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JOHNS HOPKINS
BLOOMBERG SCHOOL
of PUBLIC HEALTH

COVID-19
SITUATION REPORT

April 2, 2020 | Joshua Sharfstein, MD

Coronavirus COVID-19 Global Cases by the Center for Systems Science and Engineering (CSSE) at Johns Ho…

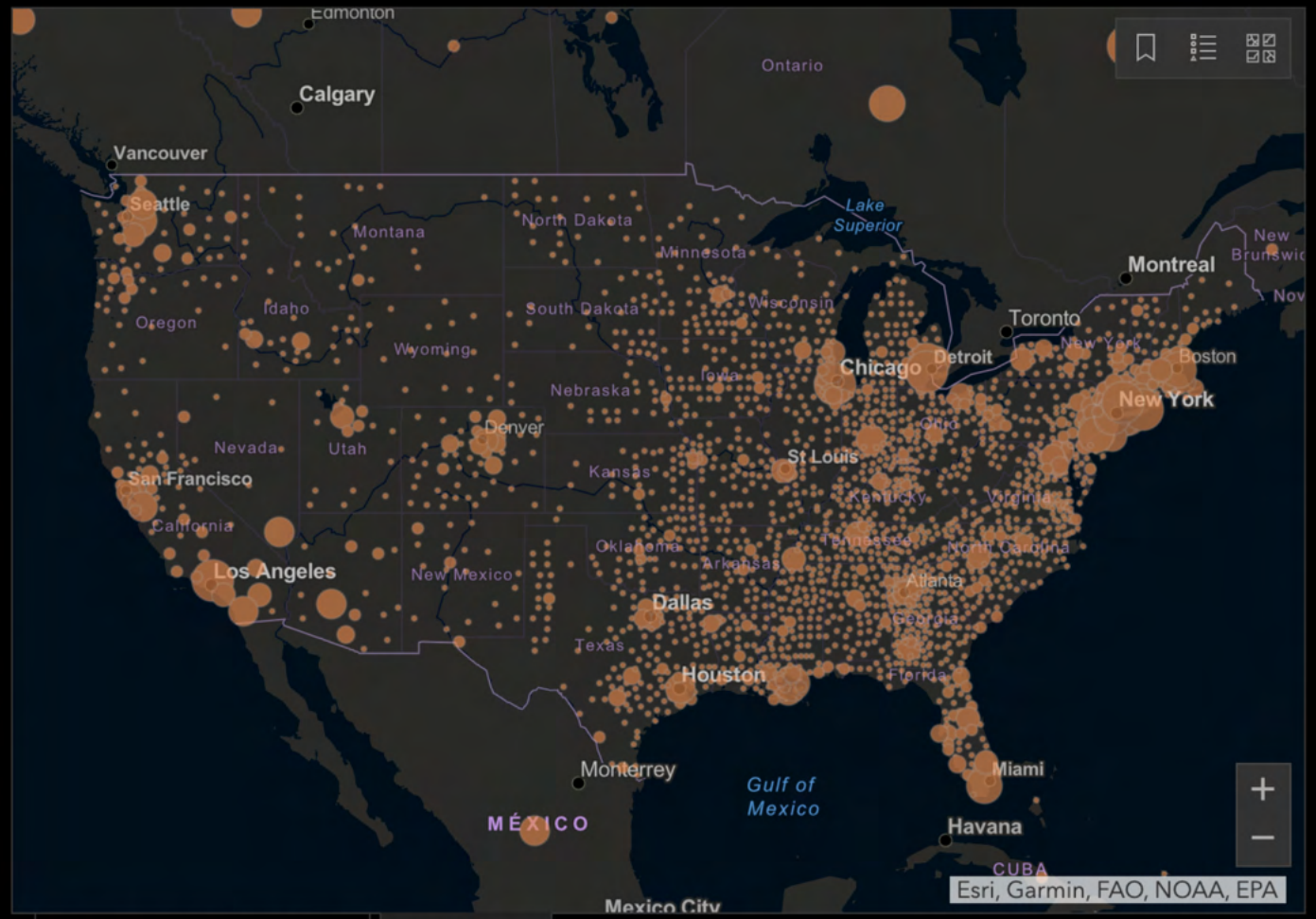
Total Confirmed
216,722

Confirmed Cases by Country/Region/Sovereignty

- 216,722 US
- 110,574 Italy
- 110,238 Spain
- 82,431 China
- 77,981 Germany
- 57,780 France
- 50,468 Iran
- 29,872 United Kingdom
- 18,117 Switzerland
- 15,679 Turkey
- 15,348 Belgium
- 13,696 Netherlands

Admin0

Last Updated at (M/D/YYYY)
4/2/2020, 6:31:02 AM



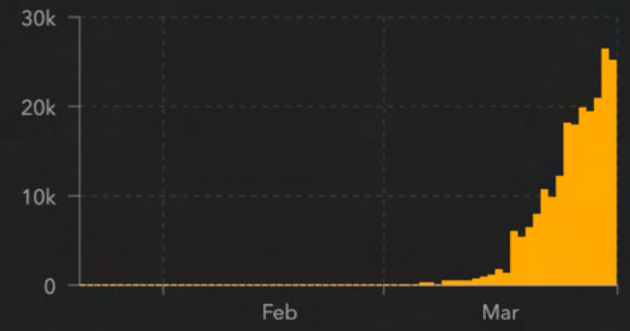
Cumulative Confirmed Cases | Active Cases

Total Deaths
5,137

- 1,374 deaths New York City **New York** US
- 585 deaths Unassigned **New York** US
- 164 deaths King **Washington** US
- 146 deaths Wayne **Michigan** US
- 115 deaths Orleans **Louisiana** US
- 99 deaths Oakland **Michigan** US

Total Recovered
8,672

8,672 recovered US



Confirmed | Logarithmic | Daily Increase

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

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What's New This Week

April 30

The president extended social distancing guidelines until the end of April

For Mayors

It is likely significant social distancing will be required until testing is better established, cases are declining, and capabilities to intervene and treat are in place

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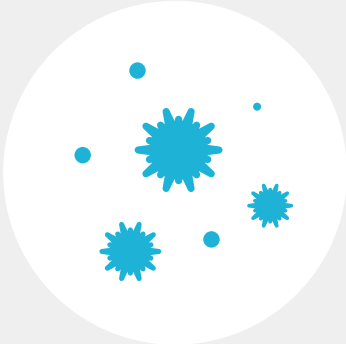
What's New This Week



Antibody Therapy

Studies began testing
of antibodies from
