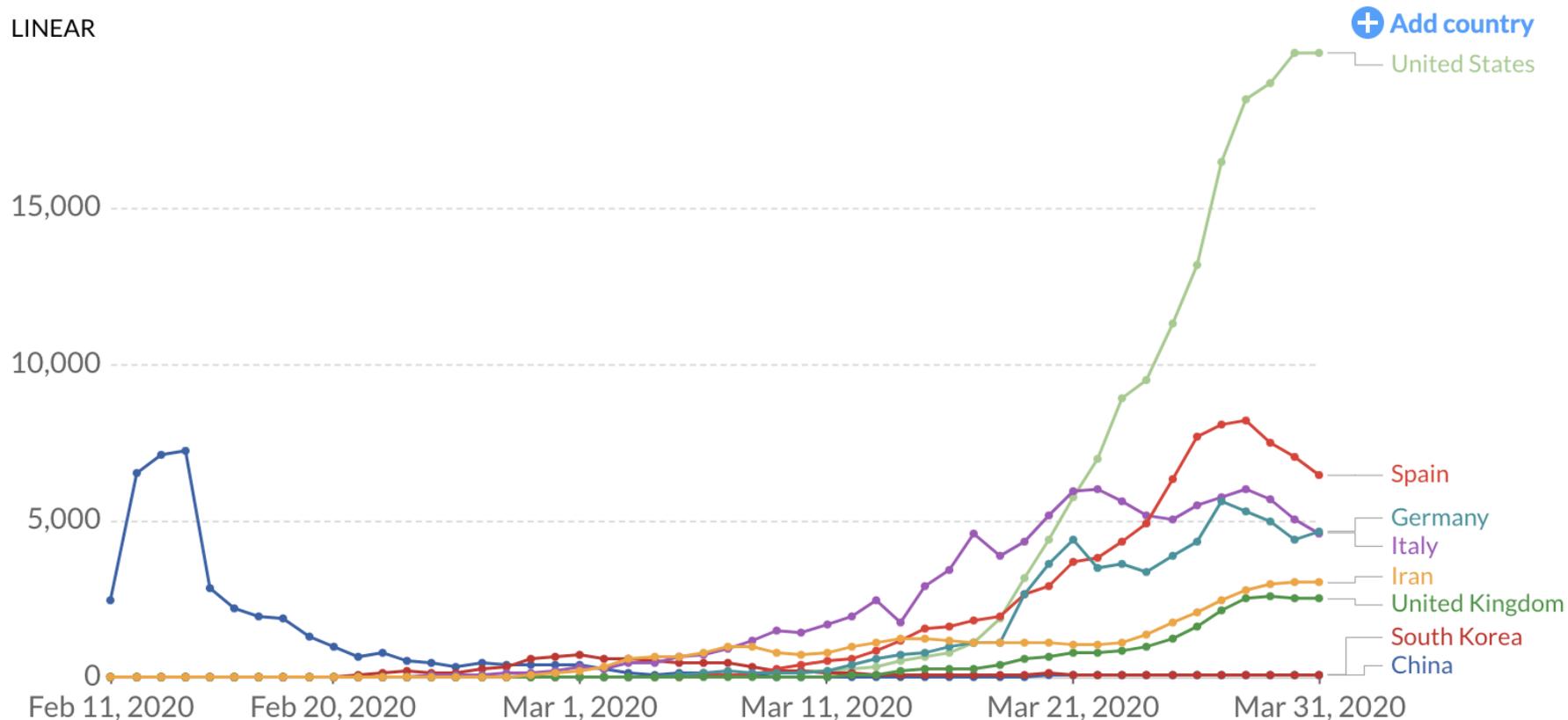
Confirmed Logarithmic Daily Cases

Last Updated at (M/D/YYYY) 4/22/2020, 6:38:37 AM

COVID-19 – Daily new confirmed cases – rolling 3-day average

The number of confirmed cases is lower than the number of total cases. The main reason for this is limited testing.

LINEAR



Source: European CDC – Situation Update Worldwide – Last updated 31st March, 13:00 (London time)

CC BY

Note: The rolling average is the average across three days – the confirmed cases on the particular date, and those on the previous and the following day. For example, the value for 26th March is the average over the 25th, 26th and 27th March. The latest value is calculated as the average of confirmed cases on the particular date and the previous day.

▶ Dec 31, 2019

Mar 31, 2020

CHART

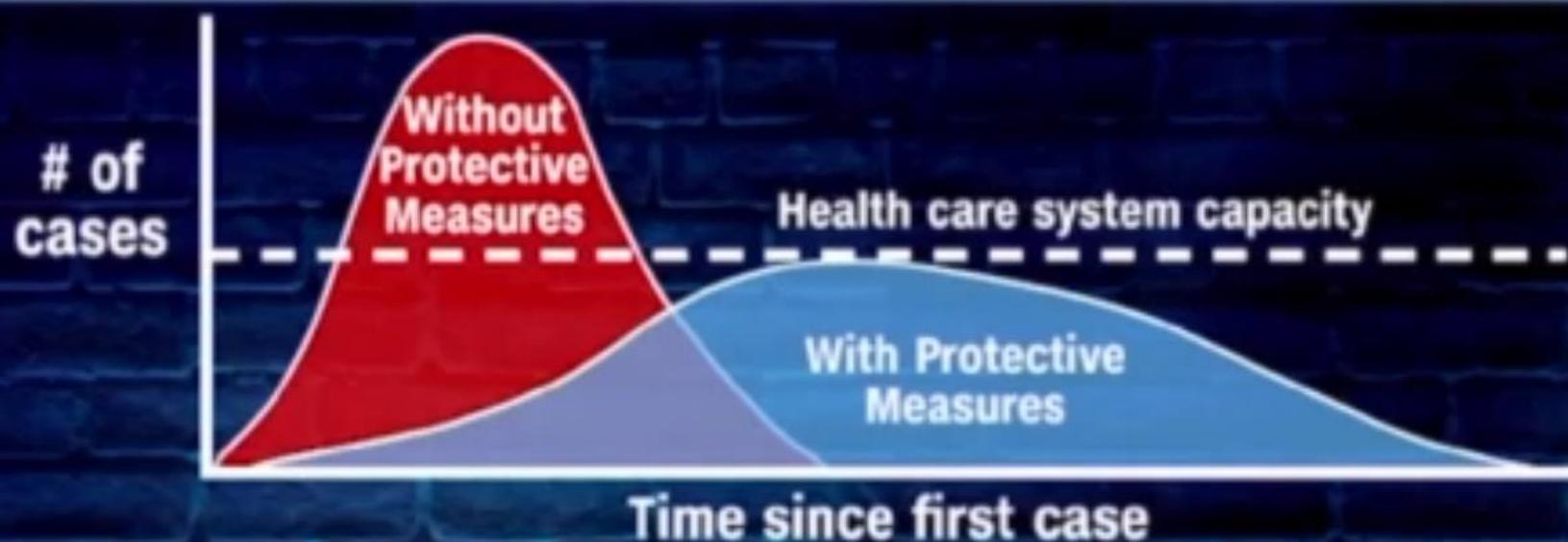
MAP

DATA

SOURCES



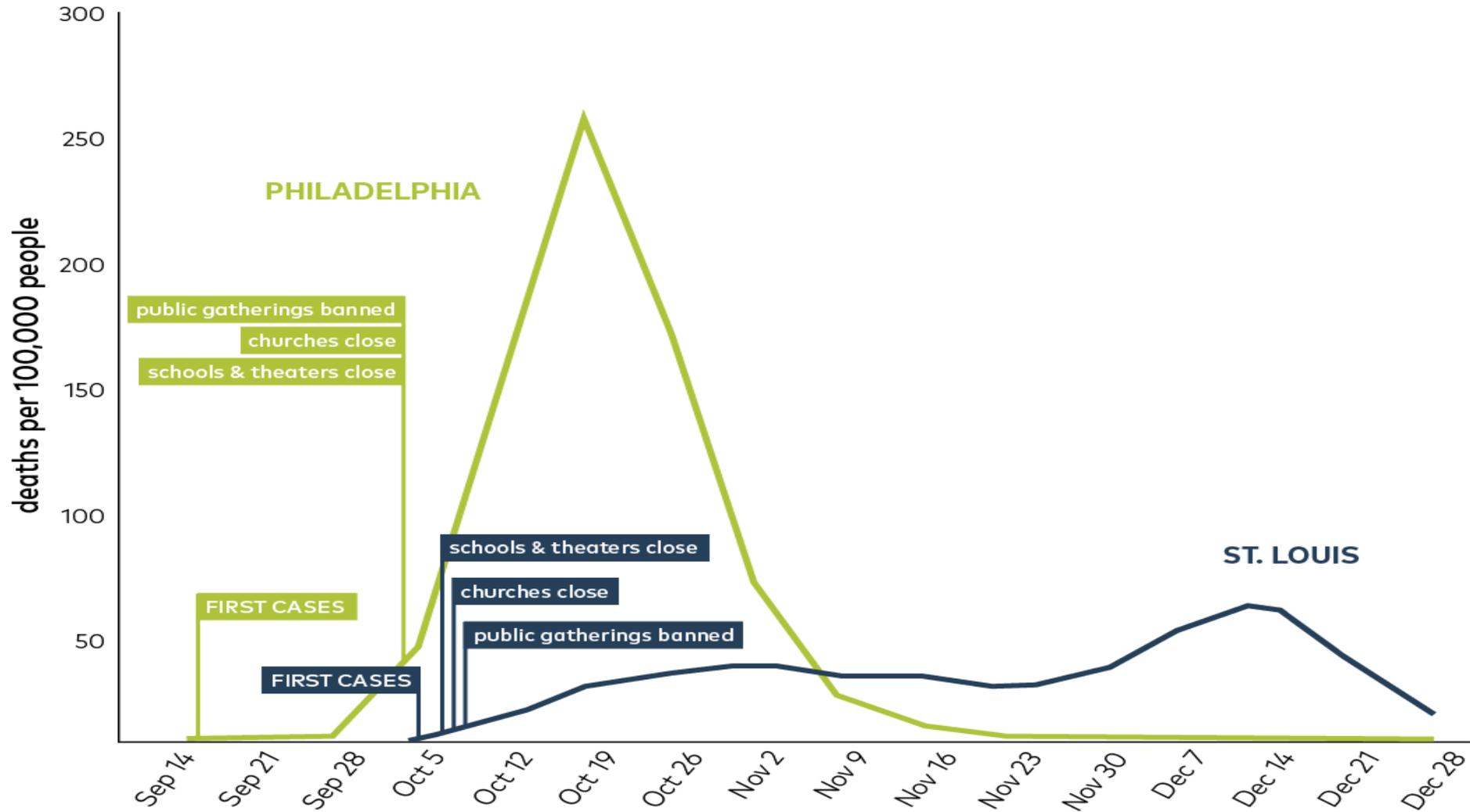
FLATTENING THE CORONAVIRUS CURVE



Source: New York Times/CDC/The Economist

Delaying preventative measures made the 1918 flu pandemic much worse for some cities

St. Louis managed to flatten their curve by implementing social distancing measures rapidly, whereas Philly decided to go ahead with a parade scheduled on September 28. Their pandemics turned out very differently.

