Coronavirus Disease 2019
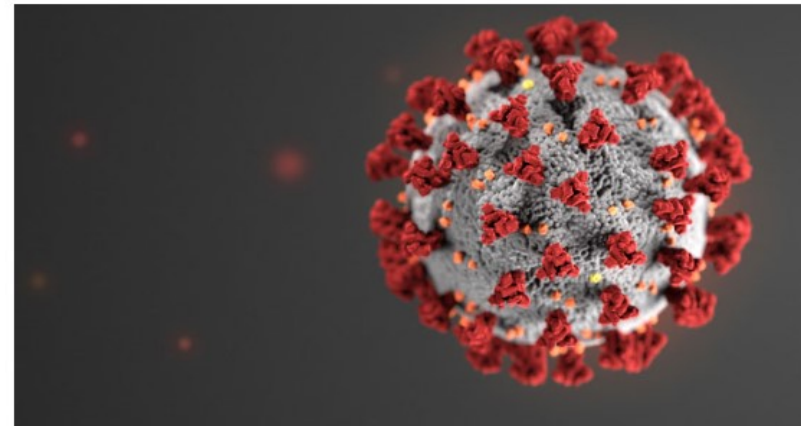# **Statistics**

## Graphical Updates on the Current Situation

3/15/2020

Coronavirus

Note: This is a compilation of information from various sources.
It has been posted as general information on a topic of interest. This is
an emerging topic, so info and understanding are changing rapidly.

IMPACT ★ **SAFETY**

WHO declares the coronavirus outbreak a pandemic

Figure 1. Countries, territories or areas with reported confirmed cases of COVID-19, 12 March 2020
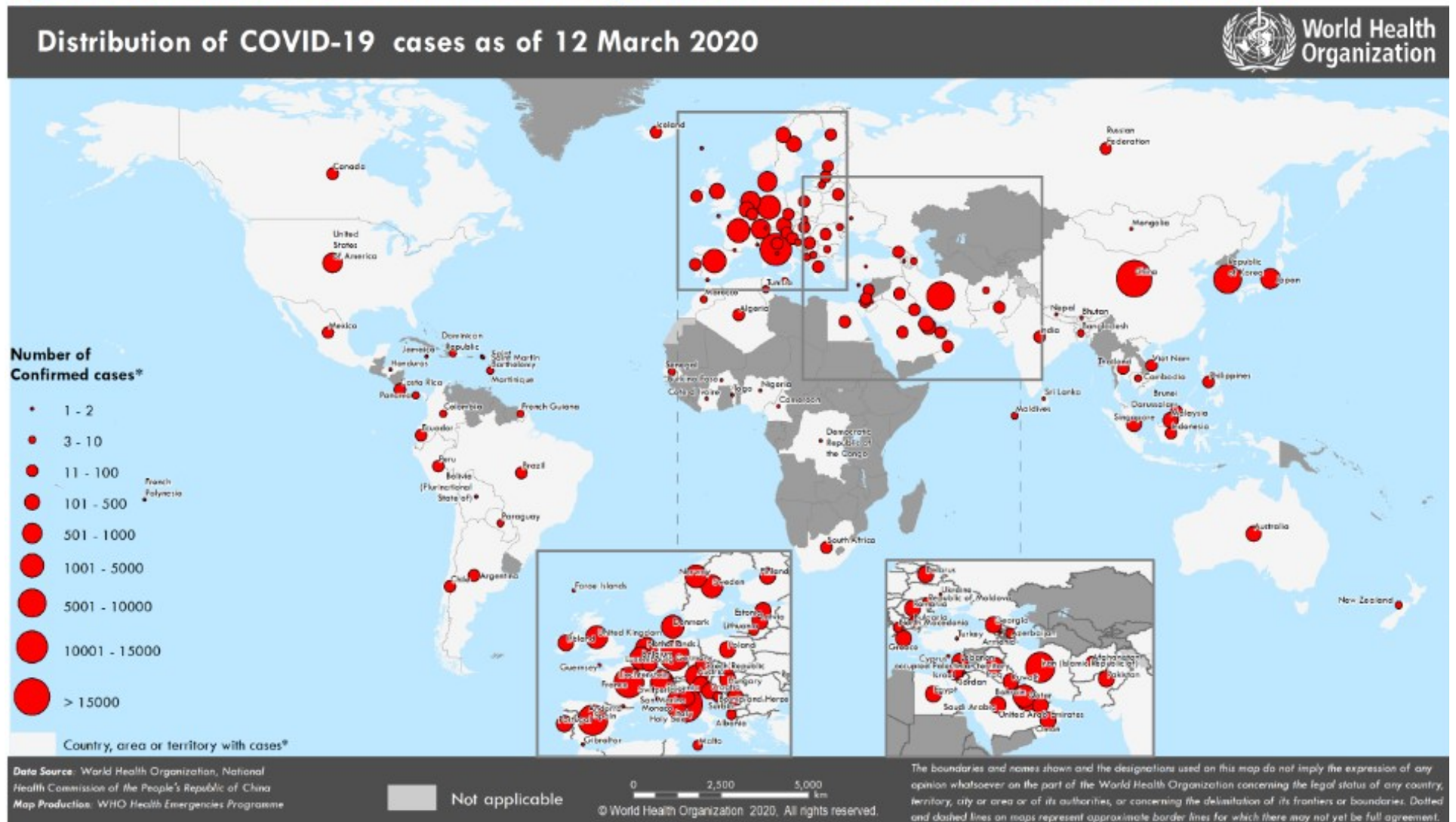
COVID- 19 stats   3/15/2020

Country, Other	Total Cases	New Cases	Total Deaths	New Deaths	Total Recovered	Active Cases	Serious, Critical	Tot Cases/ 1M pop
China	80,849	+25	3,199	+10	66,931	10,719	3,226	56.2
Italy	21,157		1,441		1,966	17,750	1,518	349.9
Iran	13,938	+1,209	724	+113	4,590	8,624		165.9
S. Korea	8,162	+76	75	+3	834	7,253	59	159.2
Spain	7,753	+1,362	291	+95	517	6,945	272	165.8
Germany	5,426	+827	11	+2	46	5,369	2	64.8
France	4,499	+30	91		12	4,396	300	68.9
USA	3,094	+151	62	+5	56	2,976	10	9.3
Switzerland	2,217	+842	14	+1	4	2,199		256.2
UK	1,372	+232	35	+14	18	1,319	20	20.2
Norway	1,208	+99	3		1	1,204	27	222.8
Netherlands	1,135	+176	20	+8	2	1,113	45	66.2
Total:	162,959	6,387	6,085	262	76,219	80,655	5,655	20.9

Coronavirus [COVID-19]: the severity of diagnosed cases in China

Descriptions of 44,415 confirmed cases of COVID-19 nationwide in China.
Included are confirmed cases in the early period of the outbreak of the disease up to February 11, 2020.

2.3% of all cases died

1,023 of the 44,415 infected people, for which the breakdown is shown on the right, died. The *case fatality rate* is therefore 2.3%.

5% Critical cases

Critical cases include patients who suffered respiratory failure, septic shock, and/or multiple organ dysfunction/failure.

