

Epidemiology and Public Health Response to COVID-19, New Jersey, January 2020 to Present

Rutgers School of Management and Labor Relations
NJ COVID-19 Weekly Update Ongoing Webinar Series
Tuesday, January 26, 2021



Outline

- Background: emergence of COVID-19 and evolution of public health response
- Descriptive epidemiology
- What do we know now?
- Where do we go from here?

CDC HAN, January 8, 2020

Outbreak of Pneumonia of Unknown Etiology (PUE) in Wuhan, China



Distributed via the CDC Health Alert Network
January 8, 2020, 1615 ET (04:15 PM ET)
CDCHAN-00424

Summary

The Centers for Disease Control and Prevention (CDC) is closely monitoring a reported cluster of pneumonia of unknown etiology (PUE) with possible epidemiologic links to a large wholesale fish and live animal market in Wuhan City, Hubei Province, China. An outbreak investigation by local officials is ongoing in China; the World Health Organization (WHO) is the lead international public health agency. Currently, there are no known U.S. cases nor have cases been reported in countries other than China. CDC has established an Incident Management Structure to optimize domestic and international coordination if additional public health actions are required.

This HAN Advisory informs state and local health departments and health care providers about this outbreak and requests that health care providers ask patients with severe respiratory disease about travel history to Wuhan City. Wuhan City is a major transportation hub about 700 miles south of Beijing with a population of more than 11 million people.

<https://emergency.cdc.gov/han/han00424.asp>

CDC Press Release, January 21, 2020

[https://www.cdc.gov/
media/releases/2020/
p0121-novel-
coronavirus-travel-
case.html](https://www.cdc.gov/media/releases/2020/p0121-novel-coronavirus-travel-case.html)

First Travel-related Case of 2019 Novel Coronavirus Detected in United States

Press Release

For Immediate Release: Tuesday, January 21, 2020

Contact: [Media Relations](#)

(404) 639-3286

The Centers for Disease Control and Prevention (CDC) today confirmed the first case of 2019 Novel Coronavirus (2019-nCoV) in the United States in the state of Washington. The patient recently returned from Wuhan, China, where an outbreak of pneumonia caused by this novel coronavirus has been ongoing since December 2019. While originally thought to be spreading from animal-to-person, there are growing indications that limited person-to-person spread is happening. It's unclear how easily this virus is spreading between people.

The patient from Washington with confirmed 2019-nCoV infection returned to the United States from Wuhan on January 15, 2020. The patient sought care at a medical facility in the state of Washington, where the patient was treated for the illness. Based on the patient's travel history and symptoms, healthcare professionals suspected this new coronavirus. A clinical specimen was collected and sent to CDC overnight, where laboratory testing yesterday confirmed the diagnosis via CDC's Real time Reverse Transcription-Polymerase Chain Reaction (rRT-PCR) test.

NJ's First COVID-19 Case Announced, March 4, 2020

PO Box 360
Trenton, NJ 08625-0360

For Release:
March 4, 2020

Judith M. Persichilli
Commissioner

For Further Information Contact:
Office of Communications
(609) 984-7160

Governor Murphy, Acting Governor Oliver, and Commissioner Persichilli Announce First Presumptive Positive Case of Novel Coronavirus in New Jersey