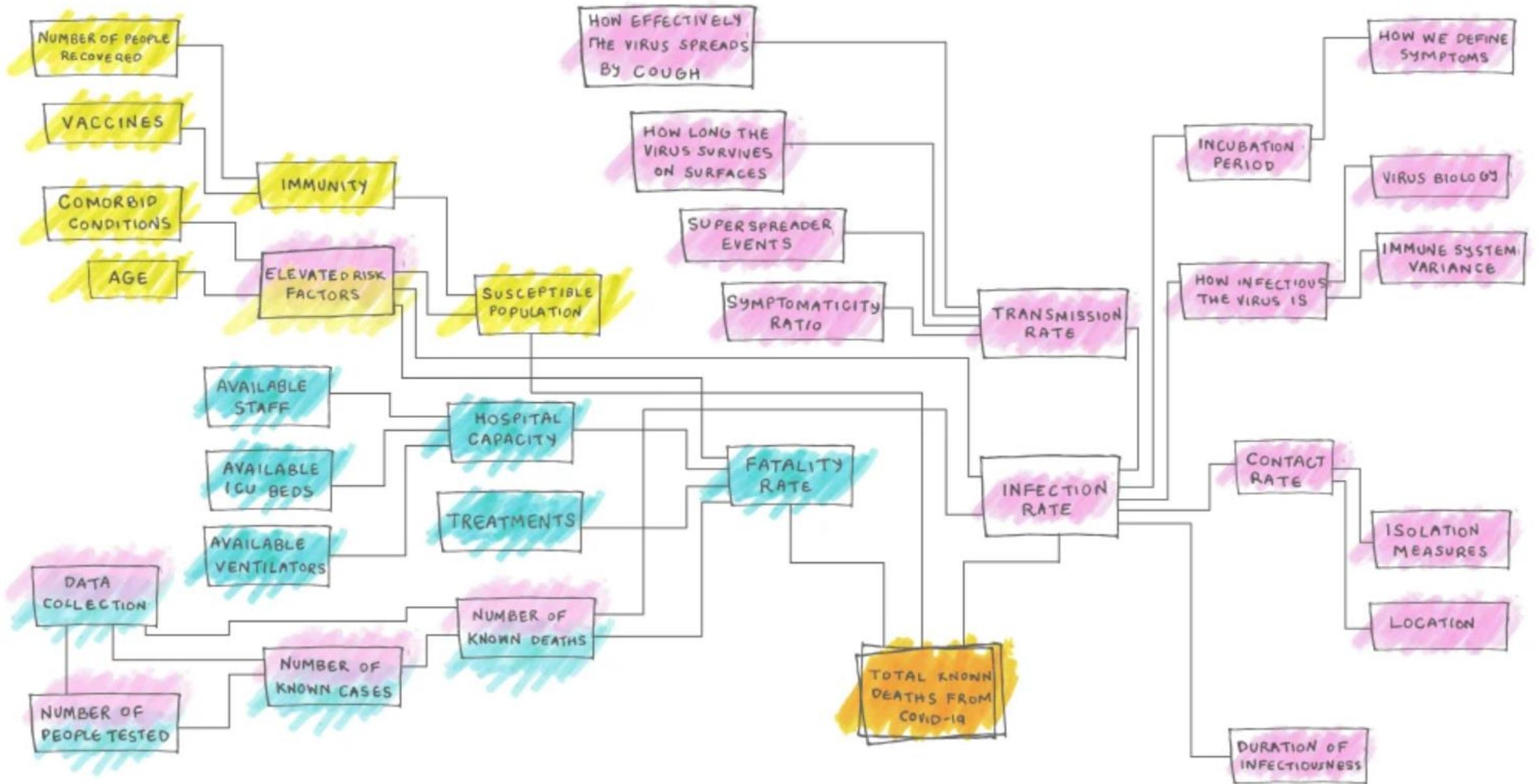


Summary

- 3.) For everyone, the main reason for cancelling sports events, closing schools/churches, and encouraging social and physical distancing is to #FlattenTheCurve, to protect the elderly *and* your healthcare workers on the front lines.
- Your nurses, doctors, and first responders are out there protecting **you**; please help protect **us** by slowing the spread.

Flattening the Curve – going well so far

- Please understand that data is limited, preliminary, and **constantly-evolving**.
 - Pandemics are difficult to model and predict.
 - Some “facts” stated just last week, may now already be out-of-date.



• **4/1/20** projection: peak daily deaths = 2214/day in USA (4/15)

United States of America

14 days until peak resource use on
April 15, 2020

Resources needed for COVID patients on peak date

All beds needed
220,643 beds



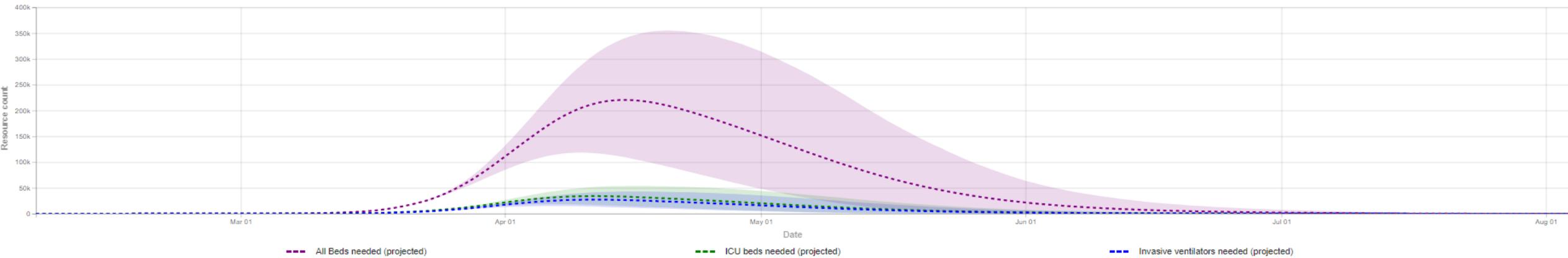
Bed Shortage
54,046 beds

ICU beds needed
32,976 beds



ICU Bed Shortage
13,856 beds

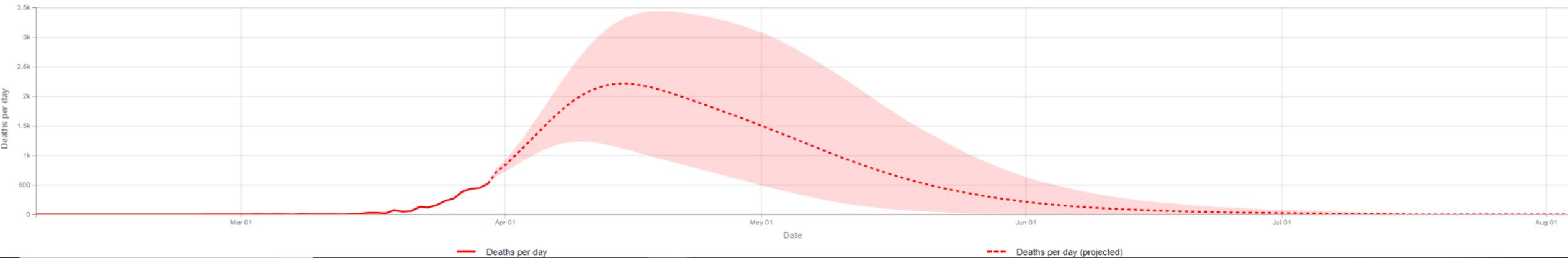
Invasive ventilators needed
26,381 ventilators



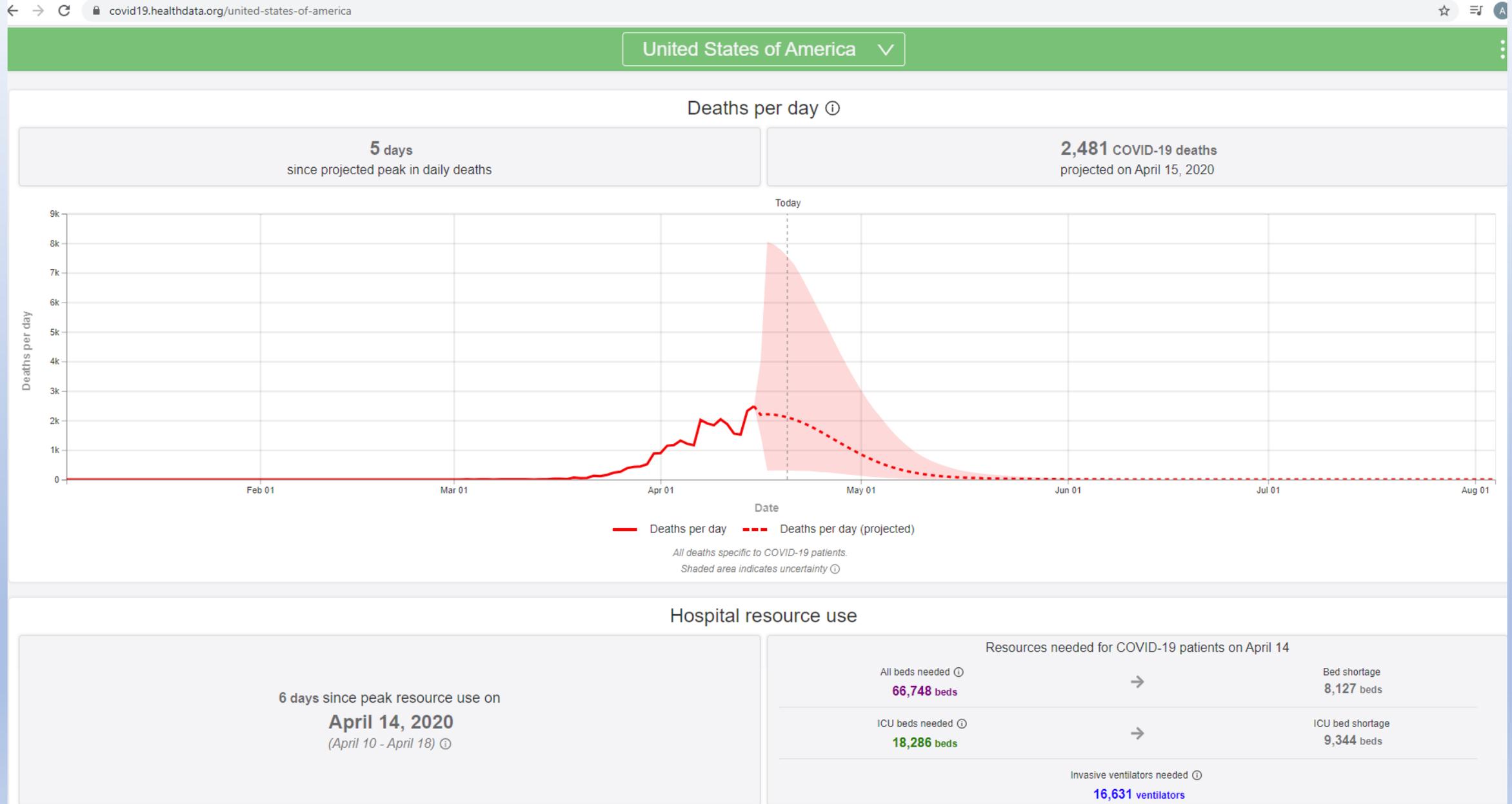
Deaths per day

14 days
until peak count of daily deaths

2,214 COVID-19 deaths
projected on April 15, 2020



• 4/20/20 projection: peak daily deaths = 2481/day in USA (on 4/15)



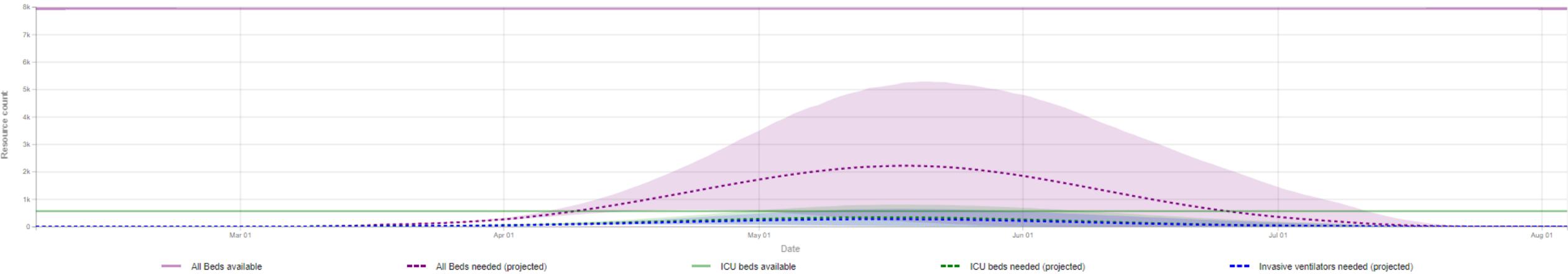
- **4/1/20** projection: peak daily deaths = 22/day in Missouri (on 5/18)