14% Severe cases

Severe cases include patients suffer from shortness of breath, respiratory frequency ≥ 30/minute, blood oxygen saturation ≤93%, PaO_2/FiO_2 ratio <300, and/or lung infiltrates >50% within 24–48 hours.

81% Mild cases

Mild cases include all patients without pneumonia or cases of mild pneumonia.

Cases that were not identified and not diagnosed

3/15/2020

Last updated: March 15, 2020, 16:01 GMT

Cases - Deaths - Countries - Death Rate - Incubation - Age - Symptoms - Opinions - News

Coronavirus Cases:
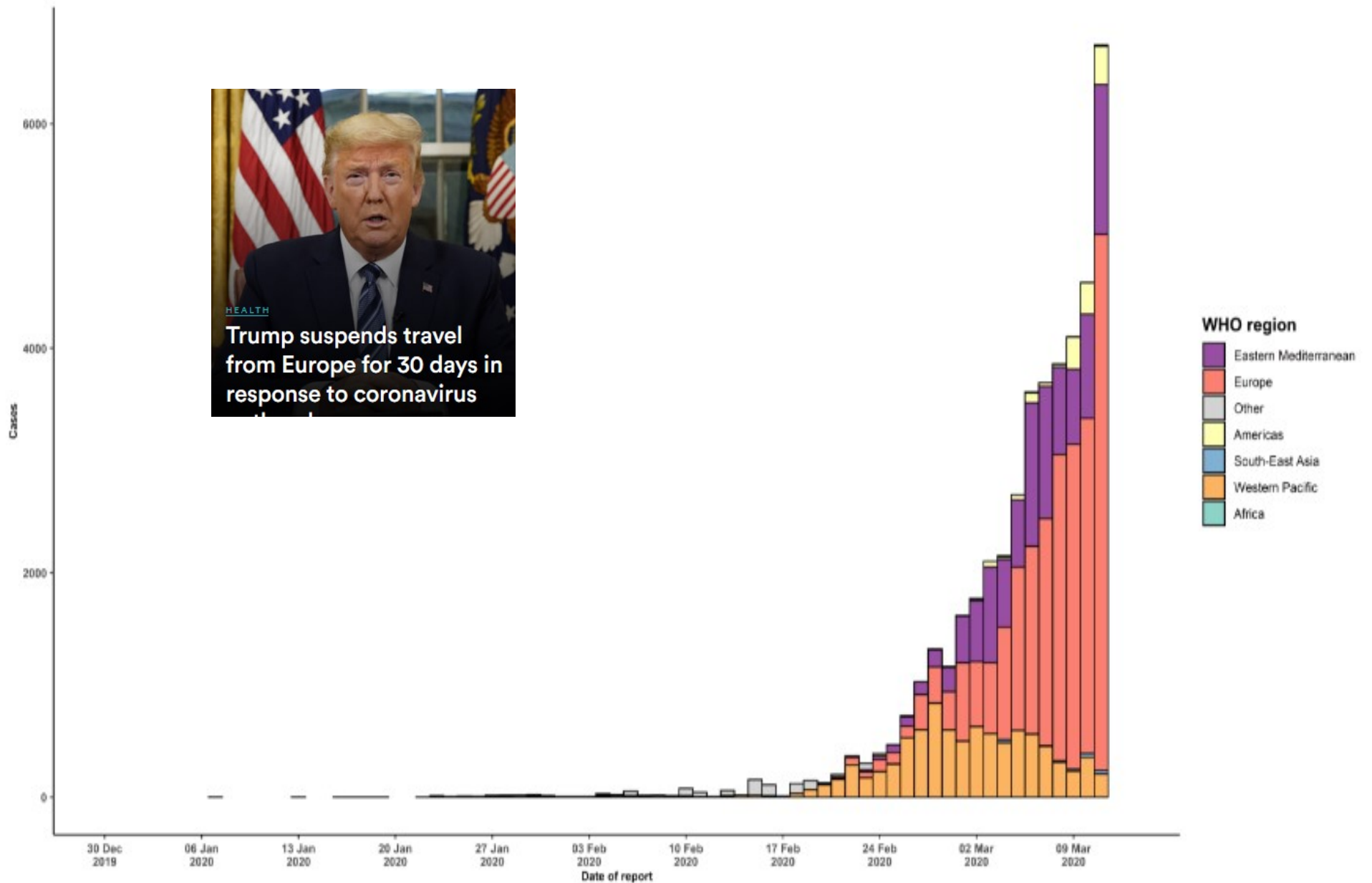
162,955

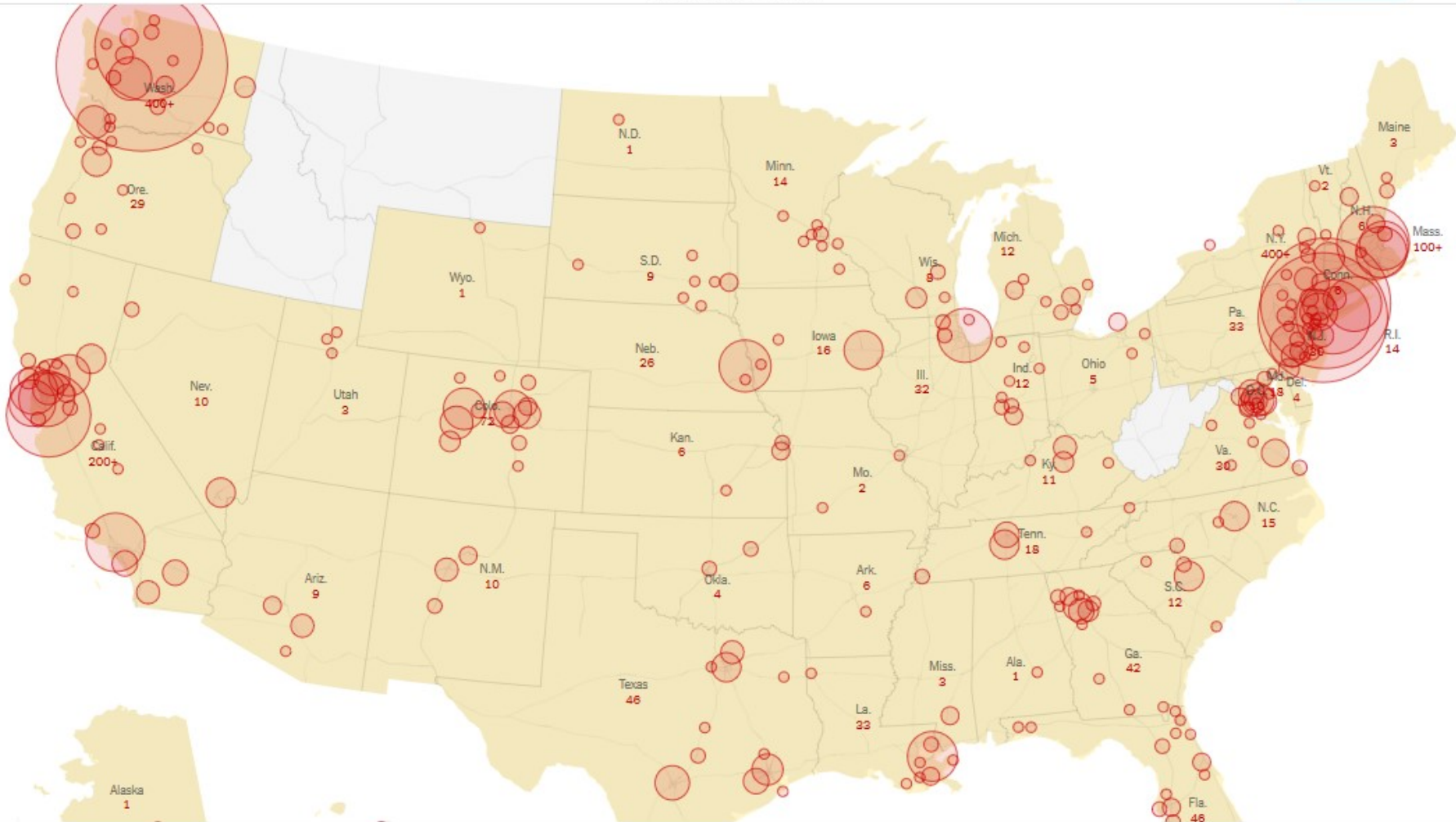view by country

Deaths:

6,085

Recovered:

76,219

