



**BLOOMBERG  
HARVARD**

| City  
Leadership  
Initiative



# COVID-19

## SITUATION REPORT

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November 12, 2020 | Joshua Sharfstein, MD

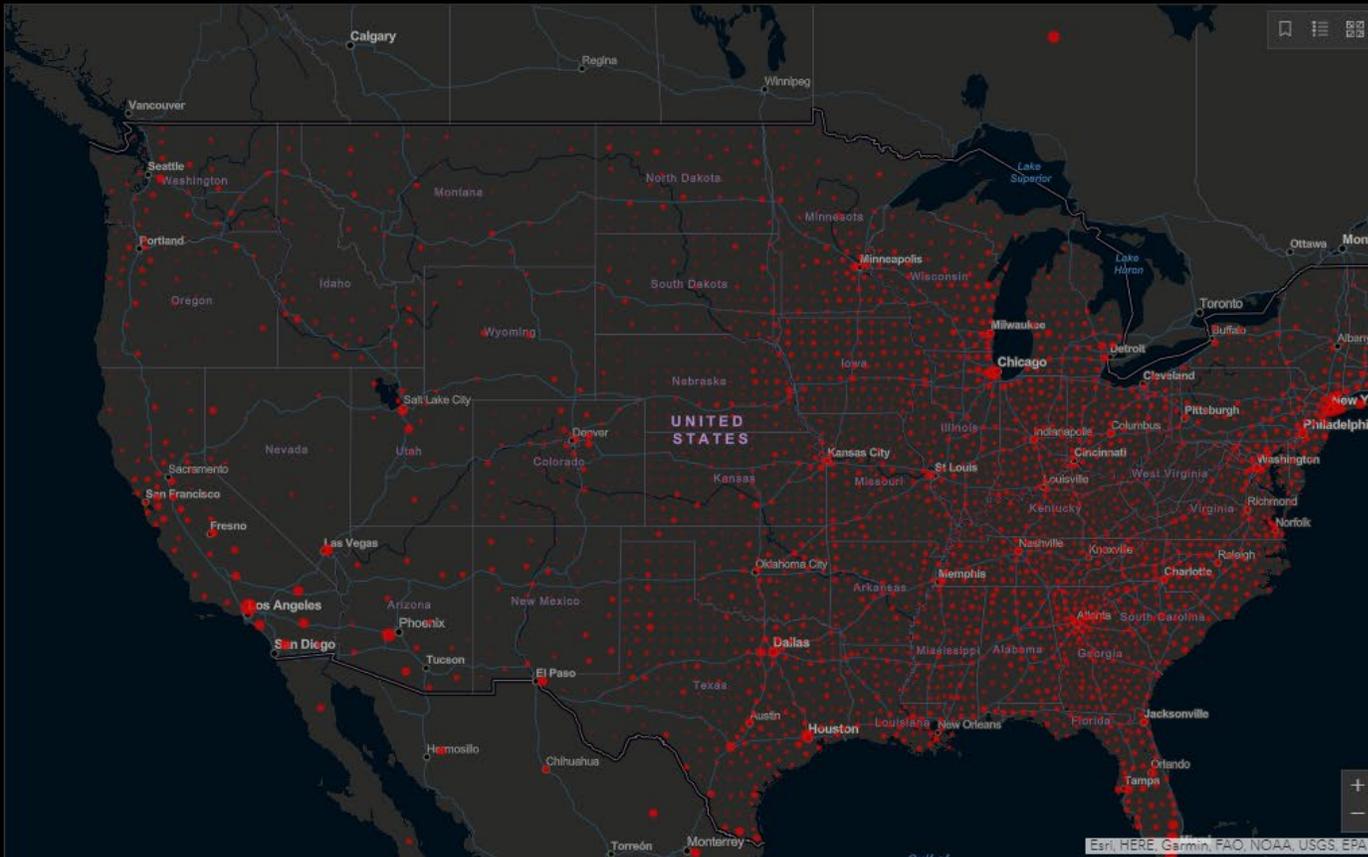
Global Cases

10,403,737

Cases by Country/Region/Sovereignty

10,403,737 US
8,683,916 India
5,747,660 Brazil
1,914,919 France
1,843,678 Russia
1,417,709 Spain
1,273,356 Argentina
1,260,198 United Kingdom
1,165,326 Colombia
1,028,424 Italy
986,177 Mexico
928,006 Peru
742,394 South Africa
738,094 Germany
726,585 Iran
641,496 Poland
524,804 Chile
515,755 Ukraine
515,391 Belgium
511,806 Iraq
452,291 Indonesia

Last Updated at (M/D/YYYY)  
11/12/2020, 8:25 AM



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

191 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: [Epi Living Atlas team](#) and [JHU APL](#). Financial Support: [JHU](#), [NSF](#), [Bloomberg Philanthropies](#) and [Stavros Niarchos Foundation](#). Resource support: [Slack](#), [Github](#) and [AWS](#). Click [here](#) to [donate](#) to the CSSE dashboard team, and other JHU COVID-19 Research Efforts. [FAQ](#). Read more in this [blog](#). [Contact Us](#).