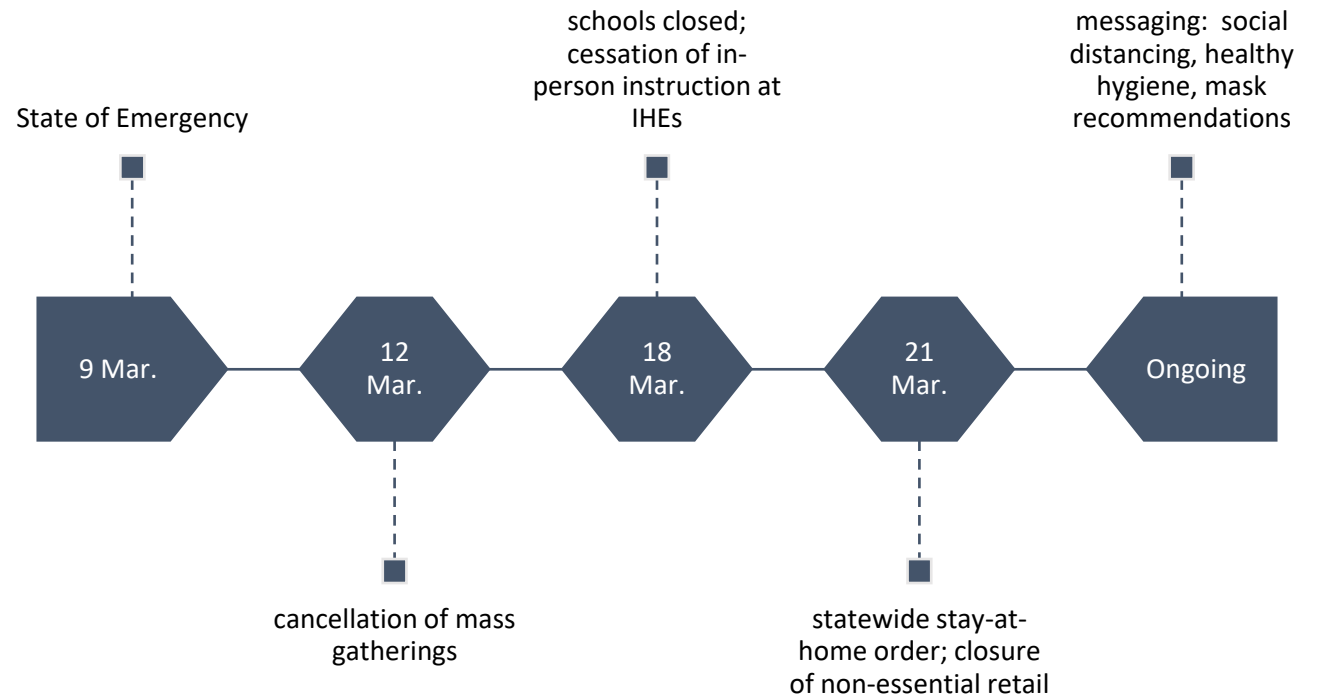
WEST TRENTON – Governor Phil Murphy, Acting Governor Sheila Oliver, and New Jersey Department of Health Commissioner Judith Persichilli tonight announced the first presumptive positive case of novel coronavirus, or COVID-19, in New Jersey. The individual, a male in his 30s, is hospitalized in Bergen County and has been hospitalized since March 3.

“My Administration is working aggressively to keep residents safe and contain the spread of COVID-19 in New Jersey,” **said Governor Murphy**. “We take this situation very seriously and have been preparing for this for weeks. I urge residents to remain calm and use resources from the New Jersey Department of Health and Centers for Disease Control to prepare and prevent the spread of infection. Safeguarding the public’s health is one of my highest priorities and my Administration is prepared to respond swiftly to any additional positive cases of COVID-19 here in New Jersey.”

“Our Administration has been coordinating across all levels of government, and with our federal partners, to ensure that we are active and engaged with preparedness and response plan,” **said Acting Governor Oliver**. “We urge all New Jersey residents to follow guidance from the New Jersey Department of Health and Centers for Disease Control to help contain the spread of COVID-19.”

<https://www.nj.gov/health/news/2020/approved/20200304b.shtml>

Immediate Public Health Control Measures

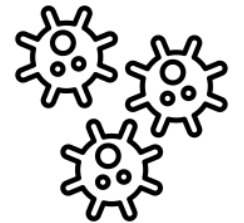


Initial Challenges

- Given early association with travel from impacted areas, CDC/state and local health departments undertook airport screening → isolation/quarantine implications



- Public health guidance was based on limited SARS-CoV-2 data and assumptions from understanding of other coronaviruses



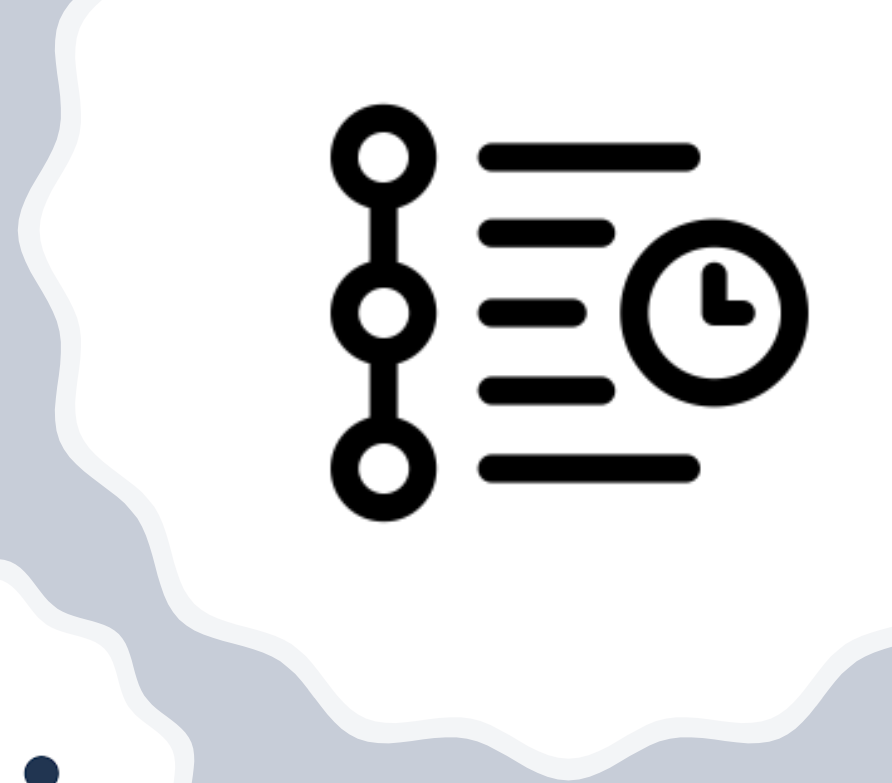
- First wave created strain on healthcare and public health systems