Figure 2. Epidemic curve of confirmed COVID-19 cases reported outside of China (*n*= 44 067), by date of report and WHO region through 12 March 2020

Known Cases in the U.S.

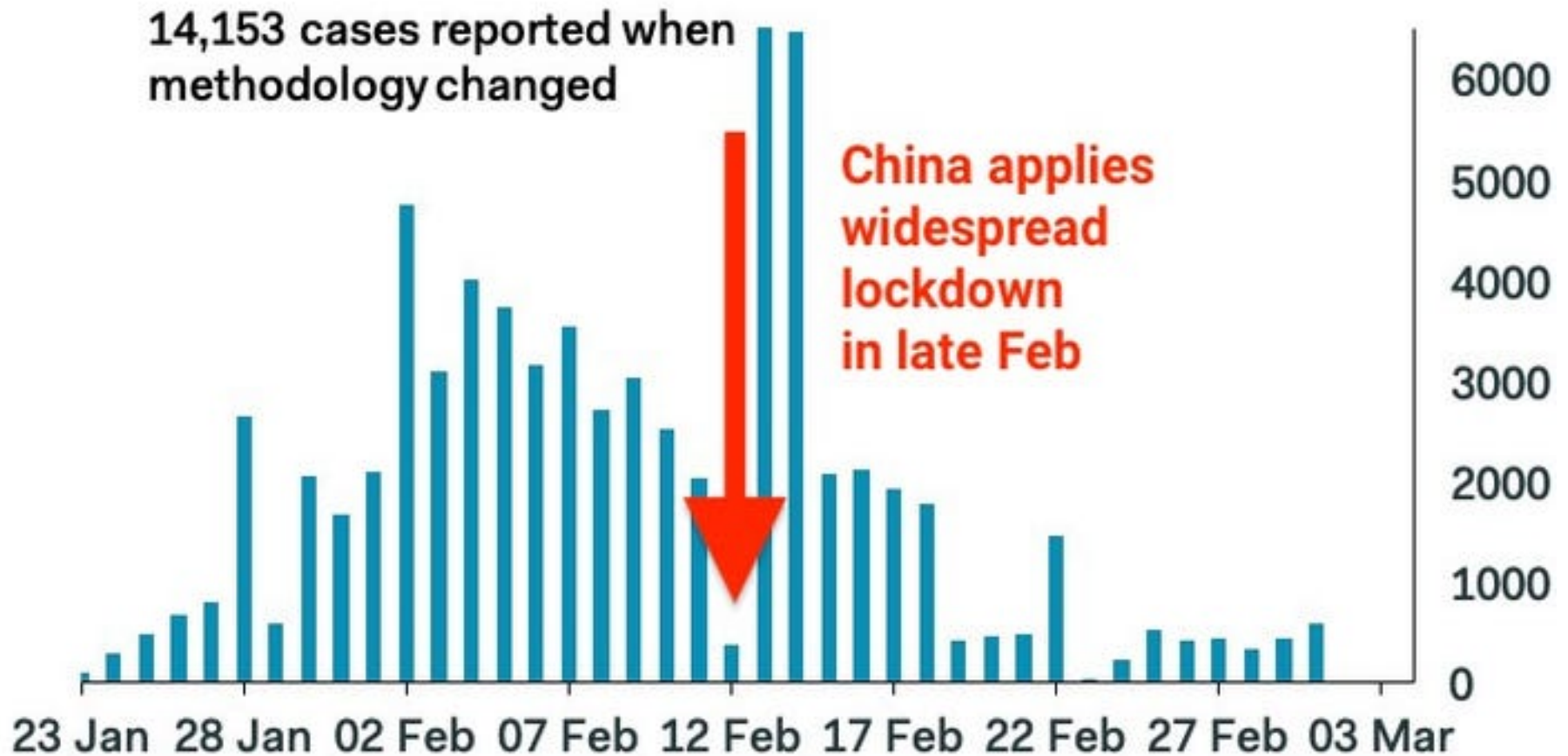at least 1,875 people in 47 states and Washington, D.C. have tested positive for coronavirus

3/13/2020

Number of new coronavirus cases, MAINLAND CHINA

14,153 cases reported when methodology changed

China applies widespread lockdown in late Feb

23 Jan 28 Jan 02 Feb 07 Feb 12 Feb 17 Feb 22 Feb 27 Feb 03 Mar

Incidences can be brought under control, once effective measures are in place .

WITHOUT LOCKDOWNS, CASES SPREAD RAPIDLY

— Daily change in number of coronavirus cases: China ex-Hubei
— South Korea
— Italy
— Continental W. Europe ex-Italy