Missouri

47 days until peak resource use on
May 18, 2020

Resources needed for COVID patients on peak date

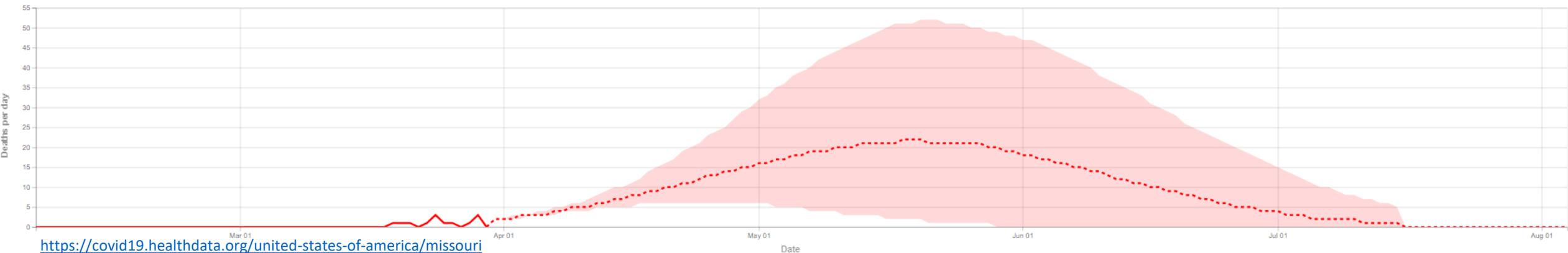
All beds needed 2,213 beds	→	All beds available 7,933 beds	→	Bed Shortage 0 beds
ICU beds needed 331 beds	→	ICU beds available 558 beds	→	ICU Bed Shortage 0 beds
		Invasive ventilators needed 265 ventilators		



Deaths per day

47 days
until peak count of daily deaths

22 COVID-19 deaths
projected on May 18, 2020



• 4/22/20 projection: peak daily deaths = 26/day in Missouri (on 4/14)

Missouri

Government-mandated social distancing

As of our most recent update on April 21, 2020, Missouri had implemented 4 out of 6 social distancing measures. See our [FAQ](#) page for details.

Mass gathering restrictions
🚫 March 23, 2020

Initial business closure
🏢 March 23, 2020

Educational facilities closed
🎓 March 23, 2020

Non-essential services closed
🚪 Not implemented

Stay at home order
🏠 April 6, 2020

Travel severely limited
➔ Not implemented

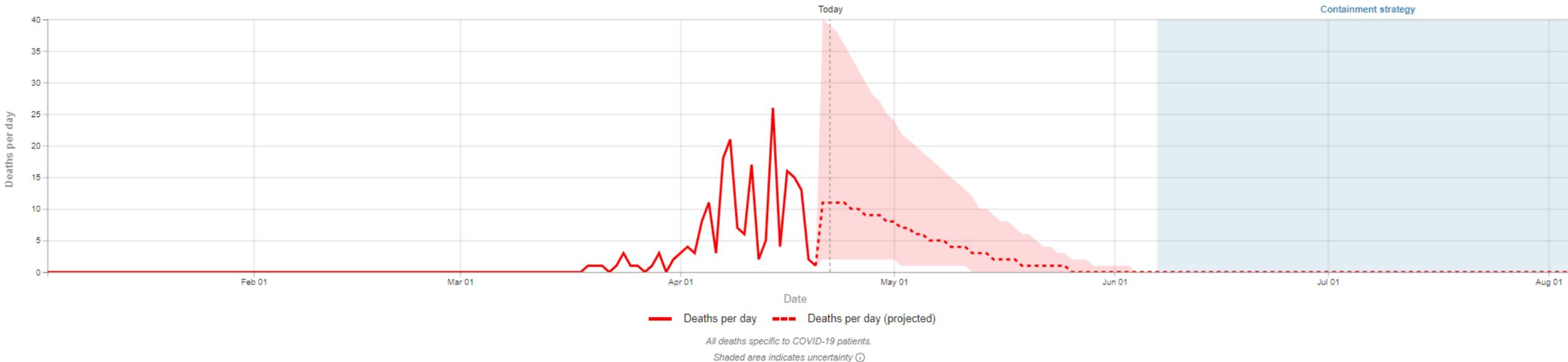
Deaths per day

8 days
since projected peak in daily deaths

26 COVID-19 deaths
projected on April 14, 2020

Containment strategy

After June 7, 2020, relaxing social distancing may be possible with containment strategies that include testing, contact tracing, isolation, and limiting gathering size.



Testing data

Testing data is for all tests, drive-thru and other facilities, for our entire 25-county service area, not just Boone County.

TOTAL TESTS	POSITIVE
4407	111

Inpatient data

Inpatient data is information about patients in our hospitals. Pending indicates inpatients for whom test results are pending.

INPATIENT POSITIVE	INPATIENT PENDING
3	2

Last updated 10:55am 4/23/2020.

COVID-19 Chat and Assessment Tool ▲

4:08 PM
04/23/2020

Mitigation Scenarios

- **Consider 5 possible futures**

- Two levels of intensity with two durations and one with no effect

- **Start of social distancing:** March 15th, as measured from VDH data

- **Duration:** Lift on April 30th or lift on June 10th

- **Intensity of mitigation:**

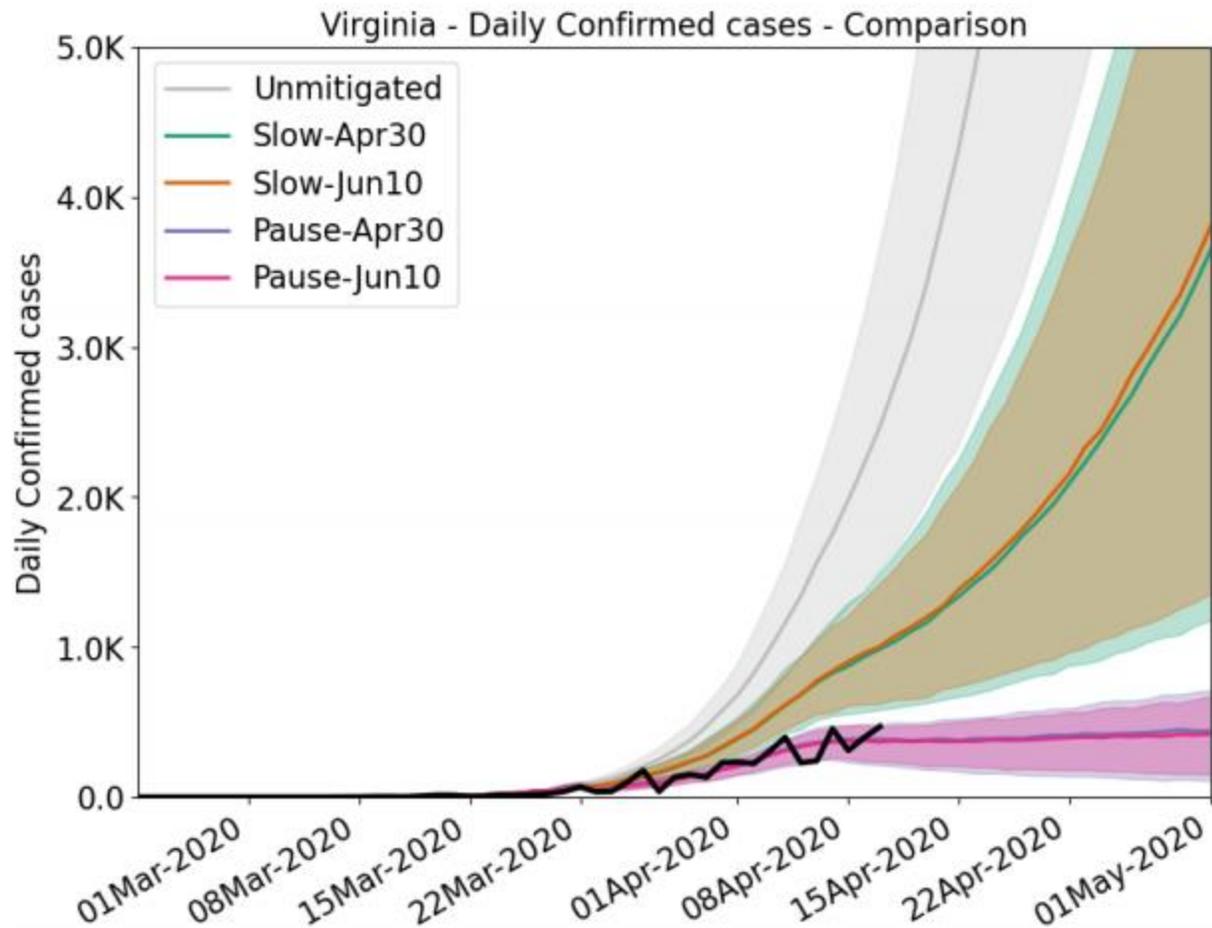
Slowing growth vs. Pausing growth

- **Slowing** – Social distancing slows the growth, but new cases do increase
- **Pausing** – Social distancing pauses growth, keeping new cases steady
- Pausing scenarios track the data better

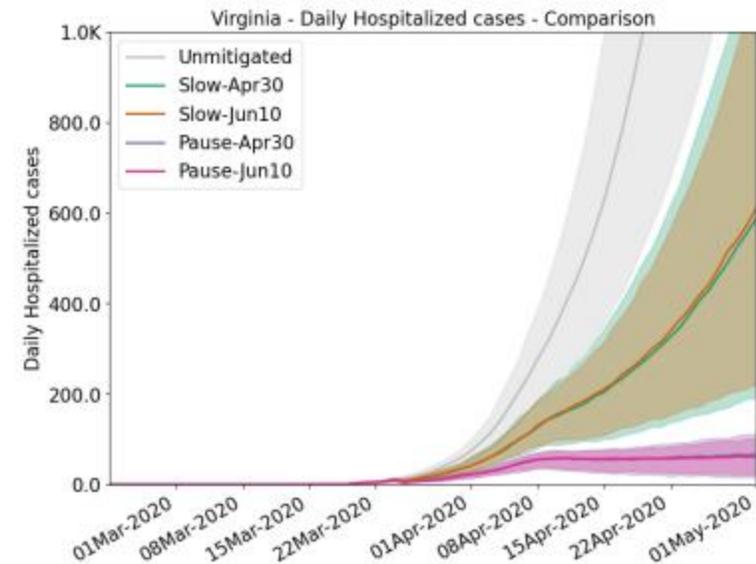
Duration (lift date)	Intensity	Short Name	Description
Apr 30 th	Slowing	Slow - Apr30	Slowing intensity, lift April 30 th
June 10 th	Slowing	Slow - Jun10	Slowing intensity, lift June 10 th
Apr 30 th	Pausing	Pause – Apr30	Pausing intensity, lift April 30 th
June 10 th	Pausing	Pause – Jun10	Pausing intensity, lift June 10 th
None	Unmitigated	Unmitigated	No effect of social distancing