- Risk communications was constantly evolving

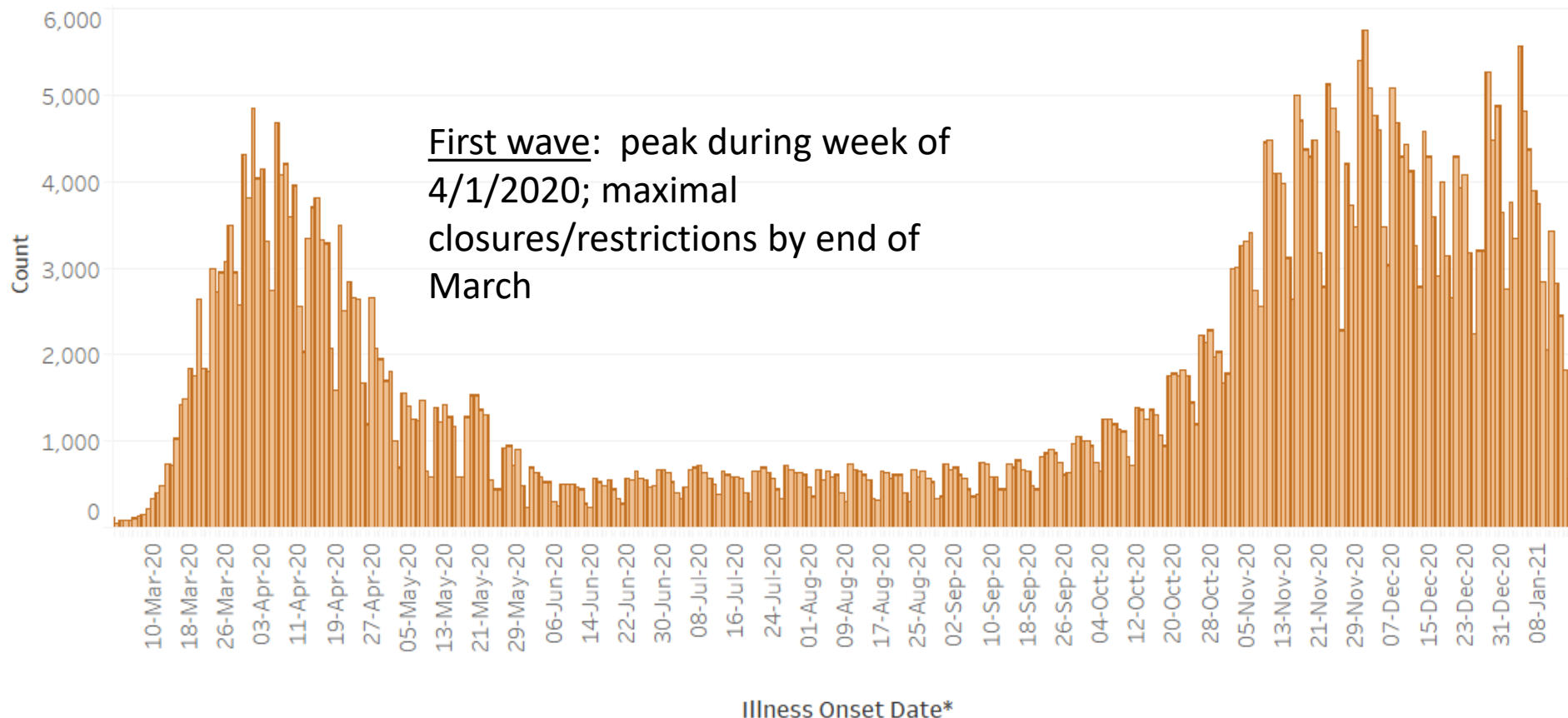
Evolution of Public Health Response, Late Spring 2020 to Present

- Initial closures and ongoing messaging re: masking, social distancing, healthy habits → sustained decreases in disease metrics
- Framework for reopening at federal- and state-level
- Contact tracing ramp up
- Vaccination preparations