T=0:
China: Jan 23
S. Korea: Feb 20
Italy: Feb 22
W. Europe: Feb 24
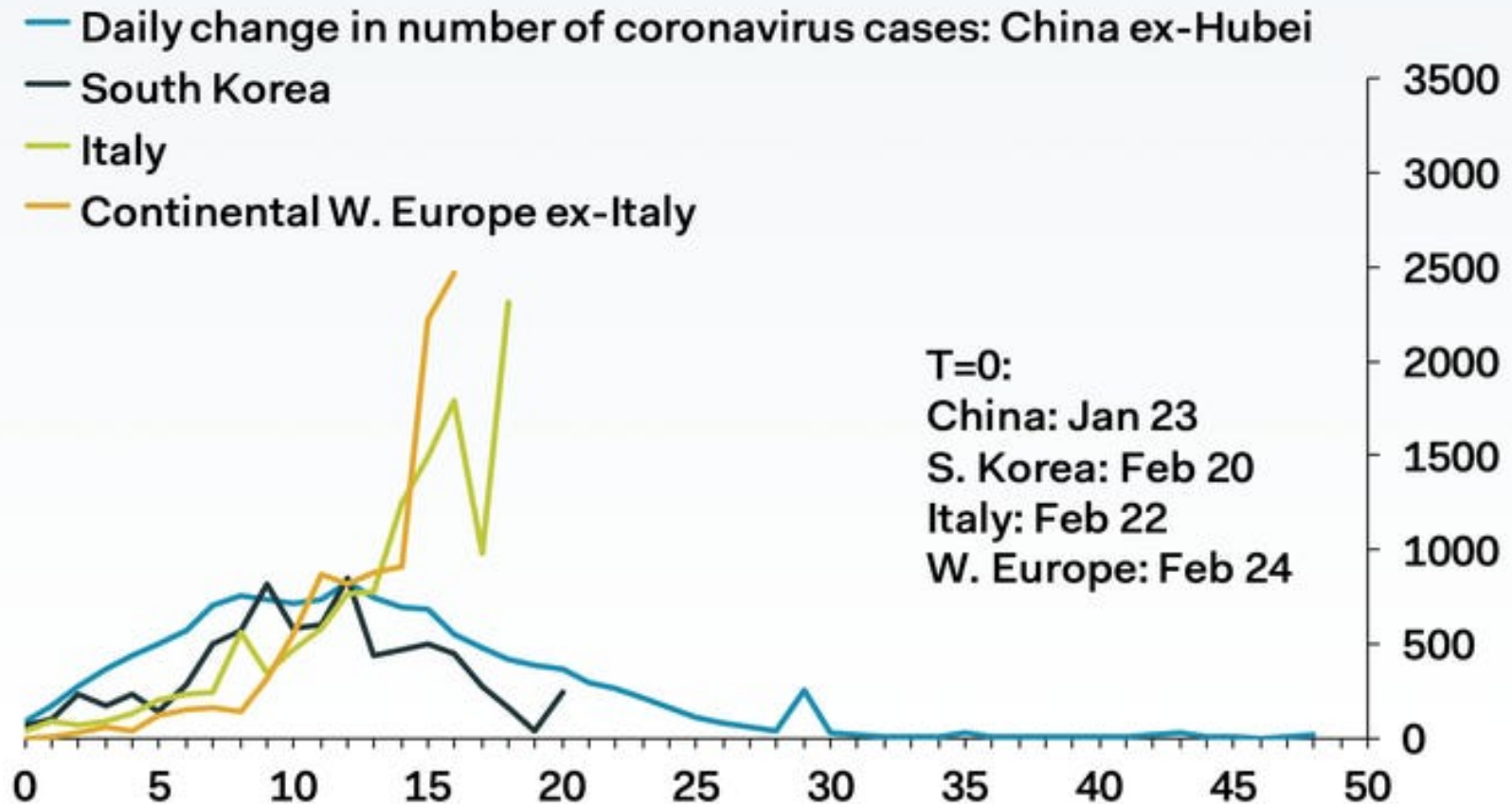
New infections are doubling every 4 days in most of the world.
It's very important to follow advise from authorities.

