



**BLOOMBERG  
HARVARD**

| City  
Leadership  
Initiative



# COVID-19

## SITUATION REPORT

September 17, 2020 | Joshua Sharfstein, MD



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

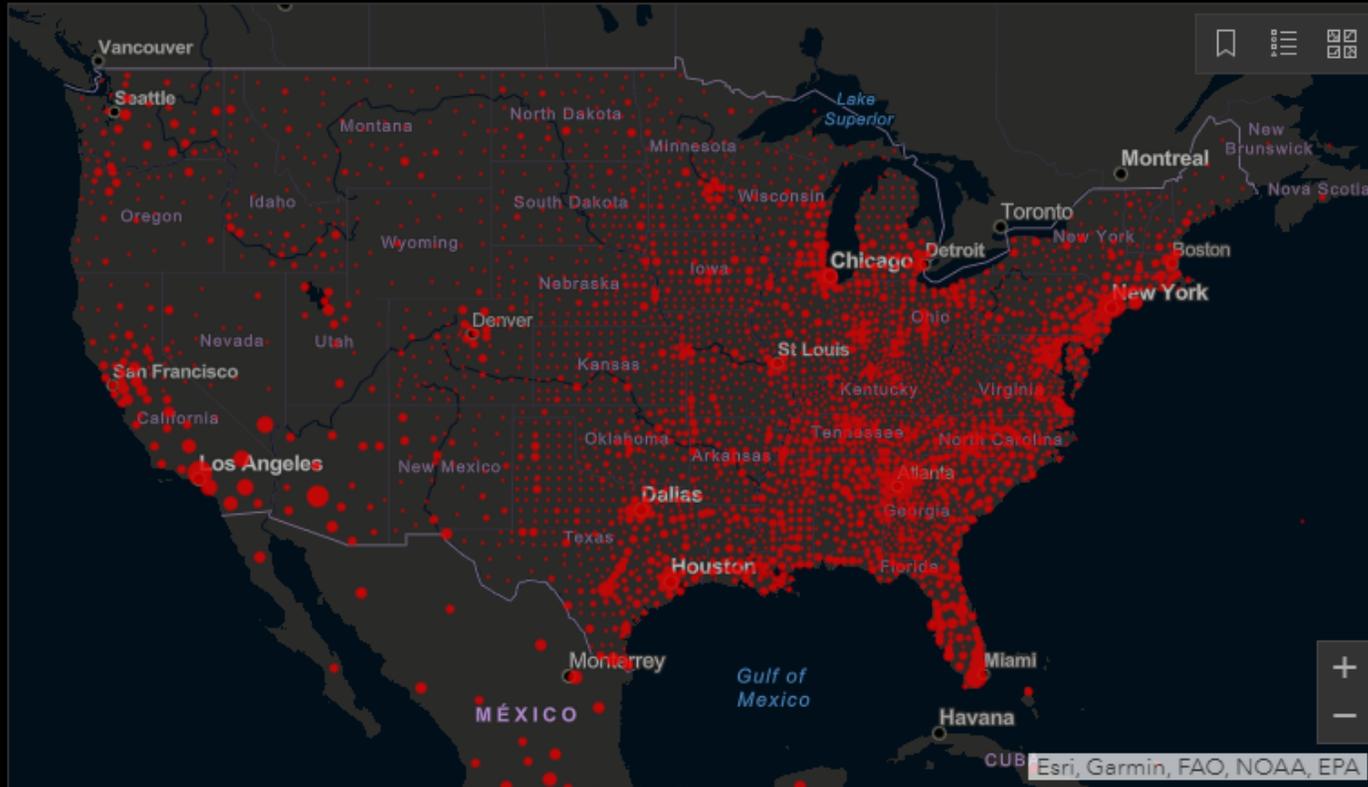


Global Cases

## 6,631,751

Cases by Country/Region/Sovereignty

- 6,631,751 US
- 5,118,253 India
- 4,419,083 Brazil
- 1,081,152 Russia
- 738,020 Peru
- 736,377 Colombia
- 680,931 Mexico
- 653,444 South Africa
- 614,360 Spain
- 589,012 Argentina



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

## 188

countries/regions

Lancet Inf Dis Article: [Here](#). Mobile Version: [Here](#). Data sources: [Full list](#). Downloadable database: [GitHub](#), [Feature Layer](#).  
Lead by JHU CSSE. Technical Support: [Esri Living Atlas team](#) and [JHU APL](#). Financial Support:

Global Deaths

## 196,831

196,831 deaths US

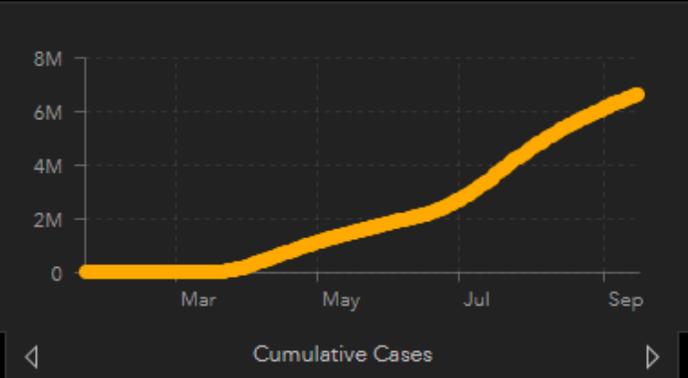
US State Level

### Deaths, Recovered

- 33,042 deaths, 75,903 recovered New York US
- 16,054 deaths, 34,503 recovered New Jersey US
- 14,739 deaths, recovered California US
- 14,738 deaths, 590,837 recovered

Global Deaths

US Deaths, Rec...



Admin0

Last Updated at (M/D/YYYY)  
9/17/2020, 8:23 AM

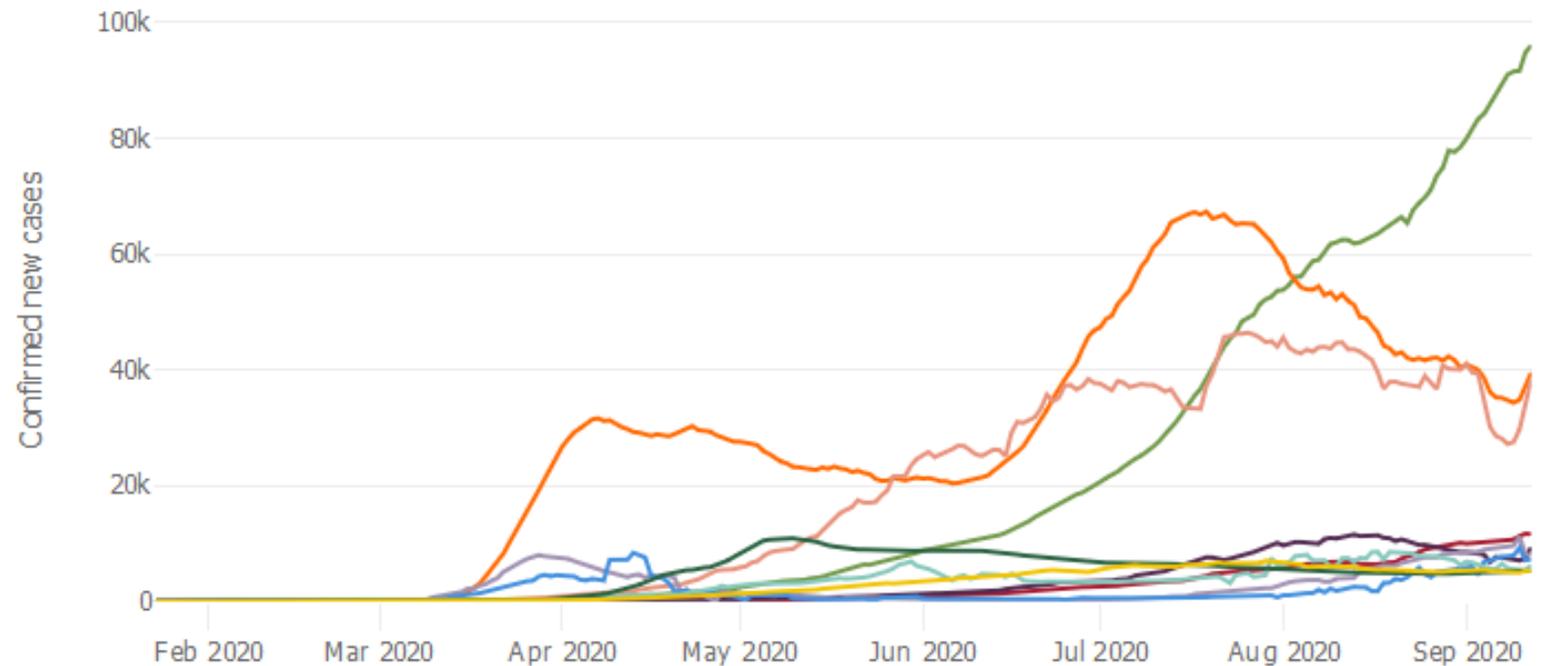
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Over second hump but still **40K cases per day**