Descriptive Epidemiology, 2020 to Present

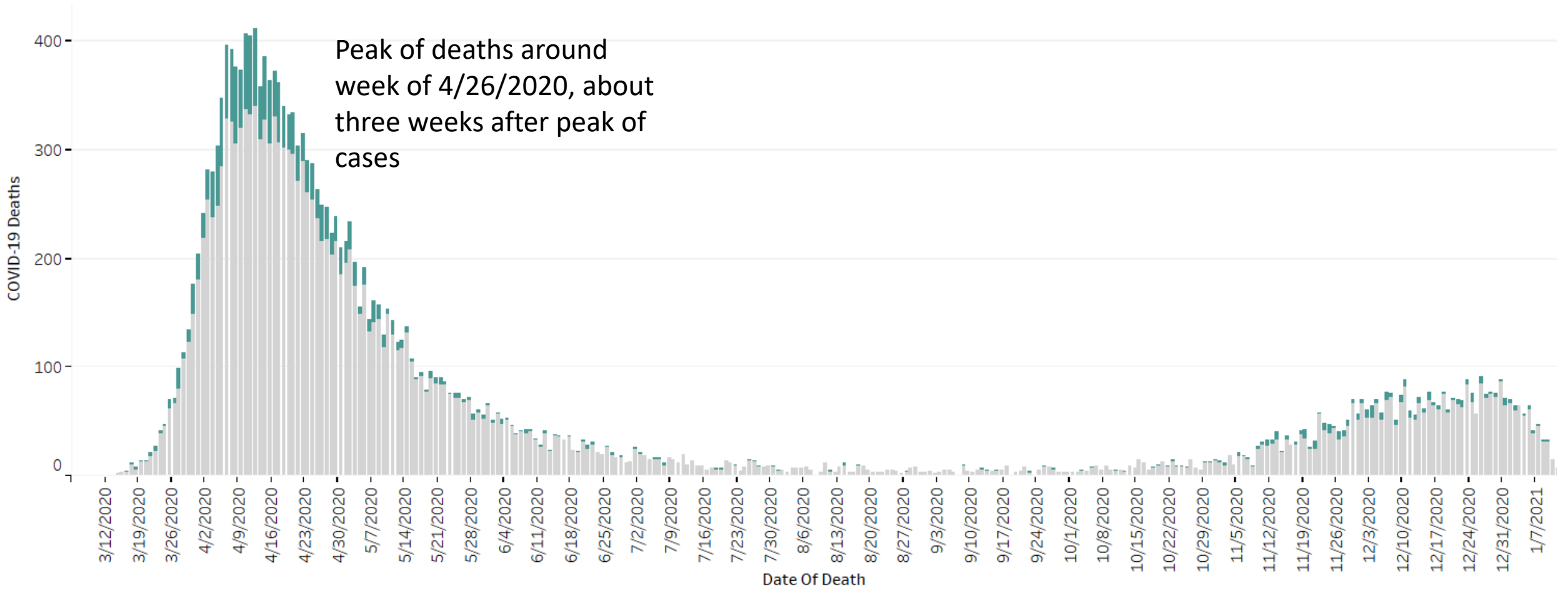
Epidemic curve, NJ lab-confirmed cases (N=565,097), Mar. 2020 to Jan. 2021



Second wave: peak during end of November; secondary peak (likely due to holidays) during first week January (preliminary)

*If illness onset date is unknown the date of specimen collection or the date of NJDOH notification is used, whichever is earlier.

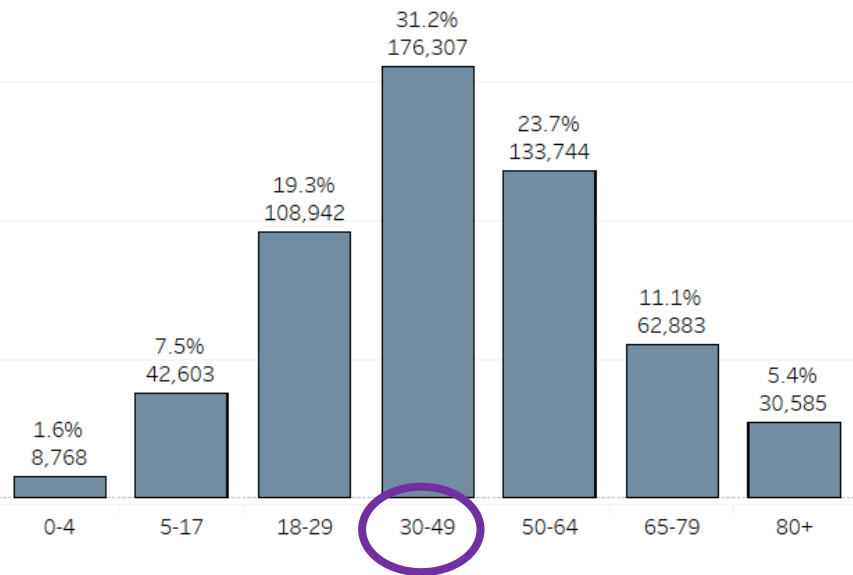
COVID-19 Deaths in New Jersey by Date of Death