Cases of coronavirus in the US

■ Active: 2,883   ■ Recovered: 12   ■ Deaths: 57

Total cases: 2,952

3,000

2,500

2,000
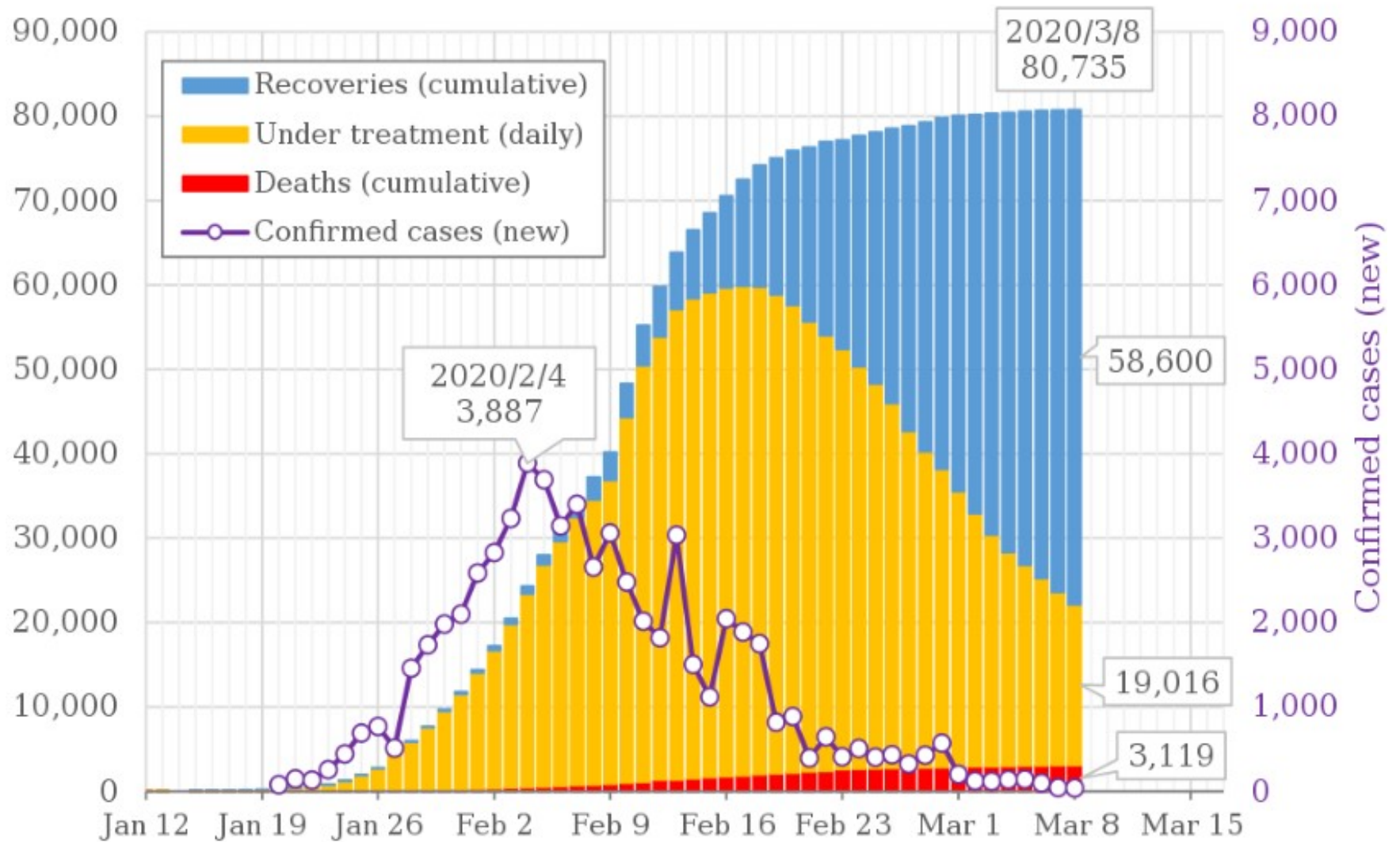
1,500

1,000

500

0

01/22   03/15
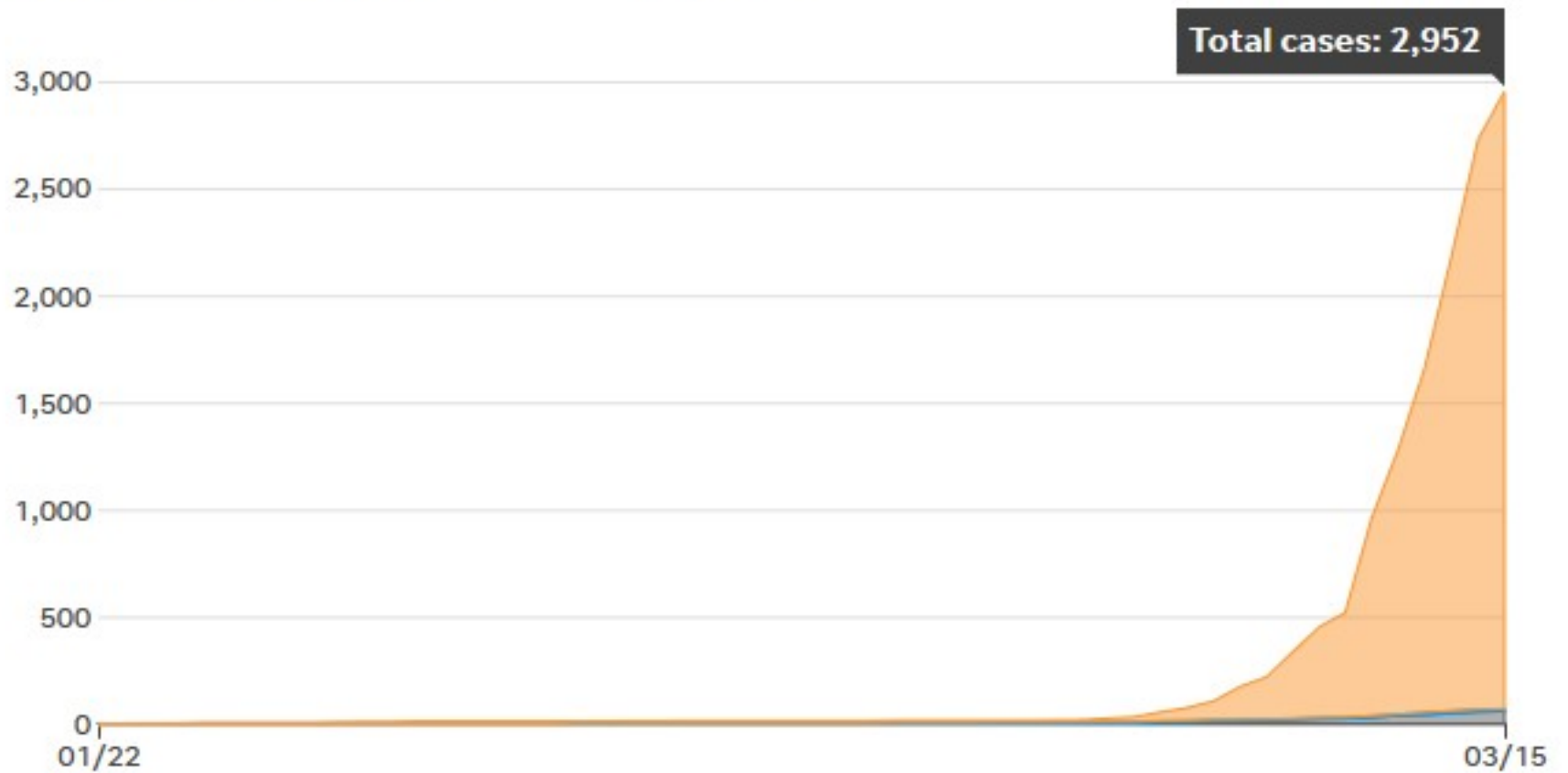
Last updated: 3/15/20 at 4:13 AM

SOURCE Johns Hopkins University; WHO; CDC; USA TODAY

2020 coronavirus cases in China (NHC)

Following recommendations will:
- Reduce illnesses
- Reduce deaths
- Keep our medical services more available for those in need
- Buy some time for a 20201 vaccine
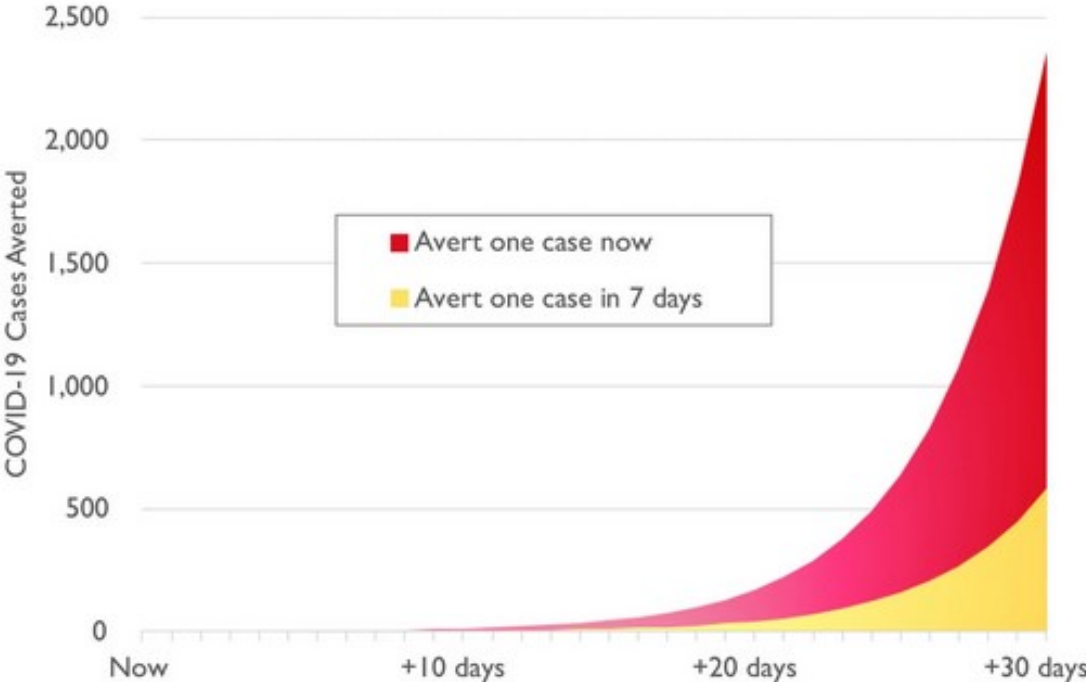
Flattening the curve