Short-term Projections

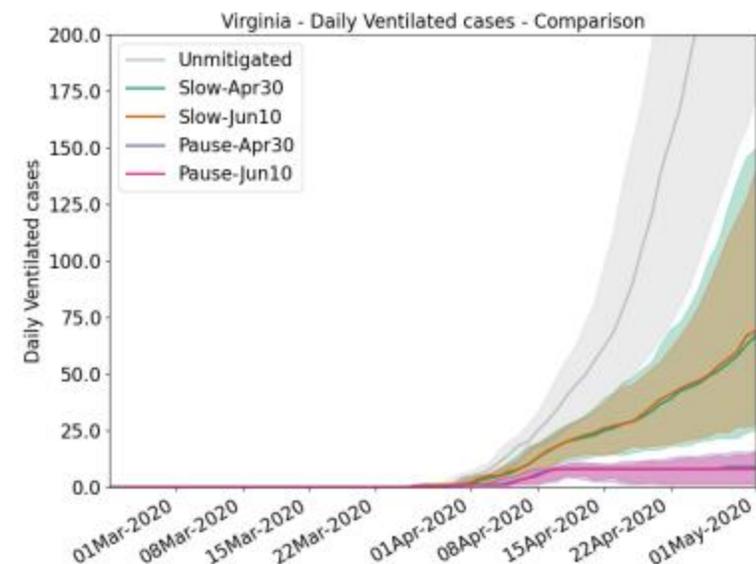
Confirmed cases



Hospitalizations

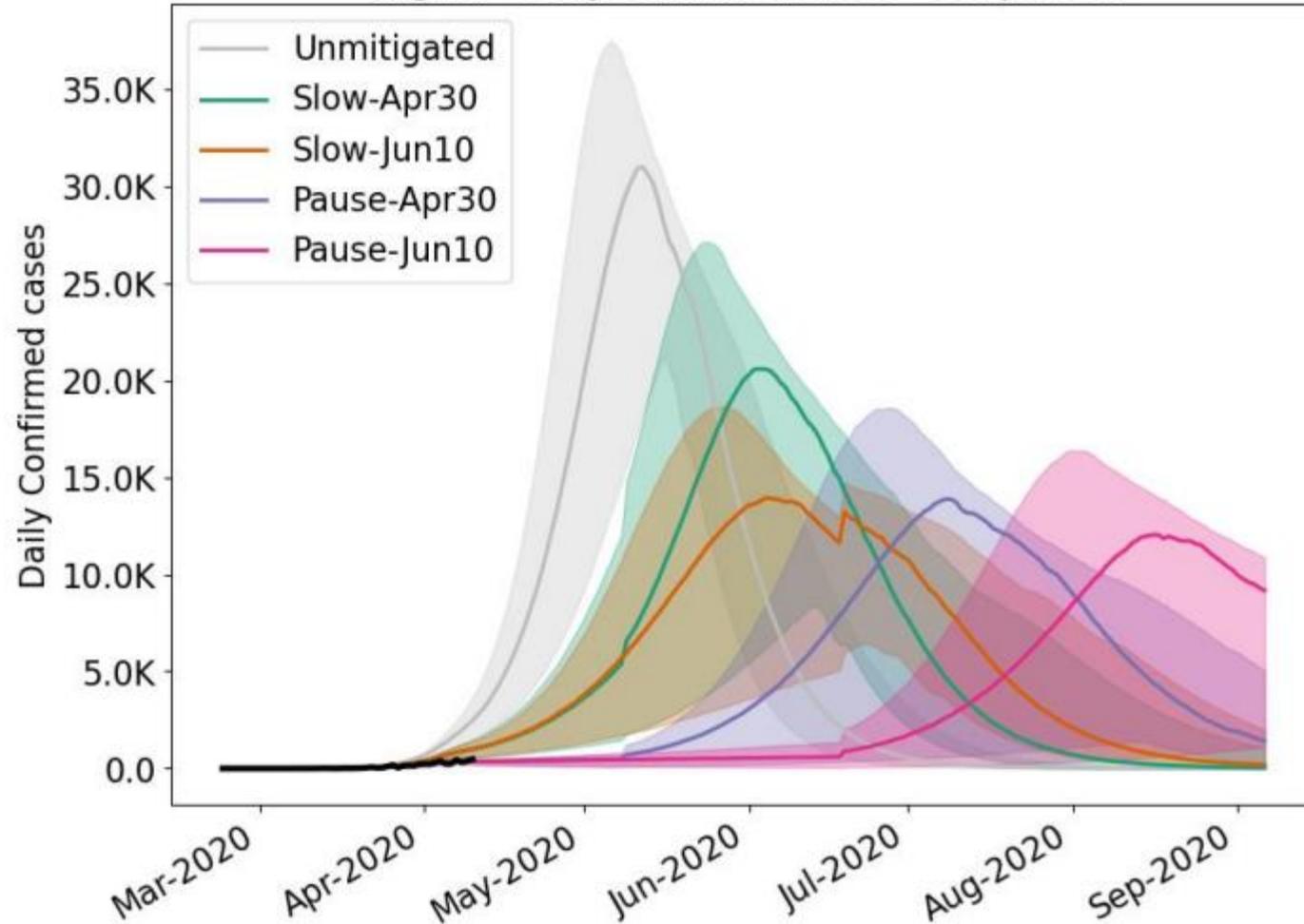


Ventilations



Stay the Course: Future Depends on Policy

Virginia - Daily Confirmed cases - Comparison



Weekly New Confirmed Cases

Week ending	Unmitigated	Slow Jun10	Pause Jun10
4/12/20	11,846	5,518	2,469
4/19/20	25,712	8,502	2,599
4/26/20	53,562	13,076	2,742
5/3/20	101,876	19,881	2,944
5/10/20	164,527	29,567	3,151
5/17/20	200,184	42,312	3,345
5/24/20	182,818	57,679	3,558
5/31/20	136,652	73,380	3,770
6/7/20	84,016	85,874	3,962
6/14/20	46,350	89,390	4,144
6/21/20	23,363	85,226	4,470
6/28/20	11,366	91,648	7,850

Numbers are medians of projections

Summary

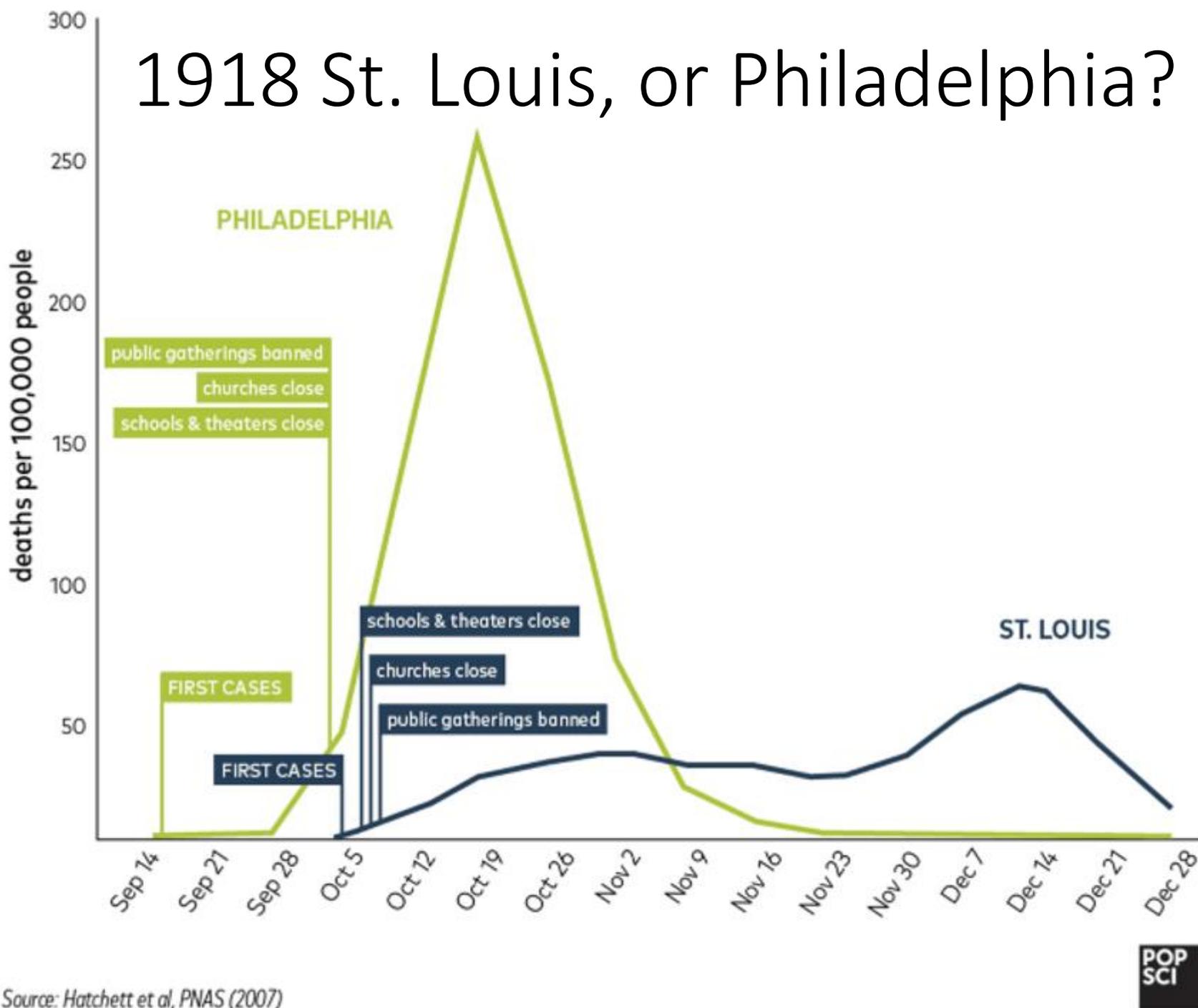
- 4.) COVID-19 may still be coming.
- I would argue that our goal is not to remain disease-free forever, but to slow the spread so as to not overwhelm our healthcare system.
- While we flattened the curve, we don't know what will happen when they cancel the "stay at home" and social distancing orders, and there may be multiple waves.

Concern: another wave of cases this fall?

This is speculation, but:

- Flu season is usually in the fall and spring
- Considerations for the fall:
 - Going back to school
 - Daycare facilities
 - Fall sports
 - Football season
-BUT, maybe by this fall, we'll be better about **good hygiene** and not going to work/school when feeling sick.

1918 St. Louis, or Philadelphia?



1918 Flu Pandemic:
Effect of delaying preventative measures

Philadelphia and St Louis

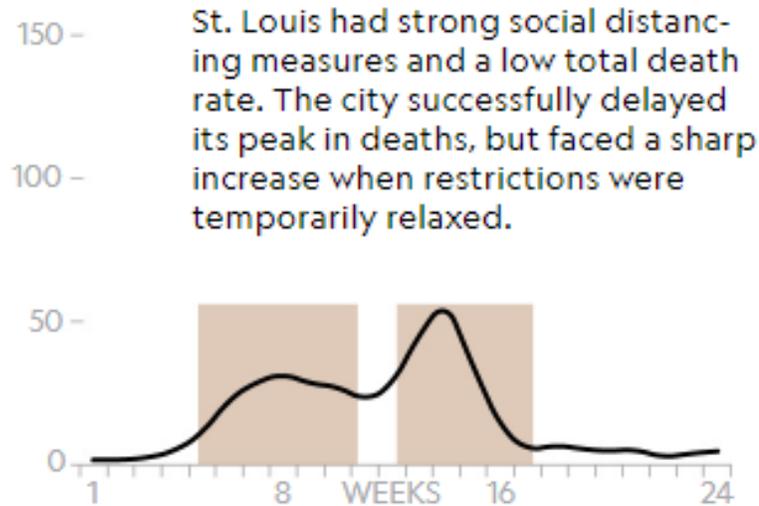
How some cities 'flattened the curve' during the 1918 flu pandemic

Social distancing isn't a new idea—it saved thousands of American lives during the last great pandemic. Here's how it worked.