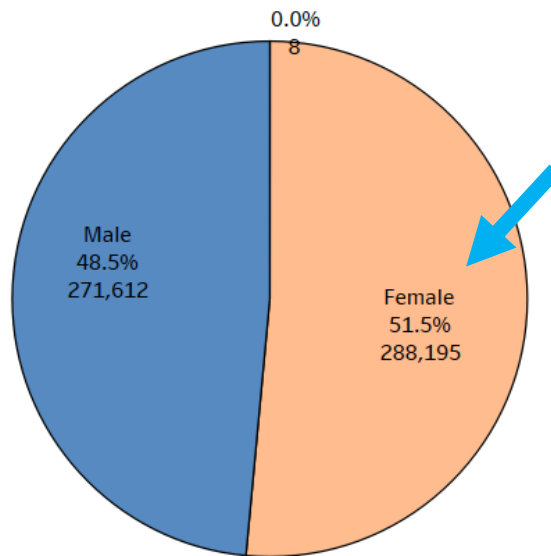
NOTE: Use the **CTRL** key to select individual dates. To select ranges of dates, click and drag across the dates of interest. To un-do interaction, select the **REVERT** button in the bottom left corner of the screen.

<https://covid19.nj.gov/> ("Case and Mortality" tab; accessed 1/17/2021)

All Cases by Age Group



All Cases by Gender

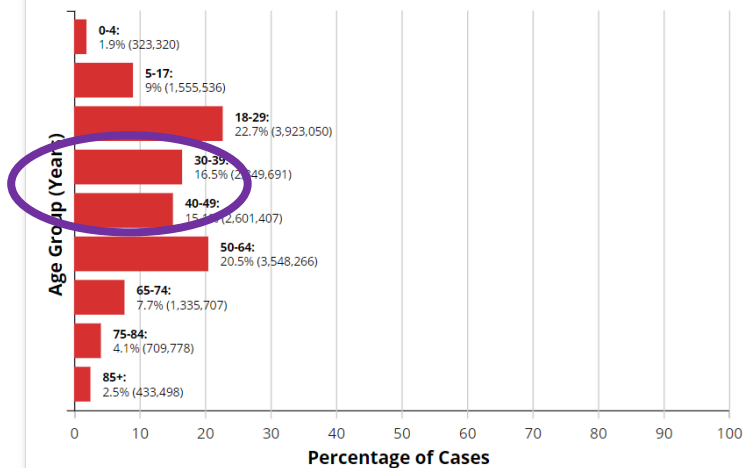


NJ:

<https://covid19.nj.gov/>
 ("Case and Mortality"
 tab; accessed
 1/17/2021)

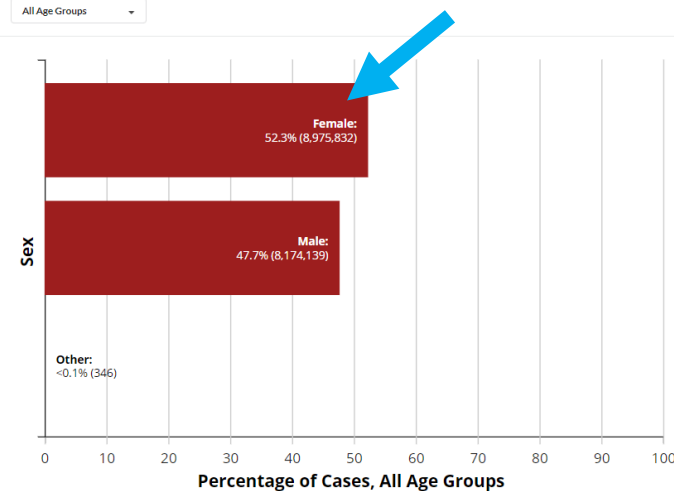
Cases by Age Group:

Data from 17,372,574 cases. Age group was available for 17,280,253 (99%) cases.



Cases by Sex:

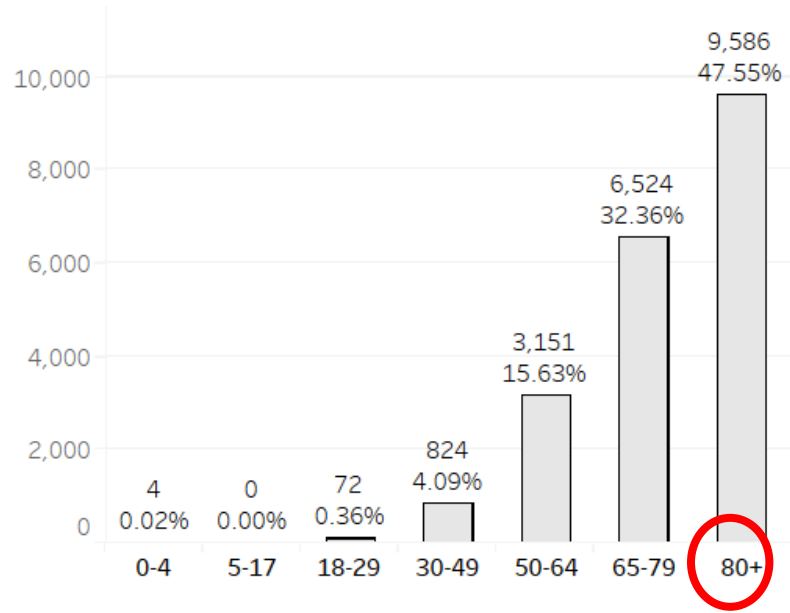
Data from 17,372,574 cases. Sex was available for 17,150,317 (98%) cases.