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## DAILY CONFIRMED NEW CASES (7-DAY MOVING AVERAGE)

Outbreak evolution for the current 10 most affected countries



Click any country below to hide/show from the graph:

- |       |        |        |           |          |
|-------|--------|--------|-----------|----------|
| India | US     | Brazil | Argentina | Colombia |
| Spain | France | Peru   | Russia    | Mexico   |



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# Mixed picture by state

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Daily New Cases per 100k people. Data shown from 1/22/20 to 9/12/20.



# What's New This Week



## Serum?

The FDA issues an emergency use authorization for convalescent serum.



## For Mayors

This remains a promising therapy, and it is worthwhile for people who have recovered from COVID-19 to donate plasma. Definitive studies still pending.



# What's New This Week



## Antigen Testing

A new type of test for infection becomes more widely available.



## For Mayors

Key question is how often this new test is wrong. We don't have a great answer yet in low-risk populations.



# What's New This Week



## Vaccine Status

Companies predicting decisions could be soon. One candidate had trials held after adverse effect.



## For Mayors

Path to use runs through 3 independent steps: data safety board for trial, advisory committee for FDA, then FDA decision. Most observers think end of year.



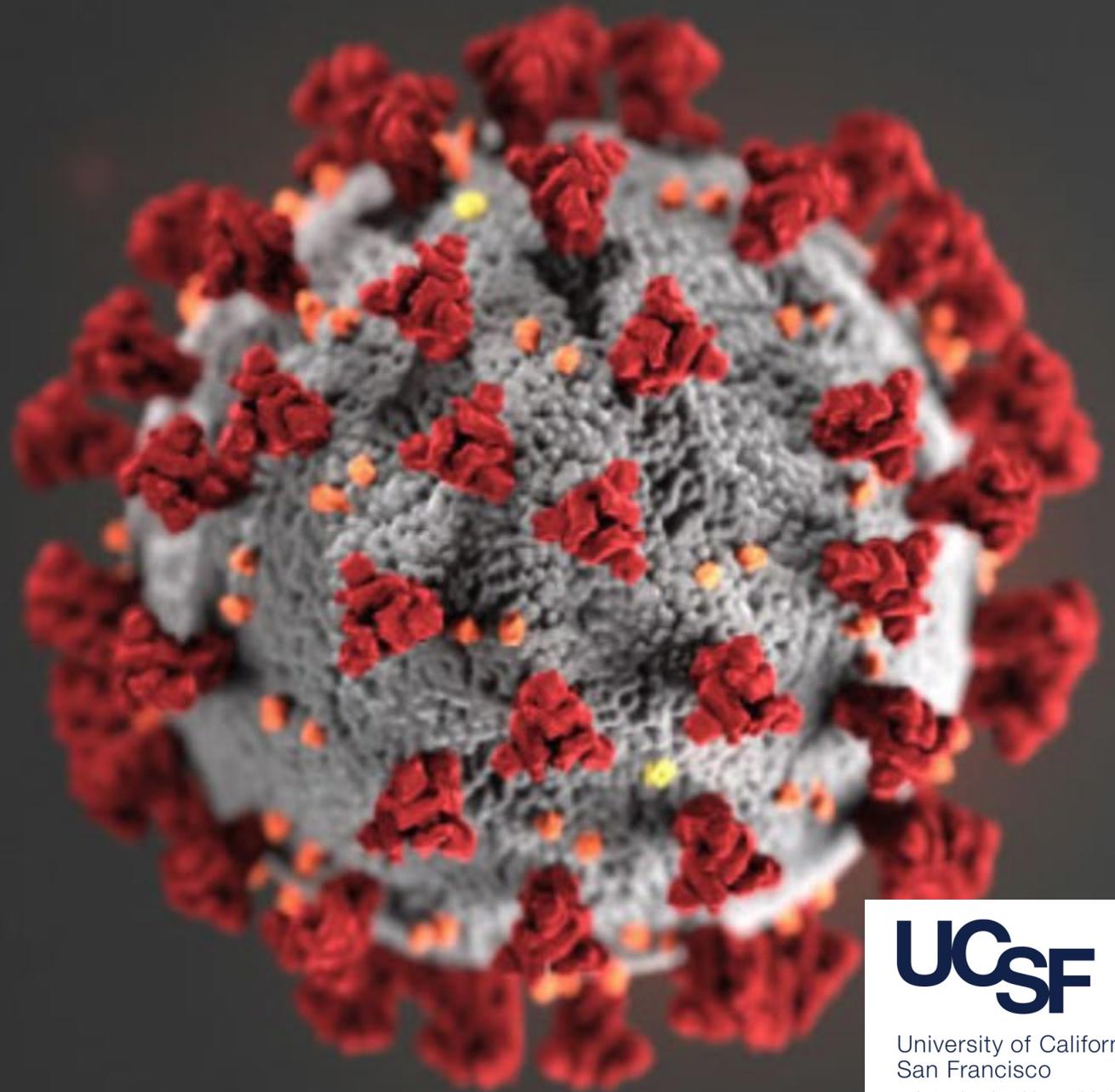
# Facial Masking and COVID-19:

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## Reducing Transmission and Severity of Disease

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*Monica Gandhi MD, MPH  
Professor, Director UCSF Center for AIDS  
Research, Medical Director, Ward 86 HIV  
Clinic, Associate Chief, Division of HIV,  
ID and Global Medicine, UCSF*



**UCSF**

University of California  
San Francisco  
*advancing health worldwide*

# Face Mask Recommendations

APRIL 3, 2020:

CDC recommended cloth face coverings due to frequency of asymptomatic transmission – “protect others”

SEPTEMBER 2020

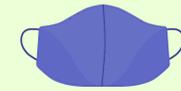
State of California and City of San Francisco expands message to recommend mask wearing to “protect others and yourself”

## Which Masks Are Best for COVID-19?

✓ Best



Surgical mask



Multi-layered cloth mask



Good fit  
Can be secured over nose, behind ears or around head, and under chin



Tightly woven or high thread count cotton or cotton blend

✓ Good



Single-layer cloth mask



Lower thread count cotton, silk, linen, polyester

✗ Not recommended



Knitted mask



Mask with vents



Folded bandana



Poor fit  
Noticeable gaps, holes or vents



Unbreathable material such as plastic or leather



Overly porous material such as nylon or fleece

COVID-19

RESOLVE  
TO SAVE LIVES

Vital  
Strategies

More info at  
[PreventEpidemics.org](https://www.PreventEpidemics.org)

#KnowCOVID  
#PreventEpidemics

# Masks Combat COVID-19



Decrease transmission

May decrease morbidity and mortality by reducing the amount of symptomatic cases

↓  
Facial masking  
reduces  
transmission

**“These face masks are the most important, powerful public health tool we have...I might even go so far as to say that this face mask is more guaranteed to protect me against COVID than when I take a COVID vaccine”-**

*Dr. Robert Redfield  
CDC Director, September 16*

RESEARCH LETTER

JAMA®

**Association Between Universal Masking  
in a Health Care System and SARS-CoV-2 Positivity  
Among Health Care Workers**



**Two hair stylists with COVID-19  
spent at least 15 minutes with  
139 clients**

*Springfield, Missouri, May 2020*

- Everyone wore face coverings
- Zero transmissions among 67 clients tested

# Masking reduces the amount of virus you are exposed to, reducing the severity of the disease



90-95% viral particles filtered



65-85% viral particles filtered depending on cloth/proper use



# Masks can help reduce symptomatic cases

CDC estimated  
**40% of all cases**  
on July 10 were  
asymptomatic

## VIROLOGIC EVIDENCE



Hamsters given SARS-CoV-2 at higher doses get more sick and masked hamsters get less sick