BY [NINA STROCHLIC](#) AND RILEY D. CHAMPINE

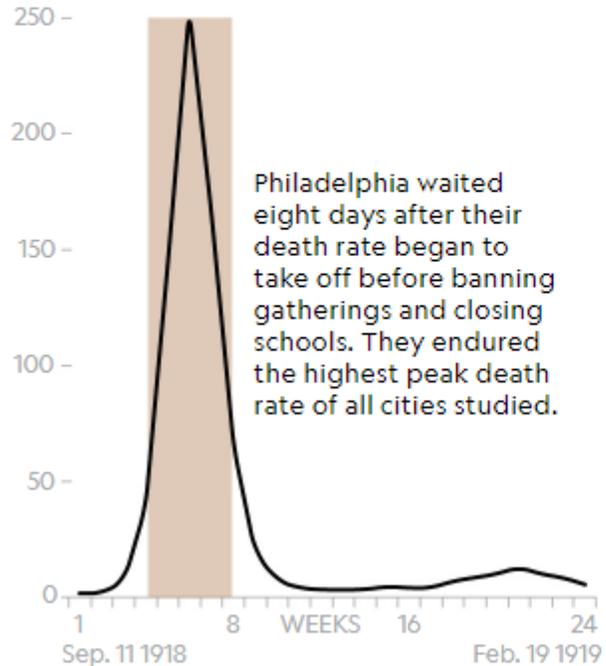
St. Louis

358 Deaths per 100,000



Philadelphia

748 Deaths per 100,000 after 24 weeks of pandemic

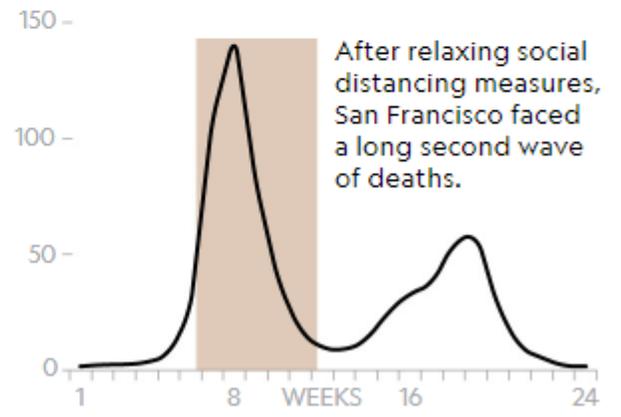


 Weekly deaths per 100,000 from 1918 pandemic above the expected rate

 Duration of social distancing measures

San Francisco

673 Deaths per 100,000



Outline

- What is COVID-19?
- Am I at risk?
- #FlattenTheCurve
- **Please don't be afraid to access medical care!**
- How to Help

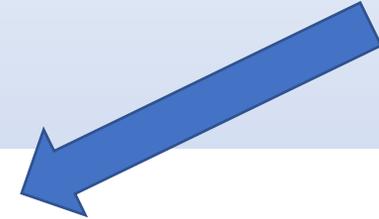


“Where have all the heart attacks gone?”

- National decline in accessing medical care
 - Fewer heart attacks
 - Fewer (non-COVID) emergency room visits
 - Fewer orthopedic visits
 - (speculation: less sports injuries? Less motor vehicle accidents?)

Don't be afraid of the hospital!

Don't let this be you!



"I would rather die than risk getting **coronavirus** right now."

That's what a patient told Dr. Comilla Sasson, an emergency medicine physician in Denver, after she advised the patient during a telemedicine visit that she was showing signs of a heart attack and should go to a hospital.

Don't be afraid to seek medical care

- Hospitals' first priority is keeping its patients safe
- Patients who are positive for COVID-19 or who are awaiting results are kept in **restricted areas**
- Hospitals have rigorous **disinfectant protocols** in their buildings and for their equipment.
- **Social and physical distancing** is used in clinics and hospitals.
- All patients, visitors and employees are screened for fever before entering the hospital. Visitors also are limited.
- Preventative care and treating chronic medical conditions are still very important! **Don't let an untreated chronic condition become an acute emergency.**

“Where have all the heart attacks gone?”

- **Preventative care** is still important!
- Most physicians’ offices are **still open** and doctors are seeing patients via virtual visits.
 - If you have concerns about any underlying medical condition, please contact your health care provider.
- Your hospitals are still open and ready to take care of you.
Go to the emergency room for medical emergencies.
 - Virtual visits and drive-thru COVID-19 testing help ease hospital capacity so that we can serve patients with other urgent needs.

Don't be afraid of the hospital!

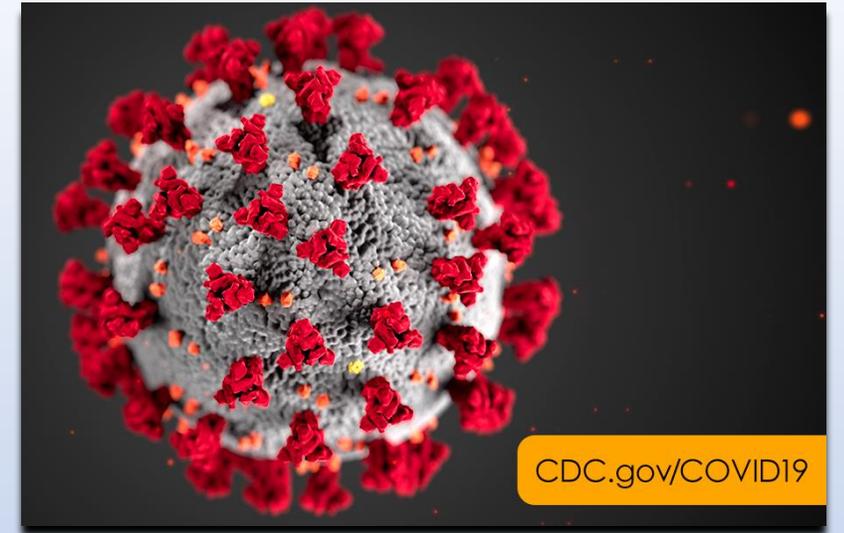
- All of your local hospitals are working closely together throughout this public health emergency.
- All of your hospitals are rigorously disinfecting public spaces. They are working hard to minimize the risk of spread of COVID-19.
- Preventative care and treating chronic medical conditions are still very important!
- Please don't let an untreated chronic condition become an acute emergency.

“Where have all the heart attacks gone?”

- Preventative care remains important!
- Most physician’s offices are **still open** and seeing patients via telemedicine.
 - If you have concerns about any underlying medical condition(s), please contact your health care provider.
- Your hospitals are still open and ready to take care of you, so **please go to the emergency room for any medical emergencies.**

Outline

- What is COVID-19?
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 - 1.) CDC recommendations
 - 2.) Donate blood
 - 3.) CoMoHelps.org
 - 4.) Student committees



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CDC recommendations (as of 4/22/20)

Know How it Spreads



- There is currently no vaccine to prevent coronavirus disease 2019 (COVID-19).
- **The best way to prevent illness is to avoid being exposed to this virus.**
- The virus is thought to spread mainly from person-to-person.
 - Between people who are in close contact with one another (within about 6 feet).
 - Through respiratory droplets produced when an infected person coughs, sneezes or talks.
 - These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.
 - Some recent studies have suggested that COVID-19 may be spread by people who are not showing symptoms.

Everyone Should



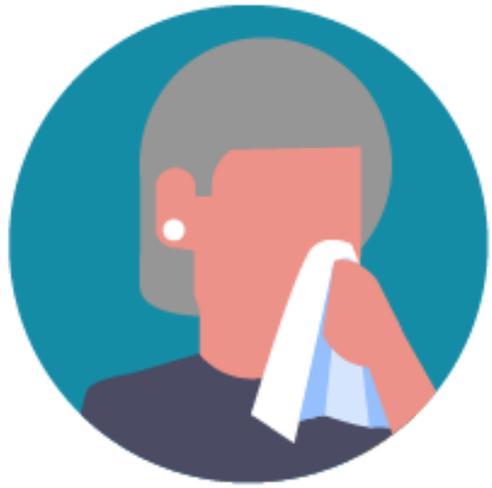
Clean your hands often

- [Wash your hands](#) often with soap and water for at least 20 seconds especially after you have been in a public place, or after blowing your nose, coughing, or sneezing.
- If soap and water are not readily available, **use a hand sanitizer that contains at least 60% alcohol**. Cover all surfaces of your hands and rub them together until they feel dry.
- **Avoid touching your eyes, nose, and mouth** with unwashed hands.



Avoid close contact

- **Avoid close contact** with people who are sick
- [Stay home as much as possible](#).   | [\[Español\]](#)  
- Put **distance between yourself and other people**.
 - Remember that some people without symptoms may be able to spread virus.
 - Keeping distance from others is especially important for [people who are at higher risk of getting very sick](#).



Cover coughs and sneezes

- If you are in a private setting and do not have on your cloth face covering, remember to **always cover your mouth and nose** with a tissue when you cough or sneeze or use the inside of your elbow.
- **Throw used tissues** in the trash.
- Immediately **wash your hands** with soap and water for at least 20 seconds. If soap and water are not readily available, clean your hands with a hand sanitizer that contains at least 60% alcohol.



Clean and disinfect

- **Clean AND disinfect frequently touched surfaces daily.** This includes tables, doorknobs, light switches, countertops, handles, desks, phones, keyboards, toilets, faucets, and sinks.
- **If surfaces are dirty, clean them.** Use detergent or soap and water prior to disinfection.
- **Then, use a household disinfectant.** Most common [EPA-registered household disinfectant](#)  will work.

How long does COVID last on surfaces?

Cardboard
24 hours



Stainless Steel
24-48 hours



Plastic
48-72 hours





Cover your mouth and nose with a cloth face cover when around others

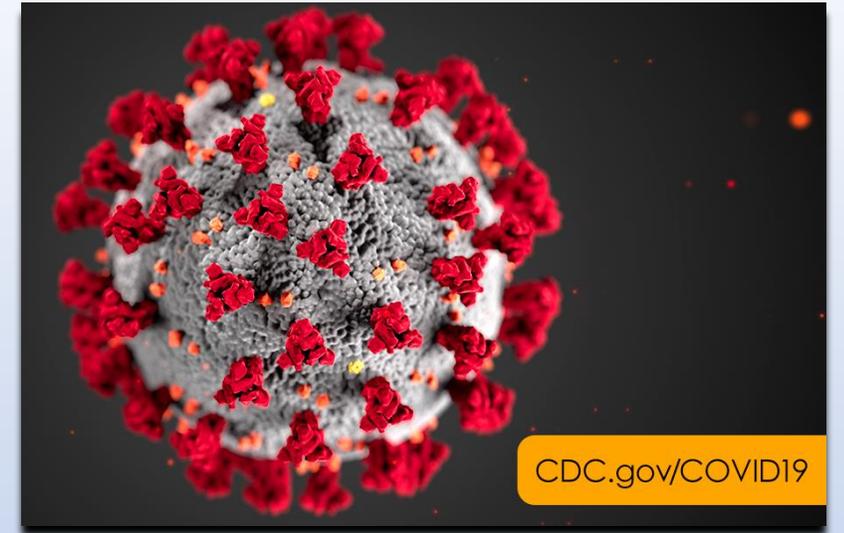
- You could spread COVID-19 to others even if you do not feel sick.
- Everyone should wear a cloth face cover when they have to go out in public, for example to the grocery store or to pick up other necessities.
 - Cloth face coverings should not be placed on young children under age 2, anyone who has trouble breathing, or is unconscious, incapacitated or otherwise unable to remove the mask without assistance.
- The cloth face cover is meant to protect other people in case you are infected.
- Do NOT use a facemask meant for a healthcare worker.
- Continue to keep about 6 feet between yourself and others. The cloth face cover is not a substitute for social distancing.

Summary of CDC recommendations

- The best way to prevent illness is to avoid being exposed:
 - Clean your hands often.
 - Avoid touching your eyes, nose, mouth with unwashed hands.
 - Avoid close contact with people who are sick.
 - Cover coughs and sneezes.
 - Cover your mouth and nose with a cloth face cover when around others.
- Social / physical distancing: stay 6 feet apart, avoid crowds
 - (“Stay Home” order in Missouri through 5/3/20)

Outline

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**American
Red Cross**

Blood
Services

F

Give Blood. Find a Drive.

ZIP or Sponsor Code

Find A Drive >

[Advanced Search](#)

Blood drive availability during COVID-19 outbreak.

We are working to quickly identify and replace blood drives canceled due to workplace and school closures. Search above for opportunities near you and check back often as we are continuously adding new donation opportunities. If you don't see available appointments near you in the near future, please search 14 days out or beyond. The need for blood is constant - patients need your help.