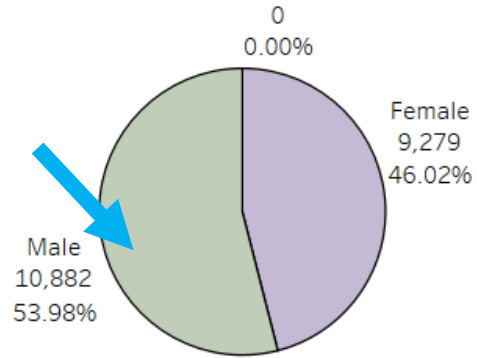
US:

<https://covid.cdc.gov/covid-data-tracker/#demographics>
 (accessed 1/18/2021)

COVID-19 Deaths by Age Group



COVID-19 Deaths by Gender

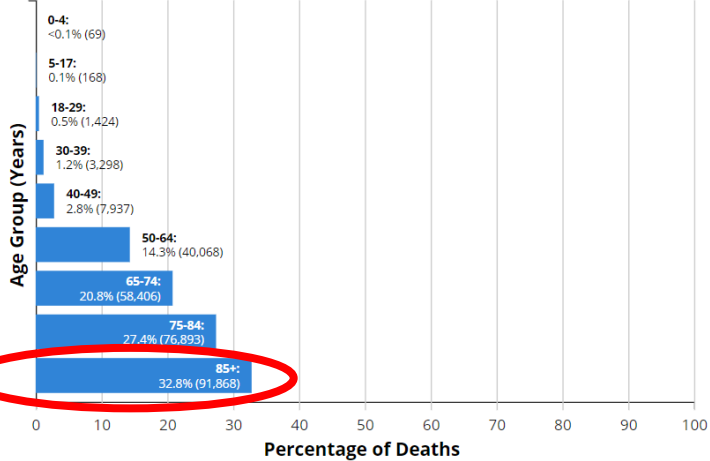


NJ:

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1/17/2021)

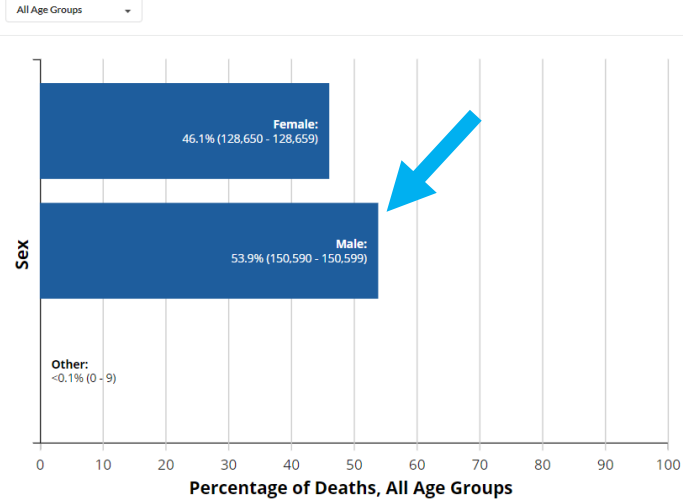
Deaths by Age Group:

Data from 280,158 deaths. Age group was available for 280,131 (99%) deaths.



Deaths by Sex:

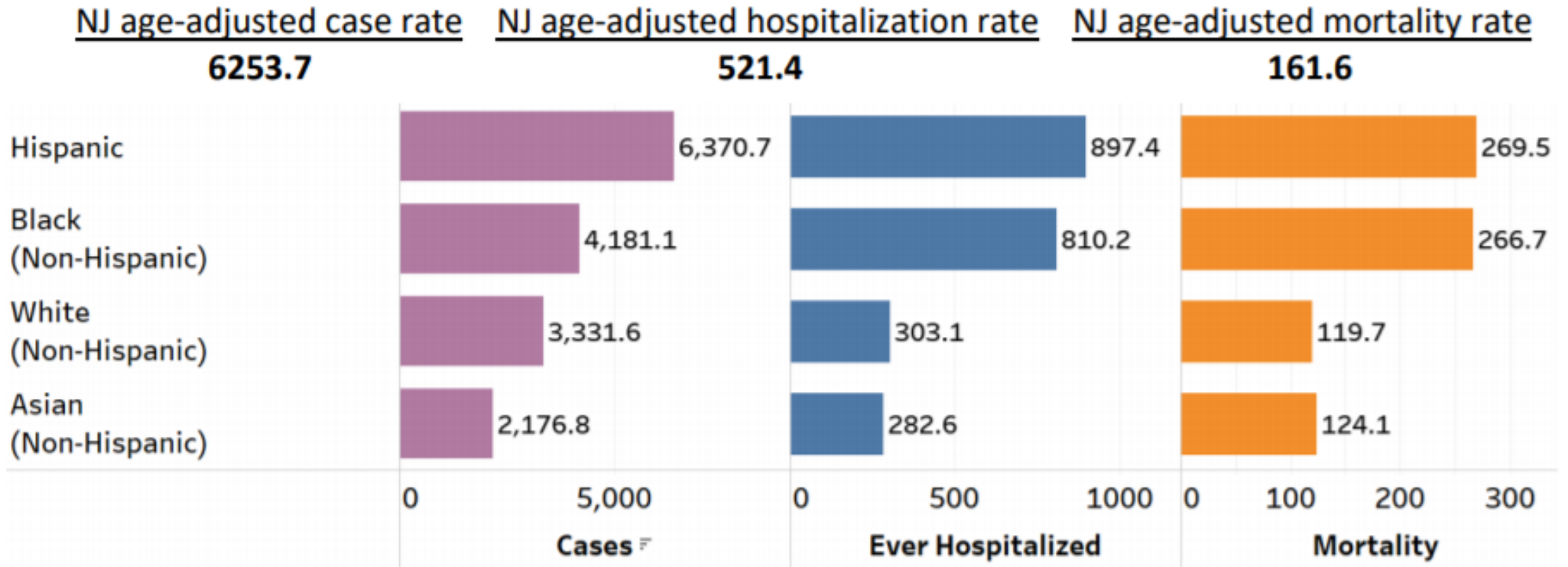
Data from 280,158 deaths. Sex was available for 279,254 (99%) deaths.



US:

<https://covid.cdc.gov/covid-data-tracker/#demographics>
(accessed 1/18/2021)

**Age-adjusted laboratory confirmed case, hospitalization and mortality rates
by race/ethnicity as of *January 19, 2021*, New Jersey**



What we know now about SARS-CoV-2 (1)

- Primarily spread through close contact transmission, including from infected people without symptoms
- Limited airborne transmission under certain conditions
- Spread through contaminated surfaces less common
- Rarely spread from between people and animals
- Reinfection rare

<https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-covid-spreads.html>

https://www.state.nj.us/health/cd/documents/topics/NCOV/COVID_Masks.pdf



1. Wear Mask Correctly



2. Maintain Healthy Habits



3. Keep Social Distancing

What we know now about SARS-CoV-2 (2)

- Anyone can have mild to severe symptoms
- Older adults and people with severe underlying medical conditions at higher risk for developing more serious complications
- Some patients can have symptoms that last for weeks/months after recovery from acute illness

Symptoms of COVID-19

- | | | | |
|--------------------|---------------|------------------------|------------------------------|
| ✓ fever | ✓ cough | ✓ shortness of breath | ✓ sore throat |
| ✓ chills, shaking | ✓ muscle pain | ✓ headache | ✓ new loss of taste or smell |
| ✓ nausea, vomiting | ✓ diarrhea | ✓ stuffy or runny nose | |

* **WHEN TO SEEK MEDICAL HELP:** If you have difficulty breathing, high fever, or other unusual or concerning symptoms, you should call your health care provider right away.