Global Deaths

# 241,809

241,809 deaths US

Global Deaths Global Recovered

US State Level Deaths, Recovered

33,848 deaths, 81,020 recovered New York US
19,469 deaths, 831,800 recovered Texas US
18,111 deaths, recovered California US
17,300 deaths, recovered Florida US
16,476 deaths, 38,586 recovered New Jersey US
10,798 deaths, recovered Illinois US
10,222 deaths, 131,646 recovered Massachusetts US
9,136 deaths, 172,791 recovered Pennsylvania US
8,806 deaths, recovered Georgia US

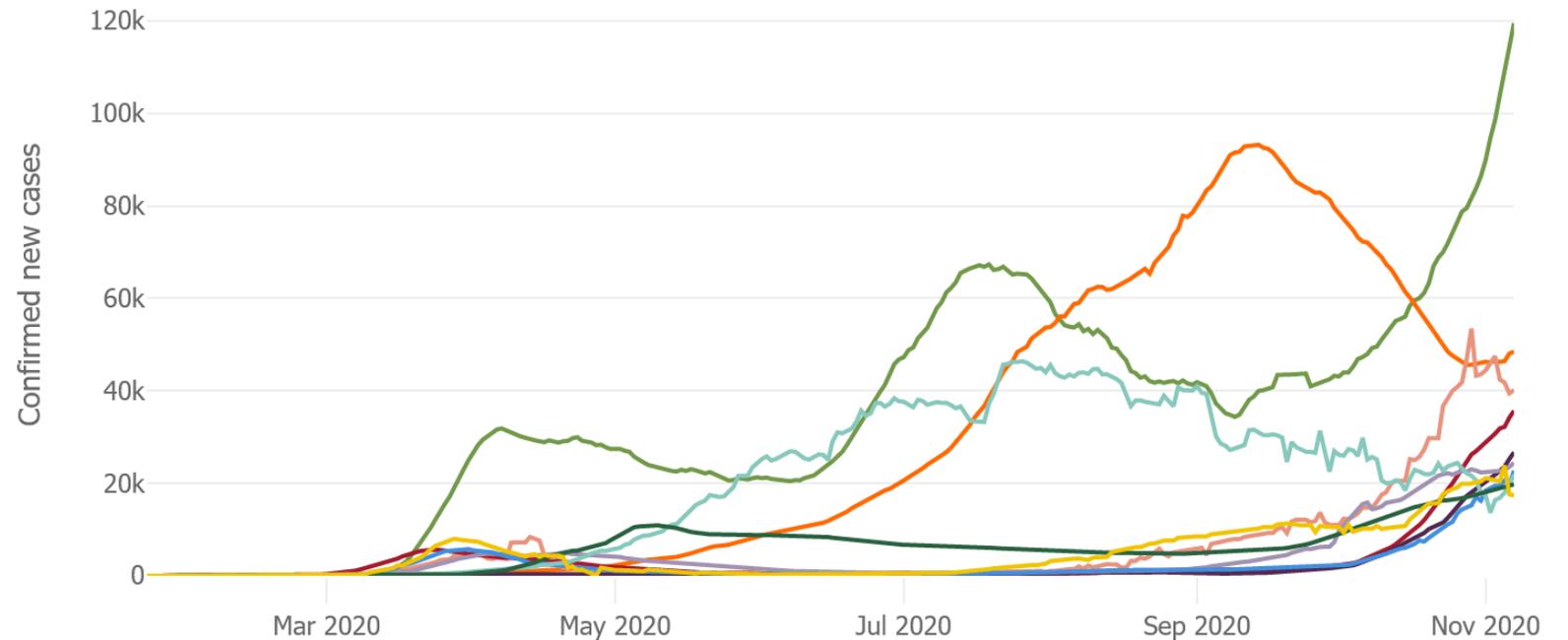
US Deaths, Recovered US Test Results



# The Third Wave

## 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:

- |        |                |         |        |
|--------|----------------|---------|--------|
| US     | India          | France  | Italy  |
| Poland | United Kingdom | Germany | Brazil |
| Russia | Spain          |         |        |