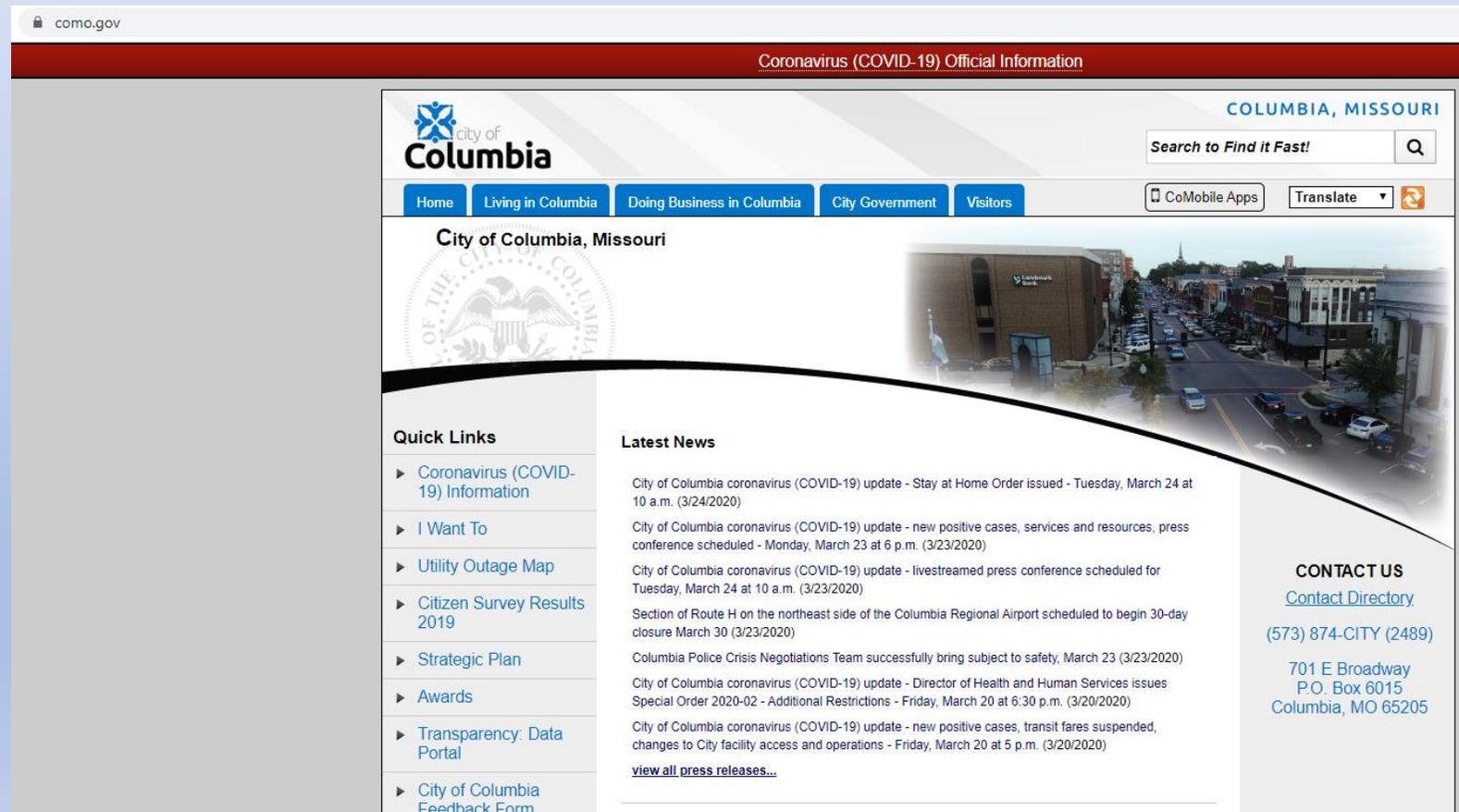
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Student volunteer opportunities

- For general volunteers: **go to como.gov, click on “coronavirus official info”**



The screenshot shows the City of Columbia, Missouri website. The browser address bar displays 'como.gov'. A red banner at the top of the page reads 'Coronavirus (COVID-19) Official Information'. The main header features the 'city of Columbia' logo, a search bar with the text 'Search to Find it Fast!', and navigation buttons for 'Home', 'Living in Columbia', 'Doing Business in Columbia', 'City Government', and 'Visitors'. Below the header is a large banner image of a city street with the text 'City of Columbia, Missouri'. The main content area is divided into two columns: 'Quick Links' and 'Latest News'. The 'Quick Links' column includes links for 'Coronavirus (COVID-19) Information', 'I Want To', 'Utility Outage Map', 'Citizen Survey Results 2019', 'Strategic Plan', 'Awards', 'Transparency: Data Portal', and 'City of Columbia Feedback Form'. The 'Latest News' column contains several news items, all related to the coronavirus update, including dates from March 20 to March 24, 2020. A 'view all press releases...' link is at the bottom of the news section. On the right side of the page, there is a 'CONTACT US' section with a 'Contact Directory' link and the address: 701 E Broadway, P.O. Box 6015, Columbia, MO 65205. The page also includes icons for 'CoMobile Apps', 'Translate', and a social media icon.

Student volunteer opportunities

- For general volunteers: goto como.gov, click on “coronavirus official info” => **then click on “give help”**

The screenshot shows the City of Columbia's official information page for Coronavirus (COVID-19). The page features a navigation menu with links for Home, Living in Columbia, Doing Business in Columbia, City Government, and Visitors. A search bar is located in the top right corner. The main heading is "CORONAVIRUS (COVID-19) OFFICIAL INFORMATION". Below this, there are two columns of information. The left column lists available resources such as Latest Updates, Health Resources, Get Help, Give Help, Frequently Asked Questions, Changes to City Services, City-Related Cancellations and Closings, and Official Orders and Documents. The right column displays statistics for Boone County and Missouri State Public Health Lab and CDC*, including the number of positive cases, deaths, and cases by age group.

Available Resources	Boone County	Missouri State Public Health Lab and CDC*
Latest Updates	20 Positive	255 Positive
Health Resources	1 Deaths	5 Deaths
Get Help		
Give Help		
Frequently Asked Questions		
Changes to City Services		
City-Related Cancellations and Closings		
Official Orders and Documents		

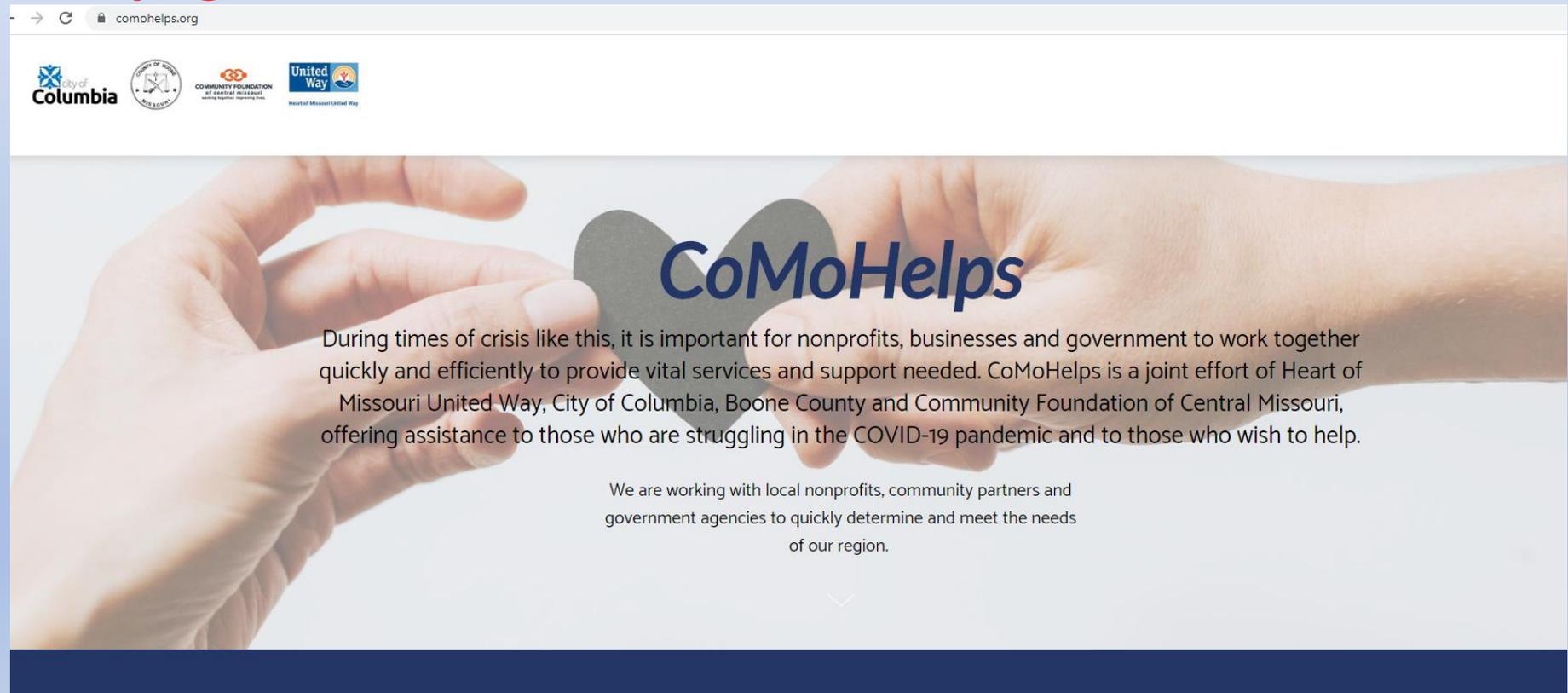
Official COVID-19 Social Media

CITY OF COLUMBIA CONTACT CENTER
573-874-CITY
CONNECTING PEOPLE WITH ANSWERS
Chat With Us!

Online

Student volunteer opportunities

- For general volunteers: goto como.gov, click on “coronavirus official info” => then click on “give help” => **that redirects you to “CoMoHelps” webpage**

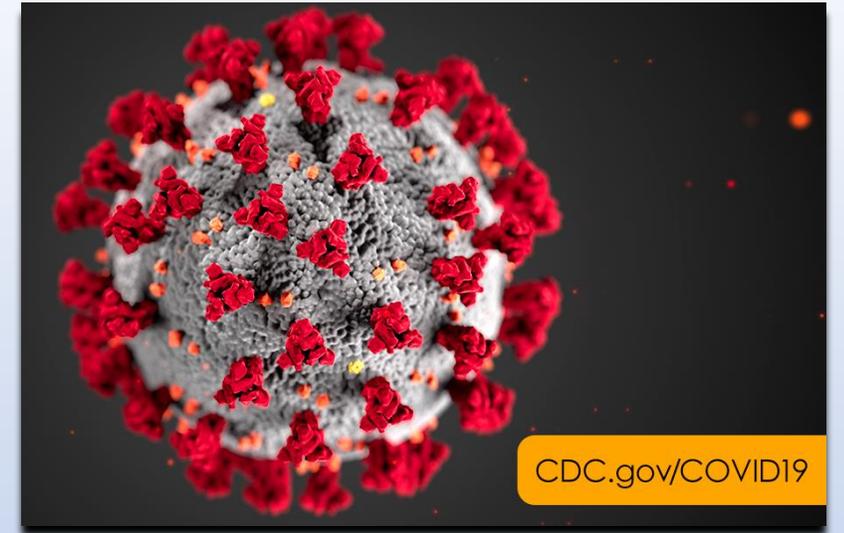


Caution

- Caution: beware of volunteer opportunities that may violate “social distancing” recommendations!

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Get organized!

- Suggested Principles for student volunteers:
 - (1) School responsibilities first! Do well on your exams and school requirements.
 - (2) Let's anticipate that our response to Coronavirus will go on for weeks-to-months.
 - (3) Many of us are going to get sick or may need to take time off to help care for friends and family. Some students will graduate soon. Succession planning is key in a crisis.

Options for organized volunteer efforts

- (1) Lobbying
- (2) Social Media
- (3) Influencers
- (4) Mutual Support
- (5) #IAmSmiling
- (6) Community Support

(1) Lobbying/Advocacy – Taylor Ross

Advocacy: Local Public Health Agencies

- Critical in containing the outbreak and limiting the spread of disease.
 - The CDC currently recommends extensive contact tracing.
 - South Korea, Singapore, and Taiwan: business open due to extensive tracing
- This work involves community surveillance through case identification and contact tracing.
- **Many local public health departments in MO have been underfunded**
 - PPE supply has been limited, when available
 - Long hours and limited personnel reinforcements
- **We are urging the state legislator to directly fund LPHA's**

(2) Social Media – Eric Grisham



Social Media Team

Eric Grisham → eaggzd@umsystem.edu

Shelly (Koch) D'Alessandro → mfbq6@umsystem.edu



Artwork credit:
Genevieve Pentecost

Follow Student Volunteer Efforts
on Social Media!

