**Source:** David Larsen

* I found larsen on the Syracuse University faculty expert page. I spoke to him over the phone.

[*dalarsen@syr.edu*](mailto:dalarsen@syr.edu) *—* associate professor of public health in Falk College. Larsen’s expertise includes global health, large data analysis and spatial statistics, and sanitation. During the 2020-2021 academic year, Larsen helped lead Syracuse University’s wastewater surveillance program to monitor COVID-19 on campus.

**Data Sets and Analysis:**

Counties:

<https://docs.google.com/spreadsheets/d/1lcaIbq6ohZZOar7PP52lF5gjB0yE_IaSNbyyihklbWA/edit#gid=1150099019>

* Deleted extra rows
* Made sure dates were in the correct format
* Made sure that the counties were spelled correctly and none were repeated
* Pivot table 1– total number of fatalities by county of residence from 2020-2022.
* Pivot table 2– total number of fatalities by place of fatality from 2020-2022.
* Pivot table 3– place of fatality by report date to see the increase of fatalities.
* Pivot table 4– place of fatality (Kings County)
* Pivot table 5– deaths by county of residence for Kings County. Since this county had the highest fatality, it was important to see how the fatalities increased from 2020-2022.

<https://docs.google.com/spreadsheets/d/1CaznHWr4ZxHc6i0AFWtqXYR30xczj9KkCg85ynfQXuU/edit#gid=1178368206>

* Deleted extra rows
* Made sure dates were in the correct format
* Pivot table 1– total number of fatalities by age from 2020-2022.
* Pivot table 2– total number of fatalities by age in 2020.
* Pivot table 3– total number of fatalities by age in 2021.
* Pivot table 4– total number of fatalities by age in 2022.
* I wanted to see if there were any changes in terms of which age groups had a higher fatality rate.

<https://docs.google.com/spreadsheets/d/1QgOGDYsmSkvlOA7FDjfaftxW5cvpL1H4eZeGbbDXlRs/edit#gid=906679480>

* Deleted extra rows
* Made sure dates were in the correct format
* Pivot table 1– total number of fatalities by sex from 2020-2022.
* Pivot table 2– total number of fatalities by sex in 2020.
* Pivot table 3– total number of fatalities by sex in 2021.
* Pivot table 4– total number of fatalities by sex in 2022.
* Similarly to the age group data, I wanted to see if there were any changes in terms of which groups had a higher fatality rate from 2020-2022.

An analysis of New York’s fatality rates from 2020-2022.

Across the United States, over 997,000 COVID-19 deaths had been confirmed at the beginning of May 2022. Over the course of the past two years, the COVID-19 fatality rate in New York has been significantly high – it is currently the state with the fourth highest fatality rate. There have been almost 69,000 COVID-19 deaths in New York State as of May 9, 2022.

According to data published by the New York State Department of Health, from 2020-2022, the top three counties in New York State with the highest number of fatalities based on patients’ county of residence were Bronx County (2,907,643 fatalities), Queens County (4,438,619 fatalities), and Kings County (4,590,048 fatalities). David Larsen, a large data analysis and global health expert, says that it is no surprise that these countries have been hit the hardest by the pandemic. “They have quite a bit of vulnerability in terms of population density,” Larsen says.

While New York City has the highest number of COVID-19 fatalities in the state, Central New York has a high number of fatalities, as well. Data published by the New York State Department of Health shows that, from 2020-2022, Erie County, Monroe County, and Onondaga County have the highest number of fatalities in Central New York – Erie County currently has the highest number of fatalities with 101,5184 within the past two years. “This is largely related to behavior,” Larsen says. “Folks that are not social distancing and not getting vaccinated are going to drive that transmission up.” [As](https://covidactnow.org/us/new_york-ny/county/erie_county/?s=33432159) of May 2022, the vaccination rate in Queens County is 95%, while the vaccination rate in Erie County is 76%. The fatality rate in Onondaga County is 376,156 and the vaccination rate is 79% – according to Larsen, the high fatality rate in Onondaga County could be due to Syracuse University students.

Below is a map that shows the number of patient fatalities that occurred in hospitals, nursing homes, and adult care facilities, based on patients’ county of residence.

This data is consistent with COVID-19 surges in New York from 2020-2022. According to The New York Times, in April 2020 fatalities in New York spiked with an all-time high of 1,003 new deaths on April 14. The data shows a significant rise in fatalities from March 2020 to April 2020 – on March 31 there were a reported 514 fatalities and by April 6 there were 10,978 fatalities. The data also shows a rise in fatalities in January 2022, which is consistent with the Omicron variant. According to The New York Times, there were 203 new deaths on January 29. The data provided by the New York State Department of Health shows that, by January 2022, the number of COVID-19 fatalities in New York was above 100,000.

On March 9, 2021, the former governor of New York, Andrew Cuomo, announced that, beginning March 10, 2021, New Yorkers over the age of 60 would be eligible to receive the vaccine, while public facing essential workers from governmental and nonprofit entities will be eligible beginning March 17.” On March 29, 2021, Cuomo announced that the vaccine would be available to all New Yorkers above the age of 30. By April 6, 2021, all New Yorkers above the age of 16 were eligible to get vaccinated. Despite the vaccine becoming widely available, the fatality rate in New York has continued to rise across all age groups.

COVID-19 mortality risk is significantly higher for elderly individuals. According to data published by the New York State Department of Health, individuals aged 80-89 had the highest number of fatalities from 2020-2022 with 7,525,930 total deaths. Individuals aged 70-79 had the second highest number of fatalities from 2020-2022 with 7,296,920 deaths from 2020-2022.

Below is a graph that shows New York State Statewide COVID-19 fatalities by age group from 2020-2022.

Data published by the New York State Department of Health suggests that the COVID-19 mortality rate is higher for males than it is for females. From 2020-2022, there were 15,804,871 male fatalities in New York and 12,332,748 female fatalities. According to Larsen, the fatality rate for men has been consistently higher than that of females over the course of the past two years. T[he CDC](https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html#:~:text=Older%20adults%20are%20at%20highest,18%2D29%20years) states that “having heart conditions such as heart failure, coronary artery disease, cardiomyopathies, and possibly high blood pressure (hypertension) can make you more likely to get very sick from COVID-19.” The CDC has also revealed that heart disease is the leading cause of death for men in the United States, killing 357,761 men in 2019.

Below is a graph that shows New York State COVID-19 fatalities by sex from 2020-2022.

According to a report published by JAMA Internal Medicine, “researchers found that throughout life, men were about twice as likely as women to have a heart attack. That higher risk persisted even after they accounted for traditional risk factors for heart disease, including high cholesterol, high blood pressure, diabetes, body mass index, and physical activity.”