people who recover
from the coronavirus

For Mayors

Social distancing helps buy time
for scientists to find new
treatments like antibody therapy
and prove that they work

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COVID-19

TESTING

Refresher on COVID-19 Testing

Viral and **antigen testing** identifies people who **have coronavirus** infection.

GOAL

To reduce the spread of the virus through isolation of cases and quarantine of contacts.

Antibody testing – also known as serology – identifies people who **have had coronavirus** infection.

GOAL

It is expected that as more is known about antibody testing, it will be possible to identify people who are immune from coronavirus.

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The Basics of Disease Control

The New York Times

Opinion

Testing is Just the Beginning in the Battle Against Covid-19

We need a comprehensive strategy to prevent the spread of the disease.

By Joshua M. Sharfstein and Melissa A. Marx

The authors are on the faculty of the Bloomberg School of Public Health at Johns Hopkins University.

March 30, 2020

The reproduction number (R_0) of an infectious disease refers to the number of subsequent cases generated by each case.

If $R_0>1$, the disease spreads.
If $R_0<1$, the disease stops spreading.

The way to lower the R_0 is to isolate cases so they cannot pass the disease to anyone else and then to find and quarantine their contacts so that they do not pass the disease to others.

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Example: Ebola in Liberia

Tolbert Nyenswah led Liberia's response to the Ebola Epidemic.