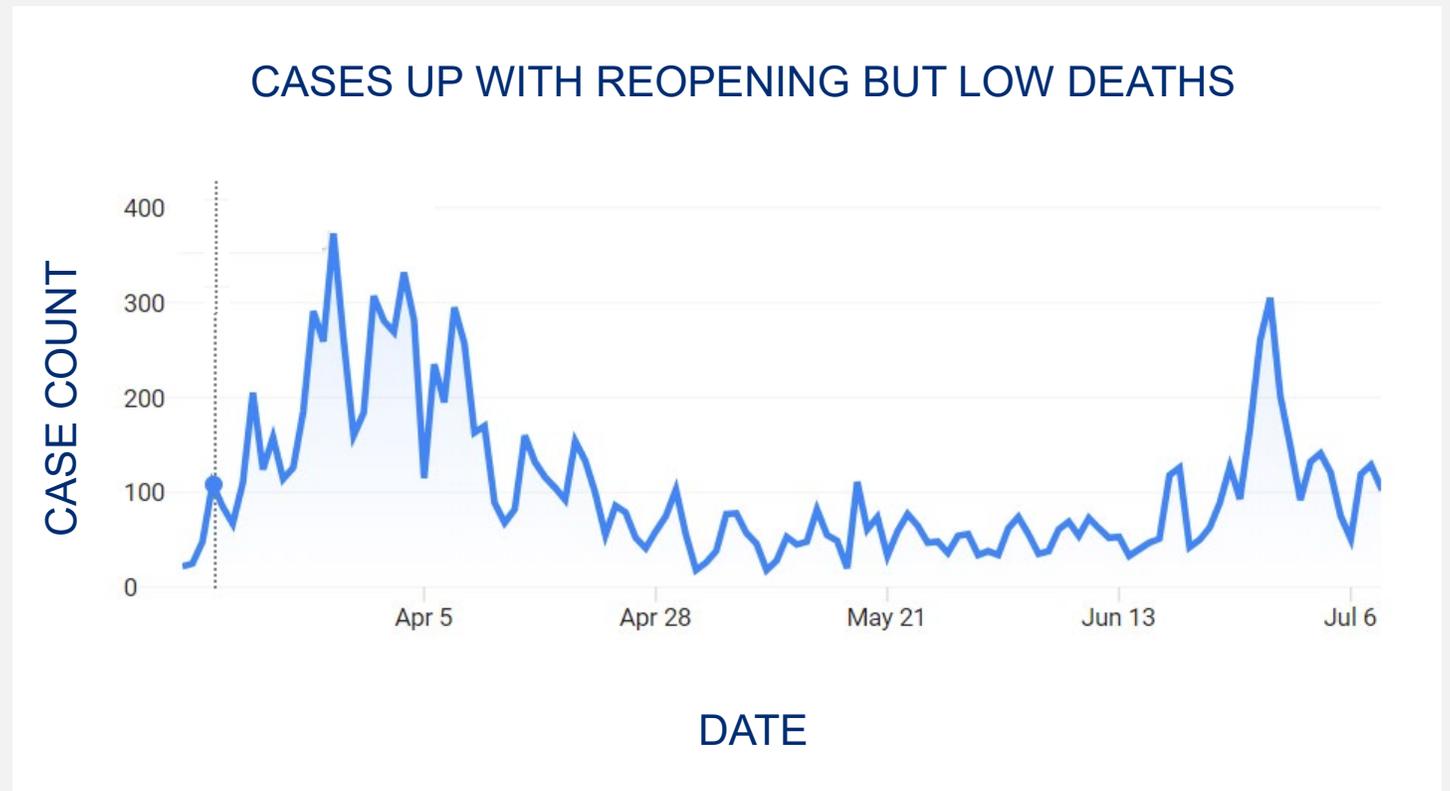
## EPIDEMIOLOGIC EVIDENCE

- 81% asymptomatic in **cruise ship outbreak** that masked
- 95% asymptomatic in **food processing plants** after masking