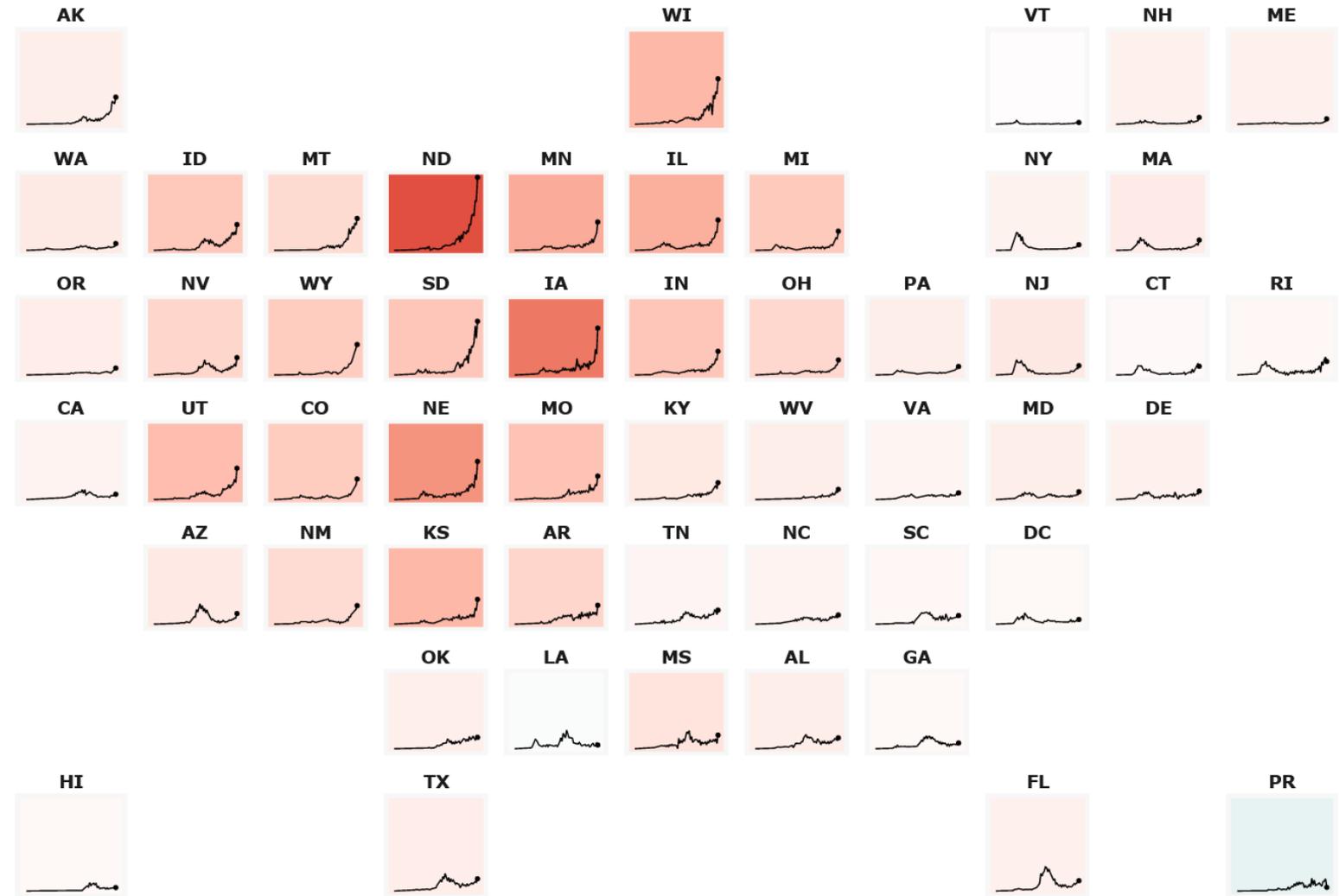


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# Many States at Record Cases

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Daily New Cases per 100k people. Data shown from 1/22/20 to 11/7/20.



# What's New This Week



## Hospitals on the Brink

South Dakota, Montana, and Utah are running out of hospital capacity. Wisconsin opened a field hospital. Military deployed to El Paso.



## For Mayors

The next two months could be the most devastating period to date. With vaccines not too far away, now is the time to fight COVID fatigue and support efforts that prevent infections.



# What's New This Week



## School Re-openings

Schools are relatively resistant to COVID outbreaks, particularly when precautions are taken. Italy opened 65,000 schools, with only one cluster of cases (in a high school).



## For Mayors

With precautions like masking, smaller class sizes, and distance, there is a path to in-school learning. Local experience with the virus can inform decisions to close.



# What's New This Week



## Masks

New CDC guidance affirms the benefits of mask wearing for the person wearing the mask, in addition to those around them.



## For Mayors

Mask wearing, distancing, and handwashing are the most important protections we have until a vaccine arrives.

