European Cystic Fibrosis Society

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# Cystic Fibrosis Research News

## Title:

Clinical outcomes of adults and children with cystic fibrosis during the COVID-19 pandemic

## Lay Title:

What happened to outcomes of Australians with CF during the first year of the COVID pandemic?

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## What was your research question?

We were interested to find out if key outcome measures, such as lung function and BMI were positively effected, negatively effected or remained unchanged after the onset of the COVID pandemic in Australia

## Why is this important?

With the onset of the pandemic, the way healthcare was delivered to adults and children with CF was drastically changed. Clinics in Australia went from being almost exclusively in-person to being almost exclusively virtual. Slowly, over the proceeding 12 months in-person visits increased but virtual care remained. In addition to using more virtual care, the entire population, including those with CF, and maybe more so the people with CF, reduced their travel and their interaction with other people. The authors thought it was important to see how the combination of a change in care delivery and reduced community interactions impacted outcomes.

## What did you do?

We looked at all of the data contained in the Australian CF Data Registry (ACFDR) for the two years before the COVID pandemic started and for the one year after the pandemic started. Information included logistical data, such as types of clinic visits and use of medications, as well as important data on clinical progress, such as lung function and nutrition measures (weight, height, BMI). Using many thousands of data points from about 3500 adults and children with CF, we used statistical methods to determine what was happening to people's lung function and nutrition before the pandemic started and we compared that to how each person progressed in the first 12 months of the pandemic.

## What did you find?

For lung function, we found that before the pandemic, there was a small annual decrease in lung function. That is, on an annual basis, lung function was going down, but only by a very small amount. Following the pandemic onset, lung function actually improved. Similarly, BMI in both adults and children slightly improved compared to before the pandemic. In Australia, very few people had access to highly effective modulators at this time, so the improvements were not associated with using modulators. Other interesting findings were that hospitalisations decreased by over 25% and virtual appointments increased 5-fold.

## What does this mean and reasons for caution?

This means that the combination of delivering more virtual care and reduced community interaction in general was associated with people with CF having slightly improved outcomes compared for 12 months following the start of the pandemic. The results do not to be considered cautiously, as many factors changes when the pandemic started. Two main factors which may have impacted outcomes were virtual care and not interacting with others as frequently. However, other factors such as changes in activity patterns or changes in adherence to medications may also have contributed to the observed changes.

## What's next?

International data registries continue to collect data, therefore, we can keep assessing the longer term impacts of the pandemic on outcomes. Additionally, it is important to understand how people with CF and their families feel about the different models of care and how care should be delivered moving forward.

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