Daily number of cases

Delay outbreak peak

Reduction in peak of outbreak

Cases without protective measures

Health care system capacity

Cases with protective measures

Time since first case
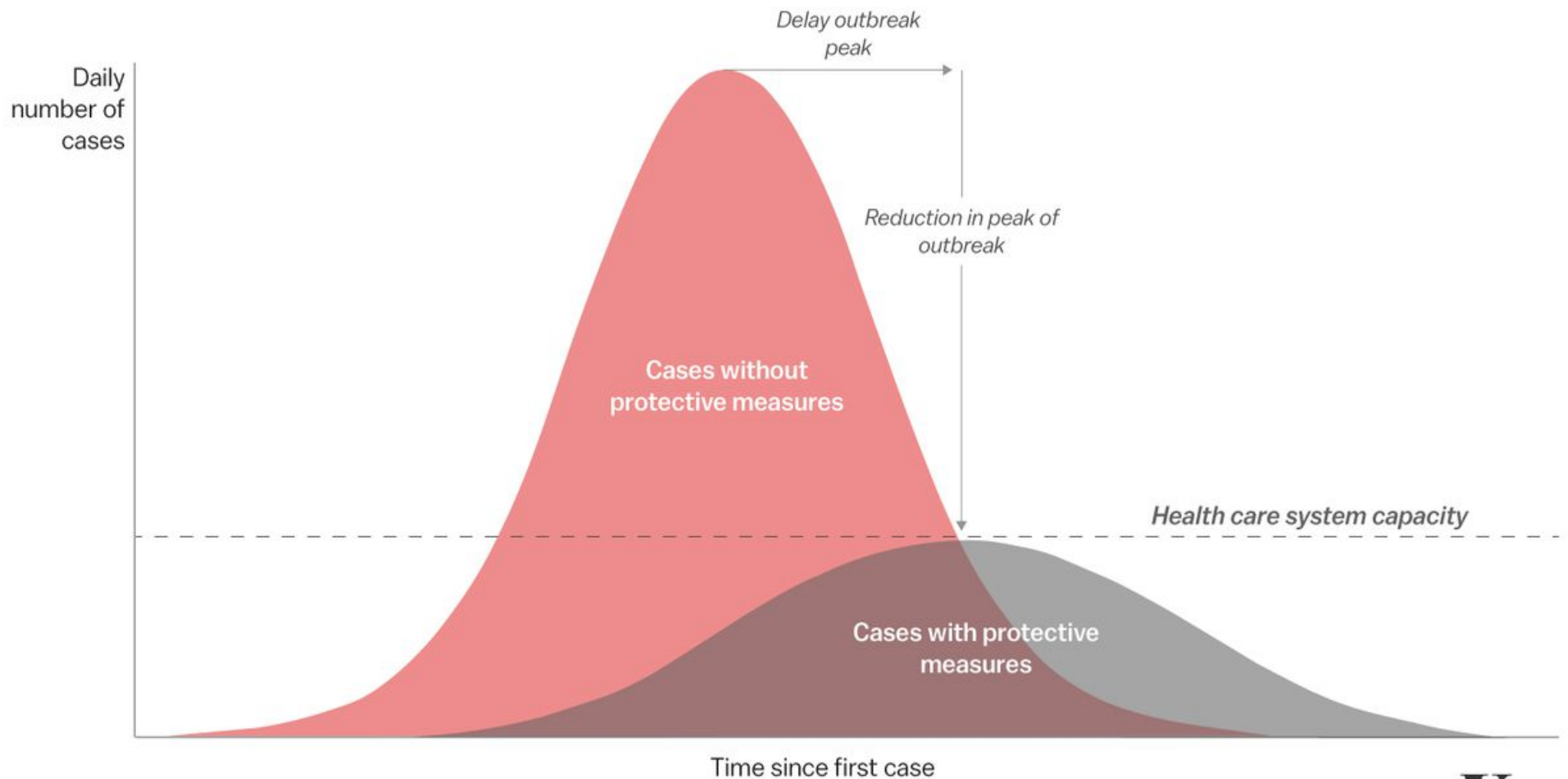
Source: CDC

Vox

The Exponential Power of Now

The explosive spread of coronavirus can be turned to our advantage, two infectious disease experts argue: "But only if we intervene early. That means now."

Legend:
- ■ Avert one case now
- ■ Avert one case in 7 days

Y-axis: COVID-19 Cases Averted (0 to 2,500)

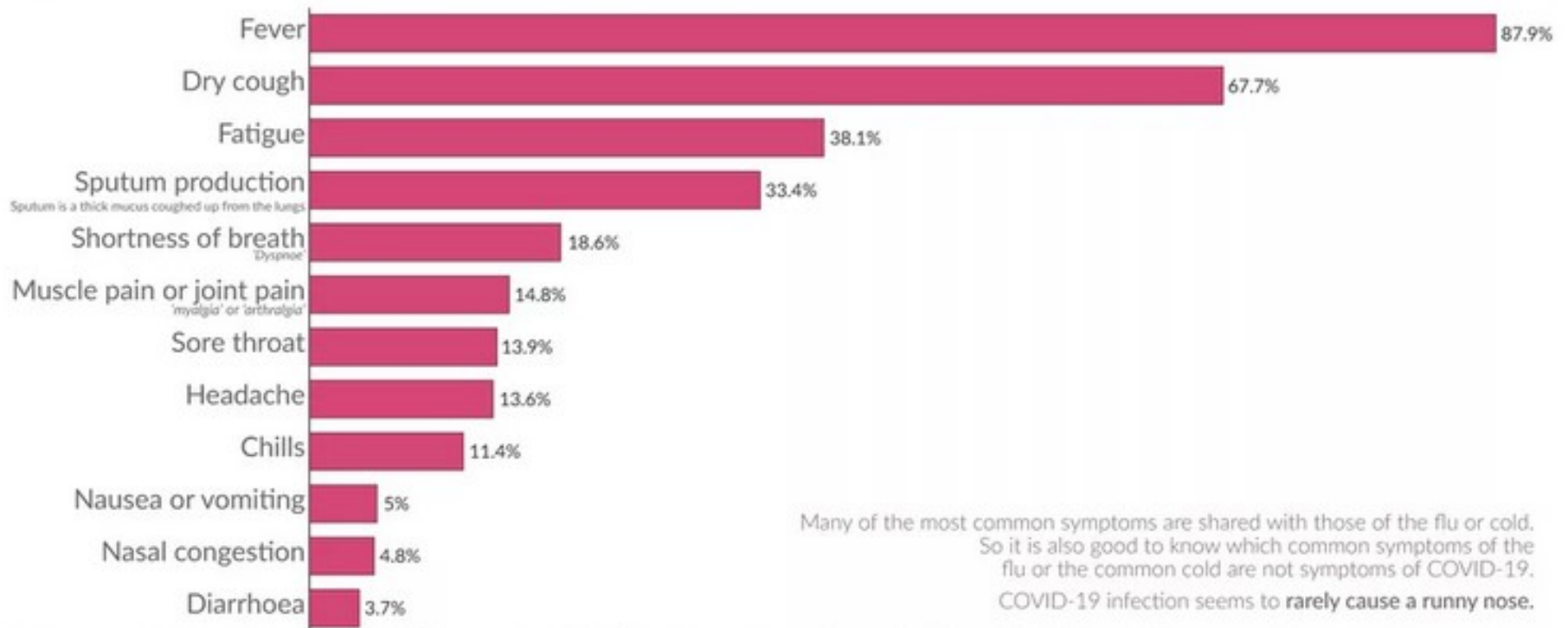**X-axis:** Now, +10 days, +20 days, +30 days

cases in the U.S. by date:

Jan. 14 — 0

Jan. 21 — 1

Jan. 28 — 5

Feb. 4 — 11

Feb. 11 — 14

Feb. 18 — 25

Feb. 25 — 59

Mar. 3 — 125

Mar. 10 — 1,004

"That is exponential growth," Dr. Nick Jewell said.