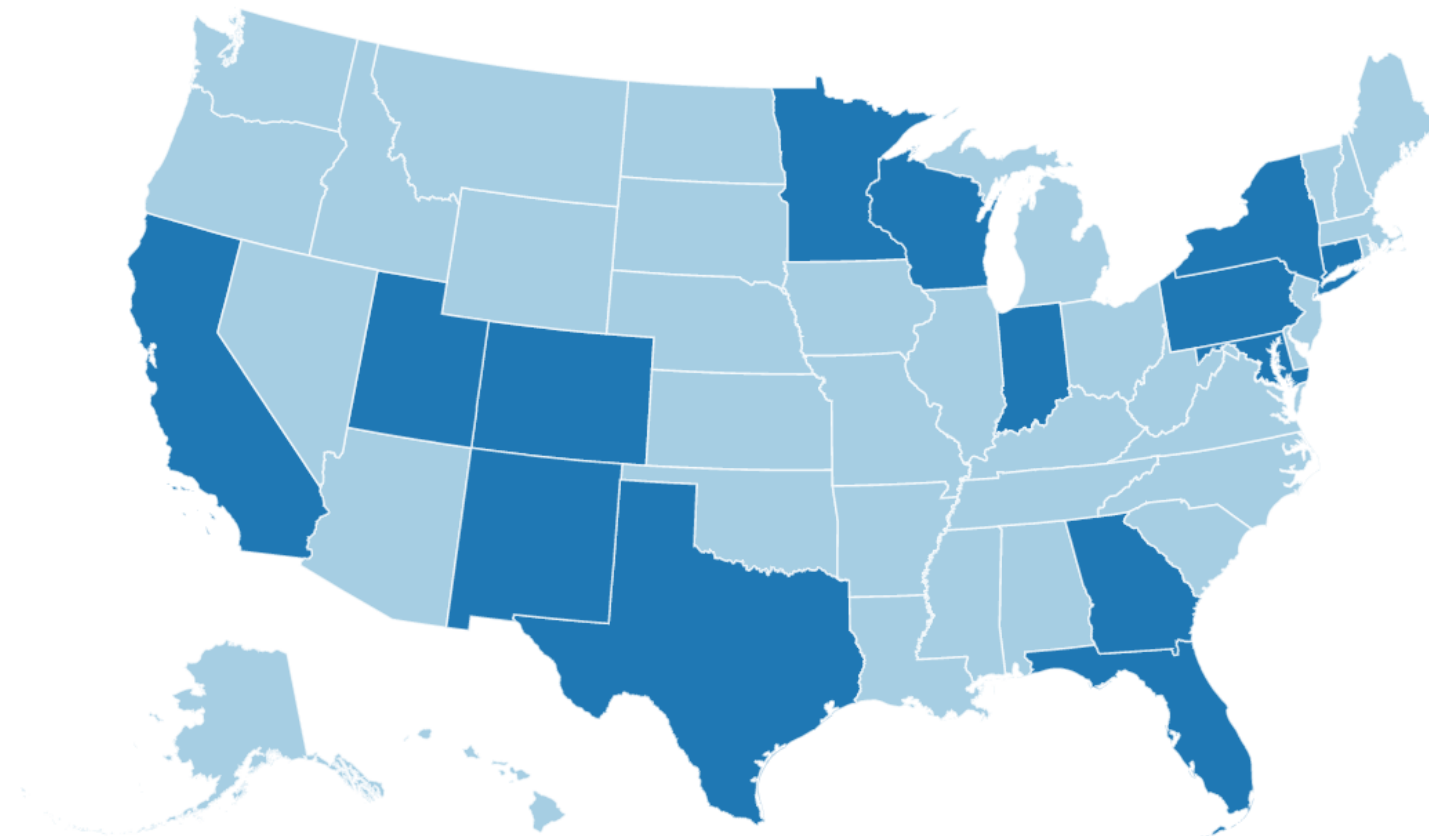
<https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>

<https://www.state.nj.us/health/cd/documents/topics/NCOV/COVID-19-QuickFacts.pdf>

<https://www.cdc.gov/coronavirus/2019-ncov/long-term-effects.html>

US COVID-19 Cases Caused by Variants (as of 1/15/2021)

B.1.1.7 Lineage Cases in the United States*† Total Cases: 88



Territories AS GU MH FM MP PW PR VI



<https://www.cdc.gov/coronavirus/2019-ncov/transmission/variant-cases.html>

What to Know About the COVID-19 Vaccine



How Do COVID-19 Vaccines Work

Learn more how COVID-19 vaccines work and how they were developed.



Vaccine Trials and Safety Precautions

Learn more about COVID-19 vaccine development and trials, approval process, and possible side effects or risks.



Vaccination Timeline and Priority Groups

Learn more about New Jersey's vaccination priority groups.



Where and How to Get Vaccinated

Learn more about how different groups of people can expect to receive the vaccine in different settings and how to pre-register for vaccination.

<https://covid19.nj.gov/pages/vaccine>



Vaccine Call Center Hotline: 855-568-0545

COVID-19 Vaccine

FACTS

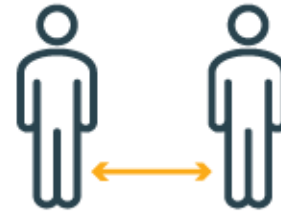
- Getting vaccinated can help prevent getting sick with COVID-19
- COVID-19 vaccines will not give you COVID-19
- COVID-19 vaccines will not cause you to test positive on COVID-19 viral tests
- People who had COVID-19 may still benefit from getting COVID-19 vaccine
- Receiving messenger RNA vaccine will not alter your DNA
- There is no evidence that mRNA vaccines affect fertility

Adapted from <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/facts.html>

CASES ARE RISING.
ACT NOW!



WEAR A MASK



STAY 6 FEET APART



AVOID CROWDS

Future

- Masks, social distancing, handwashing work!
- Testing still evolving
- Vaccinations underway; vaccine effectiveness won't be known for months
- Continued vigilance for other issues, e.g., “twindemic”/flu, mental health and chronic disease
- Continued need to stay informed as information constantly changing

Questions?

Tina Tan, MD, MPH, State Epidemiologist/ Assistant
Commissioner

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