



# Cystic Fibrosis Research News

## Title:

The clinical impact of the COVID-19 pandemic first wave on patients with cystic fibrosis in New York

## Lay Title:

The impact of the first wave of the COVID-19 pandemic on people with cystic fibrosis in New York

## Authors:

Joseph L. Simonson<sup>a</sup>, Christine Esposito<sup>a</sup>, Theresa Frantzen<sup>a</sup>, Katherine Henthorne<sup>a</sup>, Aileen Espinal<sup>a</sup>, Serena Romano<sup>a</sup>, Ramona Ramdeo<sup>a</sup>, Jessica Trentacoste<sup>a</sup>, Donna Tsang<sup>a</sup>, Geralyn La Vecchia<sup>a</sup>, Robert Abdullah<sup>b</sup>, Maria Berdella<sup>c</sup>, Lynn Bonitz<sup>d</sup>, Rany Condos<sup>e</sup>, Andrei Constantinescu<sup>f</sup>, Joan K. DeCelie-Germana<sup>d</sup>, Emily DiMango<sup>g</sup>, Myah Draine<sup>e</sup>, Tara Gimeli<sup>d</sup>, Robert Giusti<sup>h</sup>, Jessenia Guzman<sup>g</sup>, Soumia Hammouda<sup>h</sup>, Claire Keating<sup>g</sup>, Catherine Kier<sup>i</sup>, Alison T. Lennox<sup>j</sup>, Carmen Liriano<sup>f</sup>, Zachary Messer<sup>j</sup>, Amy Plachta<sup>c</sup>, Hossein Sadeghi<sup>f</sup>, Elinor Schwind<sup>c</sup>, Teresa Stables-Carney<sup>b</sup>, Patricia Walker<sup>k</sup>, Janice Wang<sup>a</sup>

## Affiliations:

<sup>a</sup> Division of Pulmonary, Critical Care and Sleep Medicine, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell, New Hyde Park, NY 11042, USA.

<sup>b</sup> Department of Medicine, Renaissance School of Medicine at Stony Brook University, Stony Brook, NY 11794, USA.

<sup>c</sup> Division of Pediatric Pulmonology, Icahn School of Medicine at Mount Sinai, Mount Sinai Beth Israel, New York, NY 10003, USA.

<sup>d</sup> Division of Pediatric Pulmonology, The Steven and Alexandra Cohen Children's Medical Center, Donald and Barbara Zucker School of Medicine at Hofstra/Northwell, Lake Success, NY 11042, USA.

<sup>e</sup> Division of Pulmonary, Critical Care, and Sleep Medicine, NYU Langone Health, New York University Grossman School of Medicine, New York, NY, 10016, USA.

<sup>f</sup> Division of Pediatric Pulmonology, Columbia University Irving Medical Center, Vagelos College of Physicians and Surgeons, New York, NY, 10032, USA.

<sup>g</sup> Division of Pulmonary, Allergy, and Critical Care Medicine, Columbia University Irving Medical Center, Vagelos College of Physicians and Surgeons, New York, NY, 10032, USA.

<sup>h</sup> Division of Pediatric Pulmonary Medicine, NYU Langone Health, New York University Grossman School of Medicine, New York, NY, 10016, USA.

# Cystic Fibrosis Research News

[cfresearchnews@gmail.com](mailto:cfresearchnews@gmail.com)



# Cystic Fibrosis Research News

<sup>i</sup> Department of Pediatrics, Renaissance School of Medicine at Stony Brook University, Stony Brook, NY 11794, USA.

<sup>j</sup> Division of Pediatric Pulmonology, Allergy, Immunology, and Sleep Medicine, New York Medical College, Valhalla, NY 10595, USA.

<sup>k</sup> Division of Pulmonary, Critical Care and Sleep Medicine, Icahn School of Medicine at Mount Sinai, Mount Sinai Beth Israel, New York, NY 10003, USA.

## **What was your research question?**

What was the impact of the COVID-19 pandemic's first wave on people with cystic fibrosis in New York?

## **Why is this important?**

This is important because people with cystic fibrosis are already more likely to suffer from pulmonary infections and may be at a higher risk of complications from infection with COVID-19. During the first wave of the pandemic in New York, it was not known how widespread COVID-19 infections were and what the outcomes of COVID-19 infection in people with cystic fibrosis are. Furthermore, the effects of the COVID-19 pandemic on the clinical care and mental health of people with cystic fibrosis are unknown.

## **What did you do?**

We collected data from 12 adult and pediatric cystic fibrosis centers to study the impact of the first wave of the COVID-19 pandemic on people with cystic fibrosis in the New York metropolitan area from March 1, 2020 to August 31, 2020. We worked out how widespread COVID-19 was by PCR and IgG antibody testing and described the outcomes of COVID-19 infection, such as, the need for hospital admission. We also gathered information to figure out whether the COVID-19 pandemic delayed routine care and affected mental health for people with cystic fibrosis.

## **What did you find?**

Among 810 people in 12 adult and pediatric cystic fibrosis centers in New York, there were 26 documented cases of COVID-19 during the first wave of the pandemic. COVID-19 infection was found in 1.6% of people with cystic fibrosis when measured by PCR and in 12.2% by antibody testing. This is lower than reported in the general population of New York. Most cases of COVID-19 infection in people with cystic fibrosis were managed successfully at home. Only 2% were admitted to hospital and there was one death. It is possible that CFTR modulator therapy is protective, as the proportion of patients who tested positive for COVID-

# Cystic Fibrosis Research News

[cfresearchnews@gmail.com](mailto:cfresearchnews@gmail.com)



# Cystic Fibrosis Research News

19 was lower among people on CFTR modulator therapy. The first wave of the COVID-19 pandemic caused delay in care and increased anxiety for people with cystic fibrosis.

## **What does this mean and reasons for caution?**

Cystic fibrosis may increase the risk of complications from COVID-19; but it is reassuring that few people with cystic fibrosis and COVID-19 infection needed to be admitted to hospital. It is likely that the lower rate of COVID-19 infection in people with cystic fibrosis compared to the general New York population was related to social isolation and masking practices already familiar to many people with cystic fibrosis. Though the first wave of the pandemic first wave interrupted care and increased anxiety for people with cystic fibrosis, our results show that the cystic fibrosis community was able to limit severe outcomes.

## **What's next?**

As vaccinations were not available during the first wave of the COVID-19 pandemic in New York, further studies are needed to better understand the long-term impact of COVID-19 on people with cystic fibrosis as people become vaccinated and social contact returns to normal.

## **Original manuscript citation in PubMed**

<https://pubmed.ncbi.nlm.nih.gov/35256307/>