The symptoms of coronavirus disease [COVID-19]

The most common signs and symptoms of 55,924 laboratory confirmed cased of COVID-19.
Reported from China in the period up to February 22, 2020

Symptom	Percentage
Fever	87.9%
Dry cough	67.7%
Fatigue	38.1%
Sputum production (Sputum is a thick mucus coughed up from the lungs)	33.4%
Shortness of breath 'Dyspnoe'	18.6%
Muscle pain or joint pain 'myalgia' or 'arthralgia'	14.8%
Sore throat	13.9%
Headache	13.6%
Chills	11.4%
Nausea or vomiting	5%
Nasal congestion	4.8%
Diarrhoea	3.7%

Many of the most common symptoms are shared with those of the flu or cold. So it is also good to know which common symptoms of the flu or the common cold are not symptoms of COVID-19.

COVID-19 infection seems to **rarely cause a runny nose.**

Max Roser and Hannah Ritchie/Our World in Data

About COVID-19

This is a new virus, so our bodies have not built up an immunity to it.

COVID-19 seems to result in a 5+x more likelihood of death with older people than a typical case of our historical seasonal flu.

There is currently no vaccine available for COVID-19

In serious cases, COVID-19 may lead to developed acute respiratory distress syndrome (ARDS),pneumonia or death.

Persons with underlying health conditions, may have 5-18% higher risk of death if COVID-19 is contracted. The older we are, the higher chances of death with COVID-19.

Some sources indicate high amounts of virus are shed into the environment, especially early on, such as during the first 7 days of having symptoms.
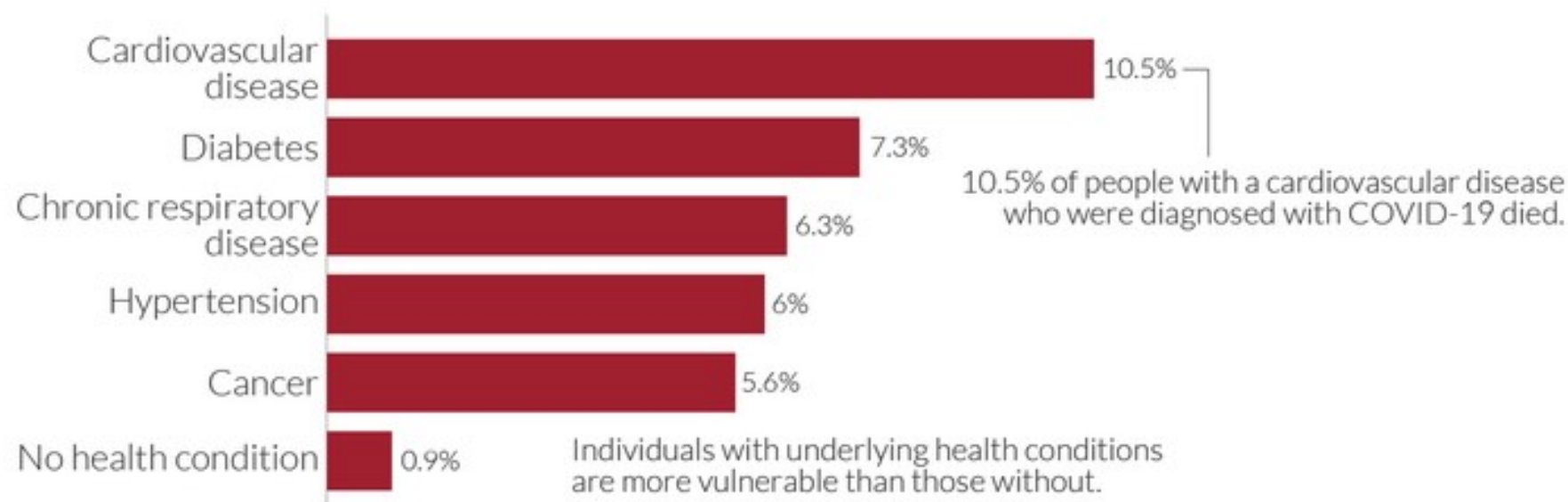
A person can sometimes have the virus and spread virus before realizing they are ill.

Side Note: The CDC estimates that, on average, about 8% of the U.S. population gets sick with the flu each season. In 2018, the CDC estimated, there were 80,000 flu deaths.

Coronavirus: early–stage case fatality rates by underlying health condition 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.

Condition	CFR
Cardiovascular disease	10.5%
Diabetes	7.3%
Chronic respiratory disease	6.3%
Hypertension	6%
Cancer	5.6%
No health condition	0.9%

10.5% of people with a cardiovascular disease who were diagnosed with COVID-19 died.

Individuals with underlying health conditions are more vulnerable than those without.

What type of underlying health conditions are a factor?

China CDC's analysis of 44,672 patients found that the fatality rate in patients who reported no other health conditions was 0.9%.

The mortality rates were much higher with these conditions:

- 10.5% for those with cardiovascular disease,
- 7.3% for those with diabetes,
- 6.3% for people with chronic respiratory diseases (such as COPD), 6.0% for people with hypertension, and
- 5.6% for those with cancer.
- 16% for patients on dialysis had fatality rate of 16% (from kidney failure, instead of pneumonia) – this was from a smaller study.
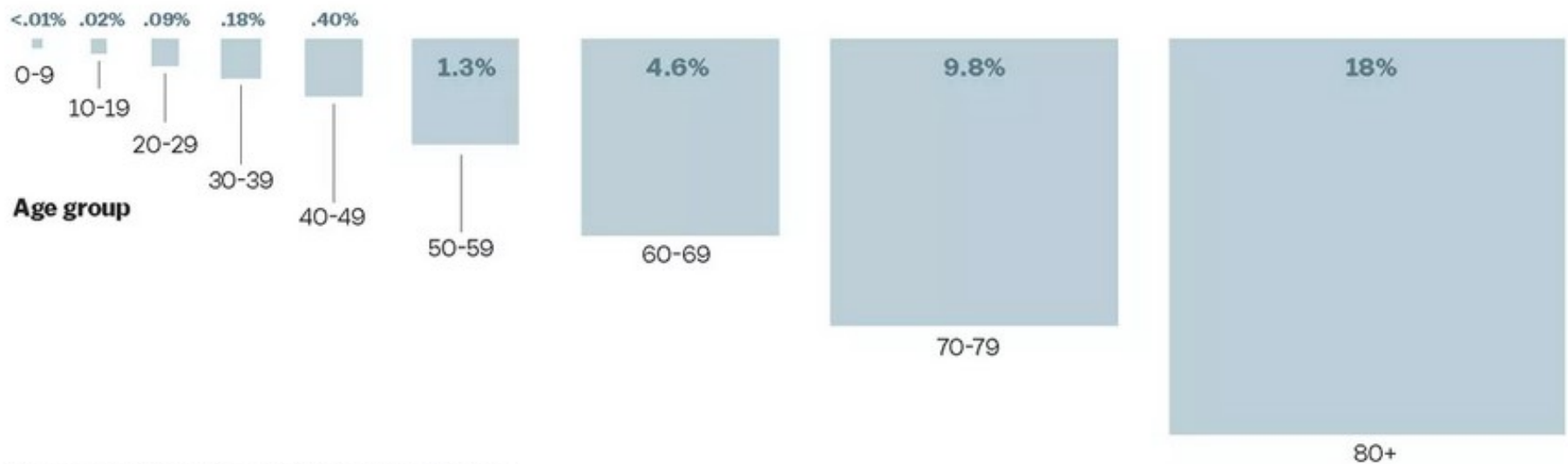
Having multiple underlying health issues (Co-morbidities)raise the risk of dying from Covid-19.