Courage In COVID

Your one-stop shop for positive vibes, stories of resilience, and lobbying/fundraising campaigns

- **Facebook:** [@CourageInCOVID](#)
- **Instagram:** [@CourageInCOVID](#)
- **Twitter:** [@Courage_COVID](#)
- **Medium:** [@CourageInCOVID](#)



courage **in** **covid**

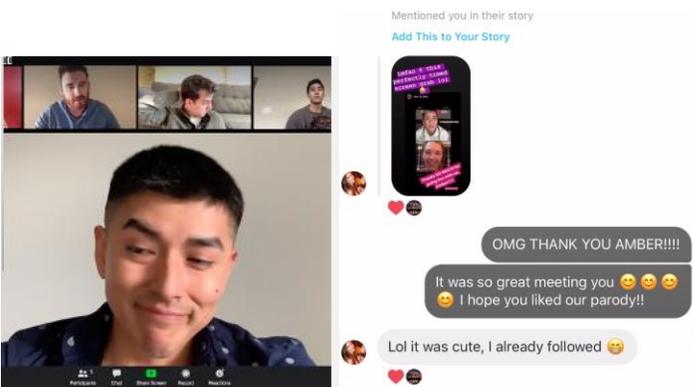
Current Projects

- **#HumansOfCOVID**
- **#IAmSmiling**
- **#LovelsViral** promotion
- Various articles highlighting public health work and essential personnel → You can see an example [here](#)
- **GoFundMe** promotion: You can find our fundraising page [here](#)!
- Be sure to send any **positive story ideas** or **suggestions for our #HumansOfCOVID photo series** to CourageInCOVID@gmail.com.

(3) Influencers – Patricia DeCastro

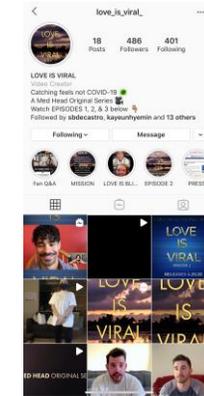
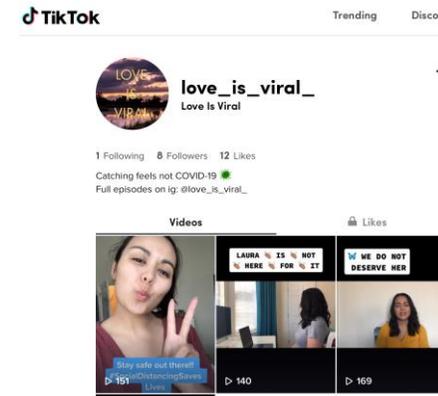
Influencers Committee - Love is Viral

- The show
 - An “original” 5-episode series created by Med Head Productions
 - Parody of the hit Netflix reality dating show Love Is Blind
- Our mission
 - Educate young people (16-25 year olds) on the importance of social distancing during the COVID-19 pandemic
 - Explain underlying concepts (i.e. flattening the curve)
 - Share CDC recommendations (i.e. mask usage)
 - Raise awareness of mental health impact
 - Utilize social media platforms in a positive way
- Where we are now
 - 3 episodes released on IGTV and Facebook with over 10K views total
 - Episode 4 drops Friday 4/24
 - Episode 5 (season finale) drops Monday 4/27



How can you help?

- Follow and share our content
 - *4th episode – Friday 4/24*
 - *Finale – Monday 4/27*
- Facebook: @LovesViral
- Instagram: @Love_Is_Viral_
- TikTok: @Love_Is_Viral_



(4) Mutual Support Team – Ben Van Amberg

Mutual Support Team

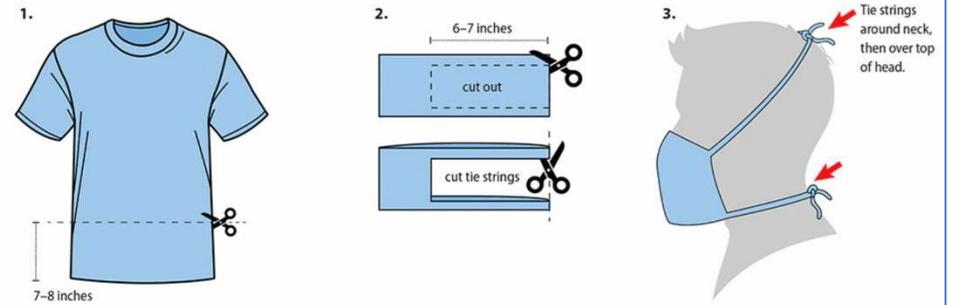
- Purpose
 - Connect University of Missouri students together to address the needs of students, community organizations, and health care workers
- Goals
 - Create open communication through multiple departments
 - Provide opportunities for students to learn how COVID-19 is affecting our community and how we can help
- Next Steps
 - Bring in guest speakers for biweekly presentations
 - Specialists, organizations, activists, small business owners, etc.
 - Utilize our resources to address areas of high need

(5) #IAmSmiling – Taylor Ross

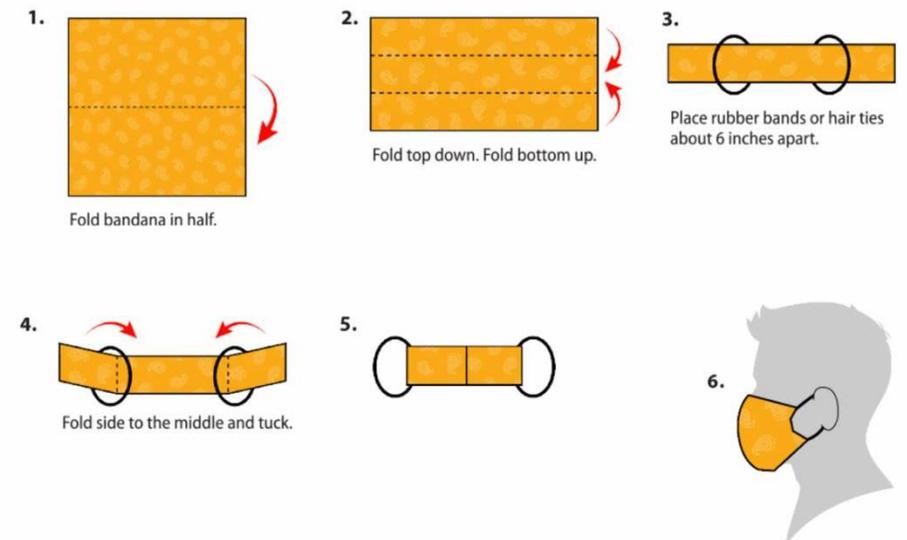
#IamSmiling



Quick Cut T-Shirt Face Covering



Bandana Face Covering



(6) Community Service Team –
Ramya Ramadas



COMMUNITY SERVICE TEAM

Ramya Ramadas

RSRVYZ@health.missouri.edu

Community Service Opportunities

- **Hand out food** at Loaves and Fishes soup kitchen
 - [Sign up here](#)
- **Cook!**
 - Vegetable sides, snacks, baked goods!
 - Drop off at Loaves and Fishes at 4:30pm any day!
 - ~100 portions each night, but we can accept any quantity
 - St. Francis House also serves 20-30 people every night from 7-9 pm.
 - Call St. Francis House at [\(573\) 875-4913](tel:5738754913)
- **Columbia Crisis Shelter**
 - [Find opportunities here](#)



Community Service Opportunities, cont.

- **Donate anything you can!**
 - Non-perishable food, clothes, cleaning supplies, \$\$, you name it! [See list here](#).
 - Lucy Sheahan is coordinating donations, email LDSWB8@health.missouri.edu
 - GoFundMe: [COVID-19 Community Organization Relief Effort](#) (by Melissa An)
- **Grocery delivery** for older and at-risk populations
 - Email Taylor Ross TRCCZ9@health.missouri.edu
- **Resources for survivors** of intimate partner violence
 - [Sign up here](#)

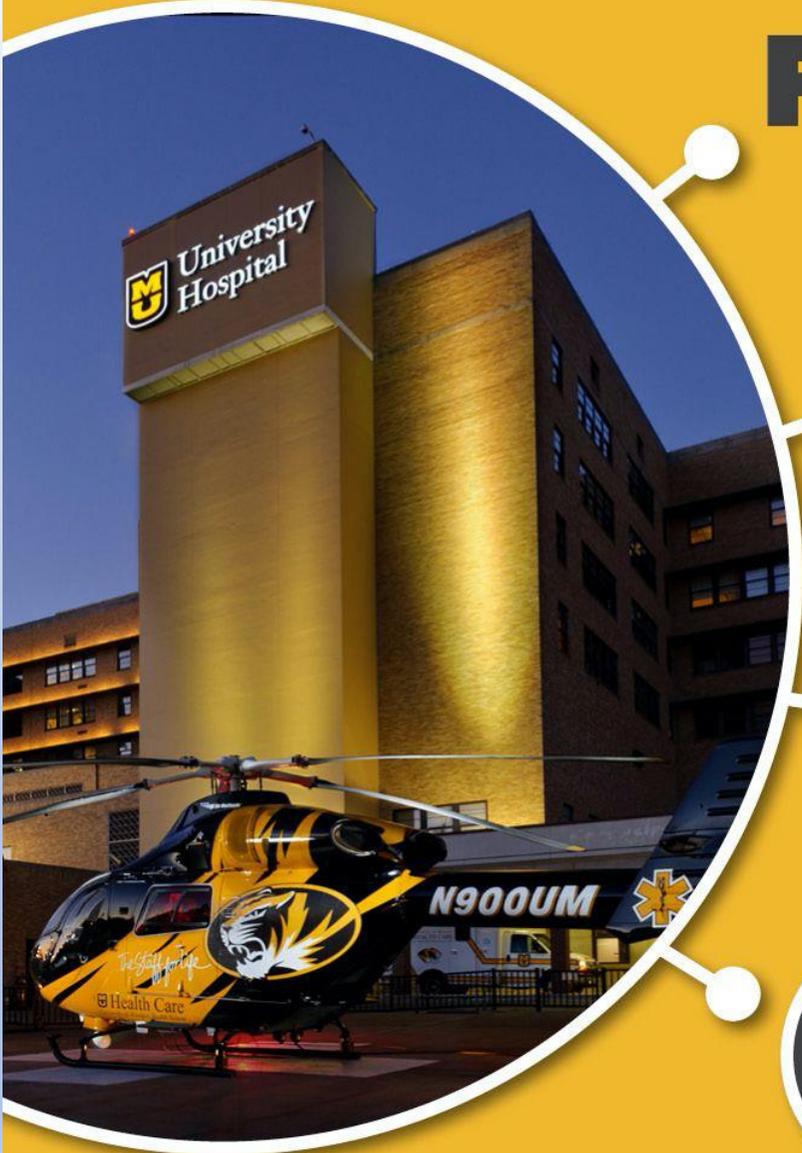
COVID-19 Community Organization Relief Effort



Disclosures / Disclaimers

- Please understand that data is limited, preliminary, **constantly-evolving**.
 - Pandemics are difficult to model and predict.
 - Some “facts” stated just last week, may now already be out-of-date.
- **I AM NOT YOUR DOCTOR**.
 - Please see your primary care provider for any personal medical questions.
- Today’s town hall is a general informational session to the Mizzou student community.
 - We will direct you to official websites (like CDC) for public health recommendations.

FOLLOW US ONLINE!



[@muhealthcare](#)



[@muhealth](#)



[@muhealth](#)



[HOME](#) / [CONDITIONS & TREATMENTS](#) / [MEDICINE](#) / [INFECTIOUS DISEASES](#) / [NOVEL CORONAVIRUS \(COVID-19\)](#)

Novel Coronavirus (COVID-19)

As the number of coronavirus cases grows in the state, you may be wondering how MU Health Care is adapting and continuing to care for the community. Know that your safety is our top priority.