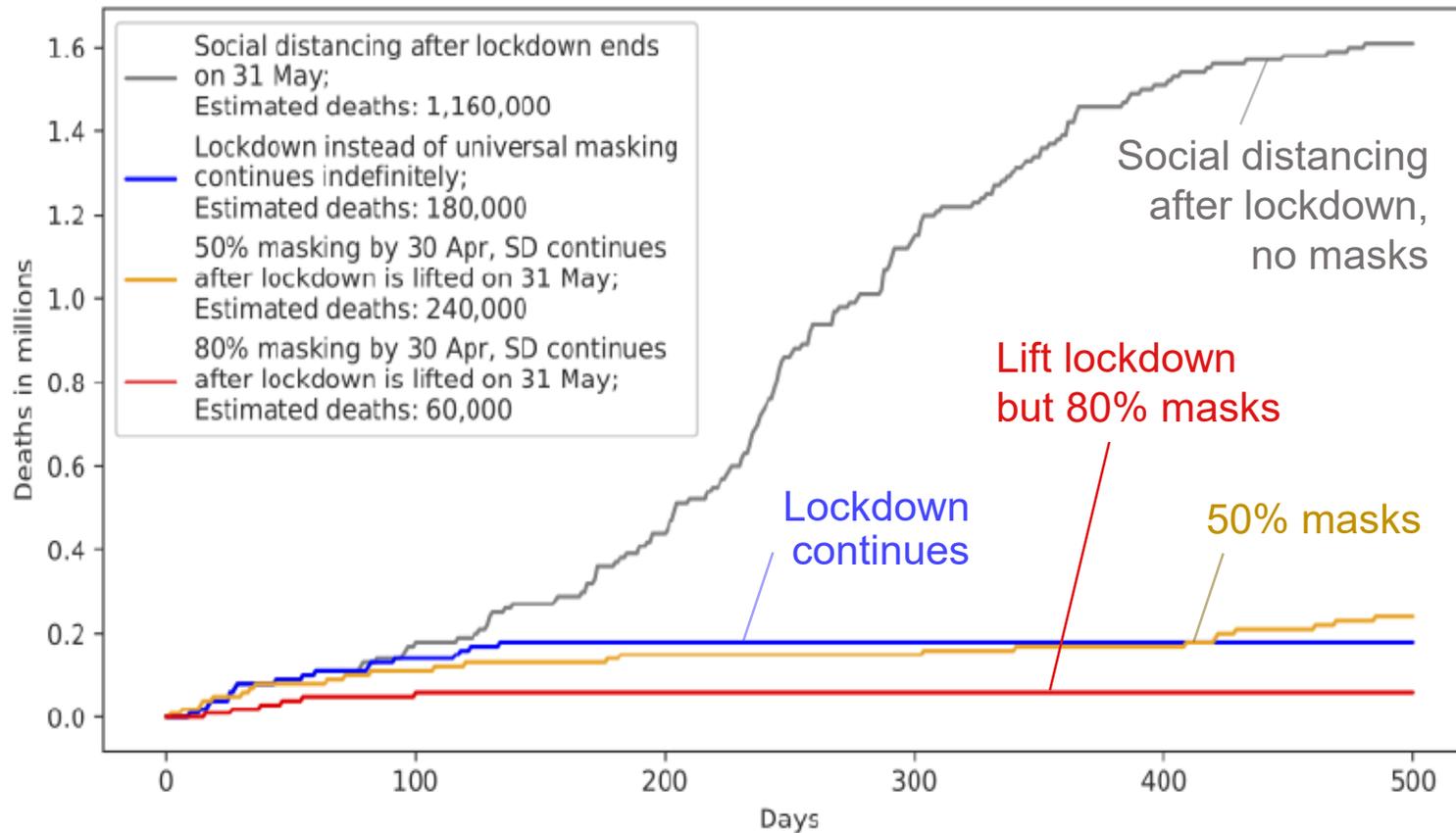
# Do we see rates of asymptomatic infection increasing under “masked” conditions?

## APPEARS TRUE

- In countries accustomed to masking since SARS (Hong Kong, Taiwan, Thailand, South Korea, Singapore, Vietnam), cases up with reopening but not deaths
- Czech Republic mandated facial masking March 23



# One model shows – after lockdown lifts – universal masking will keep death rates low



Lowest death rate requires 80% compliance rate with masking

Lockdown is a blunt instrument but masking takes behavior change

# Advice for Mayors

1

## Model Behavior

As elected officials, modeling mask wearing in public sets the example for your community

2

## Mask Provision

New data shows that providing masks to essential workers increases use

3

## Mask Mandates

If possible, implement mask mandates including enforcement mechanisms

4

## Communication

Use effective communications and community engagement to explain importance of masks and correct use

- Use “bully pulpit”
- Display signage and other city communications

5

## Monitoring

Monitor mask wearing (e.g. surveys to identify proportion of people wearing masks)

6

## Intergovernmental Advocacy

Use data when you advocate with other levels of government

7

## Necessary but Not Enough

Masking is a key tool to reduce exposure, but necessary to combine with other tools (i.e. social distancing, hand washing)

September 17, 2020

# QUESTIONS?

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BLOOMBERG SCHOOL  
*of* PUBLIC HEALTH



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