Liberia trained thousands of people to work isolating cases and quarantining contacts, even in many cases where people had no known street address.

Liberia's epidemic was controlled rapidly through public health strategies.

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SCALING OF TESTING IS IMPORTANT.

And, critical for the United States,
is how many coronavirus test diagnoses
are leading to action.

Here are some actions mayors can take…

When Not Enough Testing is Available: Support Allocation of Scarce Supply

STEP 1

When viral testing (or protective equipment) is limited, the top priority is to test sick people in the hospital to diagnose COVID-19.

STEP 2

The second priority is to test healthcare workers and first responders with symptoms.

ACTION:

Mayors can explain to people with mild symptoms that they should isolate themselves without testing.

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As Testing Becomes Available: Protect High-Risk Populations

Nursing Homes

Nursing homes, assisted living, and other congregate living (such as high-rise senior housing) are **very high risk** for outbreaks of the novel coronavirus.

Coronavirus Disease 2019 (COVID-19) Preparedness Checklist for Nursing Homes and Other Long-Term Care Settings

ACTION: **Mayors can support the use of tests to prevent outbreaks as well as CDC recommendations for infection control.**

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When Testing Readily Available: Community-Based Testing

A promising model is to have multiple community-based testing sites linked to a call center.

GOAL

The idea is for city residents to call to explain their symptoms and receive an appointment for a rapid test. **This approach assures that residents are immediately tied into the public health response, including opportunities for isolation, contact tracing, and quarantine of contacts**.

ACTION:

Mayors can work with public health authorities and support public-private partnerships to:

- Establish call centers
- Establish community-based testing centers
- Scale efforts for isolation, contact tracing, and quarantine

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Coordinate Social Services to Support Response

As more testing becomes available, mayors can also support the ability of city residents to isolate and quarantine successfully. 311 or the testing call center are options for coordinating these services.

SERVICES TO CONSIDER

Food and medication delivery (Taiwan)

-

Alternative housing (Seattle)

-

Reconnecting water (Michigan)

ACTION: **Mayors can partner with the private sector to scale services and work out referral arrangements with local public health authorities.**

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Conclusion: Mayors Role in Testing

WITH LIMITED TESTING

- Educate the public about when to test
- Protect healthcare workers
- Proactively use tests for the most vulnerable populations

WITH MORE AVAILABLE TESTING

- Assure reduction in the spread of the virus through:

  1) Effective isolation
  2) Contact tracing and quarantines

- Identify approaches to scale services in support of testing

- Identify approaches to scale services in support of contact tracing and quarantines

More on Antibody Tests

Antibody tests will help answer two key questions:

How many people were infected in the community?

-

Can people who are immune from infection be identified?

Key unknowns:

Which tests work well?

-

What different results mean for the risk of infection?

Even when returning people to work based on immunity to COVID-19, cities will still need strong disease control capacity to prevent further outbreaks.

'Immunity passports' could speed up return to work after Covid-19

German researchers studying how lockdown restrictions could be lifted for some people

Too much is unknown right now to recommend a specific strategy for using antibody tests. But stay tuned.

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COVID-19 Local Response Initiative:
City Fiscal Tracking and Federal Reimbursement Initiative

CHALLENGE

Federal funding is becoming available, but navigating the process is complex.

BLOOMBERG SUPPORT

Interested cities can access a new *Municipal Resource Guide* and join a corresponding webinar from 1-2PM EDT on Tuesday, April 7th, hosted by Bloomberg Associates consulting principals **Adam Freed** and **Rose Gill** along with a panel of national experts.

GOAL

Supports will help cities understand how to identify, navigate, and monitor the various COVID-19 federal funding streams being deployed to address the crisis.

Bloomberg Philanthropies

THE UNITED STATES CONFERENCE OF MAYORS

ACTION:

Sign Up at: mayo.rs/ReimbursementWebinar
Email Us with Questions at: coronavirusresponse@bloomberg.org

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