**Maintaining vigilance now will save lives.**





# COVID-19 VACCINES UPDATE

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How are COVID-19 vaccines being tested and approved for use?

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Ruth Karron, M.D.

Professor, International Health | Director, Center for Immunization Research | Johns Hopkins Vaccine Initiative | Bloomberg School of Public Health

# What's New This Week

90%



## Vaccine

Pfizer's Early Data Shows Vaccine is More Than 90% Effective.

### Pfizer's early data shows coronavirus vaccine is more than 90% effective

Unlike other vaccine front-runners, Pfizer did not take any federal money for research and development.

The New York Times on MSN.com · 11h



### Pfizer says COVID-19 vaccine is looking 90% effective

Pfizer Inc. said Monday that its COVID-19 vaccine may be a remarkable 90% effective, based on early and incomplete test ...

ABC · 54m



### What Does the Pfizer Vaccine News Mean?

There has been some promising Covid-19 vaccine news. A preliminary analysis shows the first effective coronavirus vaccine can ...

BBC · 4m



# COVID-19 Vaccines Being Tested in the U.S.

	mRNA	
	mRNA	
	Adenovirus Vector	
	Adenovirus Vector	
	Recombinant Protein+adjuvant	
	Recombinant Protein+adjuvant	



# COVID-19 Vaccines Being Tested in the U.S.

INITIAL TRIAL RESULTS

EARLIEST  
(Q4 2020-  
Q1 2021)

LATEST  
(Q2-3  
2021)

	<p>mRNA</p>		<p>Enrolling</p>
	<p>mRNA</p>		<p>Fully Enrolled</p>
	<p>Adenovirus Vector</p>		<p>Enrolling</p>
	<p>Recombinant Protein+adjuvant</p>		<p>Not yet started</p>
			<p>Not yet started</p>



# How are the vaccine trials being conducted?

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## AVERAGE # OF PARTICIPANTS IN TRIAL

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30,000-45,000 participants in each trial (5-10 times more people than usually enrolled in these kinds of vaccine trials)

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## HOW IT WORKS

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- Half get vaccine, half get placebo (salt water) (or in some studies, 2/3 and 1/3)
- Trial is **double blind**, which is when participants and study investigators don't know what the participants received
- Every trial participant is followed to determine safety and whether the vaccine works



# How do we determine if the vaccine is safe and effective?

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## CONDUCT OF THE TRIALS

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- Participants report symptoms and illnesses to the study investigators
- An independent committee reviews this information
  - If a serious illness occurs, the trial may be stopped while the committee and the FDA review (“study pause”)
  - In large trials like these, some serious illnesses could occur by chance. A study pause would be triggered, which means the system is working.

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## APPROVAL PROCESS

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FDA will make a final decision on the vaccine after consultation with an advisory panel at an open hearing

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## ONCE IT'S AVAILABLE TO THE PUBLIC?

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After the vaccine is approved for use, additional safety information is gathered from people who receive the vaccine



# What will we learn from these trials?

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## HOW THE VACCINE TRIALS WORK

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Rates of COVID-19 illness are compared in people who received vaccine and people who received the saltwater placebo

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## WHAT THE VACCINE TRIALS **WILL** TELL US:

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Whether a vaccine can prevent COVID illness

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## AND WHAT THEY **WON'T** TELL US:

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Whether a vaccine will be able to prevent the spread of COVID from a vaccinated person to an unvaccinated person



# Pfizer/BioNTech Vaccine: First Results

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## DATA WILL CONTINUE TO BE COLLECTED

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- Preliminary analysis: 90% effective in preventing COVID-19 disease
- Over 43,000 participants; 42% diverse backgrounds; 94 cases of COVID-19
- No serious safety signals identified

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## NEXT STEPS

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- Study will remain blinded until at least 164 cases of COVID-19 occur
- Pfizer/BioNTech plans to apply for **Emergency Use Authorization** after the required safety milestone achieved (3<sup>rd</sup> week in November)



# Emergency Use Authorization (EUA)

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## WHAT IS IT?

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- Used in emergencies when researchers might not have all the information the FDA would typically need before approving a drug
- Manufacturers provide data to show that benefits of the product outweigh the risks
- FDA has specific requirements for an EUA for COVID-19 vaccines



# What Can Mayors Do Now?



**Begin to coordinate with health officials** (city/county/state) in charge of vaccine distribution and learn how vaccine distribution will work

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Continue to **encourage social distancing measures and mask wearing**

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**Ensure that staff have right resources to respond to questions** on COVID vaccines

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**Use your bully pulpits to combat conspiracy theories** about vaccination



**Set realistic expectations** about who will get vaccine and when