Our infectious disease experts are working closely with local and state public health agencies, as well as following guidelines from the Centers for Disease Control and Prevention (CDC), to ensure we have the most up-to-date information and best care plans for our patients.

Letter from the CEO

To our family, friends and neighbors: a letter from CEO Jonathan Curtright

[READ THE LETTER](#)

MU HEALTH CARE DATA

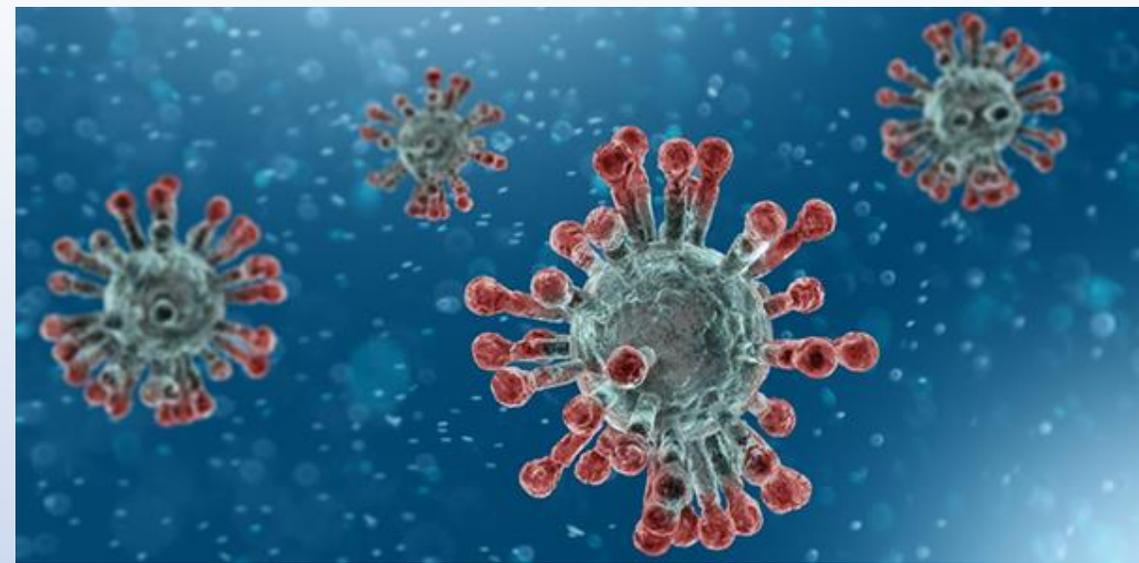
Testing data

Testing data is for all tests, drive-thru and other facilities, for our entire 25-county service area, not just Boone County.

TOTAL TESTS	POSITIVE
2,561	82

Inpatient data

Inpatient data is information about patients in our hospitals. Pending indicates inpatients for whom test results are pending.



For more information, e-mail bcms@socket.net or goto:

<https://health.mo.gov/>

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

<https://www.boonecountymedicalsociety.org/covid-19-resources.html>

<https://www.msma.org/coronavirus-2019-covid-19.html>

<https://www.ama-assn.org/delivering-care/public-health/covid-19-2019-novel-coronavirus-resource-center-physicians>

Helpful websites

- [CDC.gov](https://www.cdc.gov/)
- [Missouri DHSS: https://health.mo.gov/](https://health.mo.gov/)
- [City of Columbia: https://www.como.gov/coronavirus/](https://www.como.gov/coronavirus/)
- [BCMS: https://www.boonecountymedicalsociety.org/covid-19-resources.html](https://www.boonecountymedicalsociety.org/covid-19-resources.html)
- [MSMA: https://www.msma.org/coronavirus-2019-covid-19.html](https://www.msma.org/coronavirus-2019-covid-19.html)
- [AMA: https://www.ama-assn.org/delivering-care/public-health/covid-19-2019-novel-coronavirus-resource-center-physicians](https://www.ama-assn.org/delivering-care/public-health/covid-19-2019-novel-coronavirus-resource-center-physicians)





COLUMBIA, MISSOURI

Search to Find it Fast!



Home

Living in Columbia

Doing Business in Columbia

City Government

Visitors

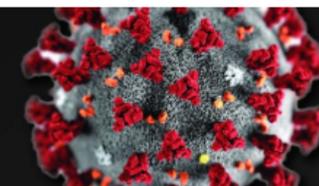
CoMobile Apps

Translate



HOME » CORONAVIRUS

CORONAVIRUS (COVID-19) OFFICIAL INFORMATION



Available Resources



[Stay at Home Order 2020-03](#)



[Essential Business Determination Form](#)



[Latest Updates](#)



[Health Resources](#)



[Get Help](#)



[Give Help](#)



[Frequently Asked Questions](#)



[Changes to City Services](#)



[City-Related Cancellations and Closings](#)



Total Cases in Boone County

66

Total Cases

42

Active

23

Recovered

1

Deaths



Cases in Missouri*

1,327

Positive

14

Deaths

* Prior to the MSPHL's approval to test for the virus that causes COVID-19 on Feb. 27, the CDC was performing testing for Missourians. The first 9 patients were tested by the CDC.





Follow Us



Like Us

Healthy Living

Senior & Disability Services

Licensing & Regulations

Disaster & Emergency Planning

Data & Statistics

Help stop COVID-19

DO THE FIVE

Missouri Novel Coronavirus Information Hotline

877-435-8411



HANDS

Wash them often



ELBOW

Cough into it



FACE

Don't touch it



FEET

Stay more than 6ft apart



FEEL

Sick? Stay Home



Have questions?
Chat about COVID-19



COVID-19 STATE TEAM MEMBER RESOURCES

How do I...

- learn about COVID-19
- learn about the flu
- report adult abuse and neglect?
- apply for medical marijuana identification card?
- find opioid crisis response?
- find my local health department?
- request a birth & death certificate?
- find child care provider inspections?
- apply for WIC?
- see more...

Recent News | M



Helpful websites

- [CDC.gov](https://www.cdc.gov)
- [Missouri DHSS: https://health.mo.gov/](https://health.mo.gov/)
- [City of Columbia: https://www.como.gov/coronavirus/](https://www.como.gov/coronavirus/)
- **BCMS**: <https://www.boonecountymedicalsociety.org/covid-19-resources.html>
- **MSMA**: <https://www.msma.org/coronavirus-2019-covid-19.html>
- **AMA**: <https://www.ama-assn.org/delivering-care/public-health/covid-19-2019-novel-coronavirus-resource-center-physicians>



Local Resources

- [Columbia/Boone County Department of Health](#)

State Resources

- [Missouri Department of Health and Senior Services](#)
- [MO HealthNet](#)
- [Missouri State Medical Association Resource Page](#)
- [Missouri Hospital Association](#)
- [DHSS: COVID-19 Fact Sheet](#)
- [DHSS: COVID-19 Call Center Information/Script](#)
- [DHSS: Missouri Pandemic Influenza Response Plan](#)

National Resources

AMA

- [A Physicians Guide to COVID-19](#)
- [AMA COVID-19 News Page](#)

[World Health Organization](#)

[Centers for Disease Control and Prevention](#)

- [CDC Situation Summaries](#)

COVID-19 Webinar Handouts

March 24, 2020 Handouts

- [Resource list for providers](#)
- [3-23-20 DHSS HU Criteria to Guide for Evaluation and Laboratory Testing](#)
- [Information for possible exposure in healthcare professionals](#)



Coronavirus Disease 2019 (COVID-19)

Missouri health care providers and public health practitioners are being asked to [contact DHSS](#) or their local public health agency to immediately report any patients who meet the criteria for evaluation for COVID-19.

COVID-19 Conference Calls

- [DHSS & MSMA Partner for COVID-19 Conference Calls – Participate Here](#)

Missouri

- [MSMA Asks Governor Parson for "Shelter-In-Place" Order](#)
- [MSMA Asks Congress for Physician Financial Stability Involving Economic Relief](#)
- [Missouri Department of Health and Senior Services – Report COVID-19 Virus](#)
- [DHSS: COVID-19 Fact Sheet](#)
- [DHSS: COVID-19 Call Center Information/Script](#)
- [DHSS: Missouri Pandemic Influenza Response Plan](#)
- [Showme Response](#)
- [Boone County Medical Society COVID-19 Webinar Slides](#)

Centers for Disease Control/World Health Organization Developing

- [CDC – What You Need to Know About COVID-19](#)
- [CDC – COVID-19 Health Alert Network for Emergency Health Professionals](#)
- [CDC – Travel Health & COVID-19 Information for Travelers](#)
- [CDC – COVID-19 FAQs](#)
- [World Health Organization Updates](#)
- [Johns Hopkins Global COVID-19 Count](#)

PUBLIC HEALTH

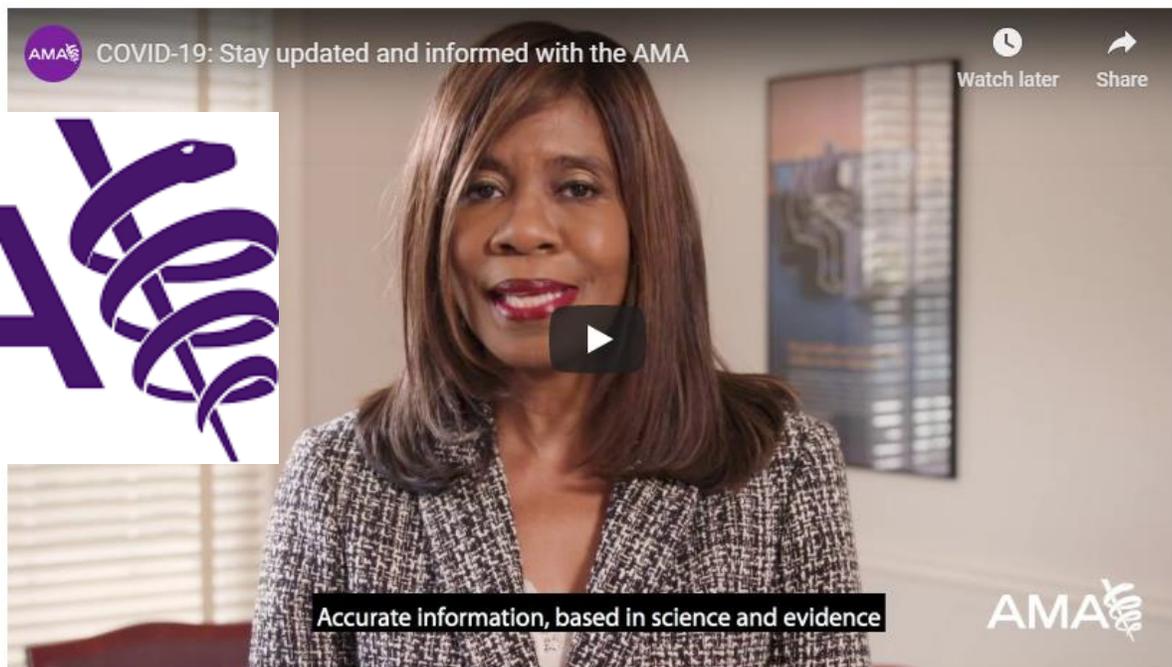
COVID-19 (2019 novel coronavirus) resource center for physicians

The AMA and Centers for Disease Control and Prevention (CDC) are closely monitoring the outbreak of COVID-19 (2019 novel coronavirus).



Featured updates Clinical information AMA collections Advocacy Medical ethics

Stay informed and updated with the AMA



Call for Ideas—Conserving Supply of Personal Protective Equipment

—JAMA is inviting immediate suggestions. Please help patients and health care workers.

Essential Tools & Resources

- A Physician's Guide to COVID-19
- COVID-19 FAQ: Your pressing questions answered
- AMA president speaks on preparing physicians for COVID-19
- JAMA Network: Coronavirus disease 2019 (COVID-19)
- CDC monitoring of COVID-19 outbreak

A time to stand together

With expert resources and