About 60% of U.S. adults have at least one underlying health condition, (Tom Frieden, former director of the U.S. Centers for Disease Control and Prevention)

Covid-19's case fatality rate increases with age, according to China's data

Estimated case fatality risk in Hubei, China, January-February 2020

Case fatality ratio*

| <.01% | .02% | .09% | .18% | .40% | 1.3% | 4.6% | 9.8% | 18% |

0-9
10-19
20-29
30-39
Age group
40-49
50-59
60-69
70-79
80+

*Among all symptomatic and asymptomatic infections
Source: *Adjusted age-specific case fatality ratio during the Covid-19 epidemic in Hubei, China, January and February 2020, medRxiv*

Vox

Christina Animashaun/Vox

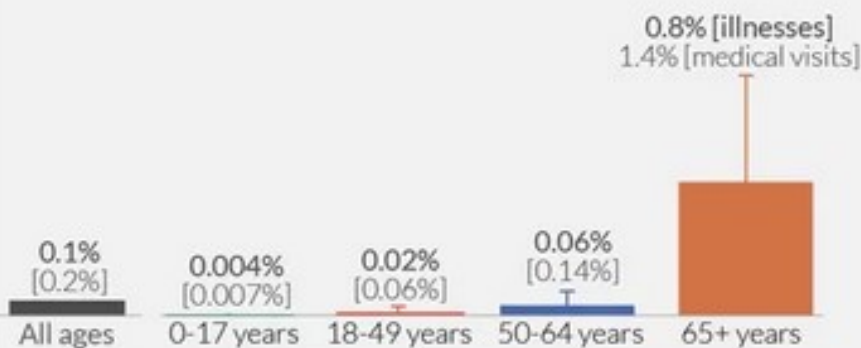**As we age, our immune systems become less robust and effective.**

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.
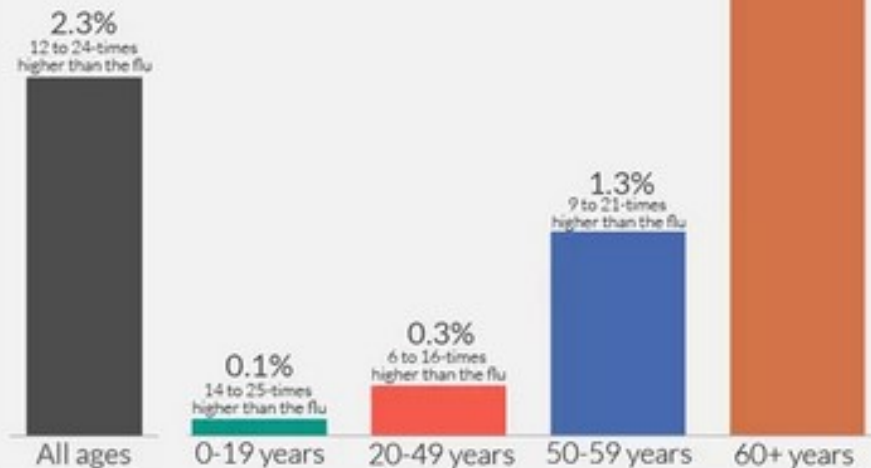
Seasonal Flu

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.

0.8% [illnesses]
1.4% [medical visits]

0.1%
[0.2%]
All ages

0.004%
[0.007%]
0-17 years

0.02%
[0.06%]
18-49 years

0.06%
[0.14%]
50-64 years

65+ years

COVID-19

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

6%
4 to 7-times higher than the flu

2.3%
12 to 24-times higher than the flu

1.3%
9 to 21-times higher than the flu

0.3%
6 to 16-times higher than the flu

0.1%
14 to 25-times higher than the flu

All ages   0-19 years   20-49 years   50-59 years   60+ years
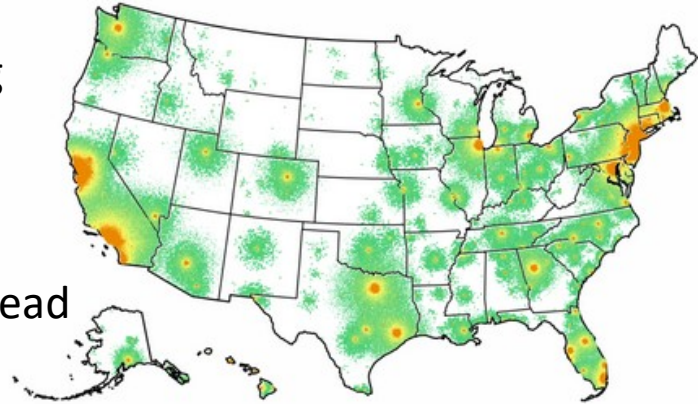
Max Roser and Hannah Ritchie/Our World in Data

How Widespread Will this be in the US??

Model is predicting Cases in the US On April 30, Depending on how well we control spread of the virus

Degree of surveillance and intervention

High — Moderate — Low

ESTIMATED INDIVIDUALS INFECTED:
159,086
by Apr. 30

Degree of surveillance and intervention

High — Moderate — Low
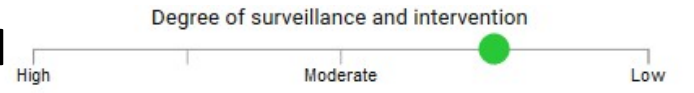
ESTIMATED INDIVIDUALS INFECTED:
795,953
by Apr. 30

Degree of surveillance and intervention

High — Moderate — Low

ESTIMATED INDIVIDUALS INFECTED:
355,873
by Apr. 30

Academics and industry experts who specialize in modeling the spread of contagious diseases. One of those outside groups, the Laboratory for the Modeling of Biological and Socio-technical Systems at Northeastern University, provided TIME

CORONAVIRUS ➜

Trump declares a national emergency

3/13/2020

Americans will soon have a screening website to determine if you should be tested (national capacity 20,000/day)

There will be drive through testing a some Walmart and Target parking lots in every city across the country. People will have access to results on-line next day.

Websites of interest:

Most reliable source for current information that has been vetted

cdc.gov

 https://www.who.int/

Note: It's possible that this slide deck could contain mis-information and/or technical errors, or mis-statements. If so, this is not intentional. JE