



Cystic Fibrosis Research News

Title:

The impact of telehealth based care on paediatric cystic fibrosis outcomes

Lay Title:

How does telehealth impact the health of children with cystic fibrosis

Authors:

Dr Kristene Rimbaldo, Dr Katherine Frayman, Dr Shivanthan Shanthikumar

Affiliations:

Respiratory and Sleep Medicine, Royal Children's Hospital, Parkville, VIC, Australia;
Respiratory Diseases, Murdoch Children's Research Institute, Parkville, VIC, Australia;
Department of Paediatrics, University of Melbourne, Parkville, VIC, Australia

What was your research question?

Does using telehealth to deliver cystic fibrosis care impact on health outcomes such as lung function, body mass index, and lung infection?

Why is this important?

Due to the COVID-19 pandemic cystic fibrosis centres around the world started using telehealth a lot more deliver care. Multiple studies have shown that people with cystic fibrosis, their families, and clinicians all like telehealth and think it should continue into the future. However, we don't know if telehealth based care results in the same health outcomes as face-to-face care. This is important as if telehealth is associated with a deterioration in health outcomes, then it might not be appropriate to use. So our study aimed to determine the impact of telehealth on health outcomes in children with cystic fibrosis.

What did you do?

Our study was based at our cystic fibrosis centre at the Royal Children's Hospital in Melbourne, Australia. Our city endured the most prolonged lockdowns in the world. As a result, we transitioned to an exclusive telehealth based model of care, including home spirometry for most patients. We looked back at our records, and compared outcomes before the pandemic, to after to assess the impact of telehealth based care.

Cystic Fibrosis Research News

cfresearchnews@gmail.com



Cystic Fibrosis Research News

What did you find?

We found the average lung function in our group was lower after the pandemic. The same reduction in average lung function was observed in those with and without home spirometers. Around 1/3rd of children in our clinic had a drop of greater than 10% in their lung function. There was no change in nutrition or lung infection outcomes.

What does this mean and reasons for caution?

There are several important reasons for caution. The reduced lung function post-pandemic may not be due to telehealth, and for example could be due to the effect of a prolonged strict lockdown reducing exercise levels, adherence, and causing mental health issues that impact cystic fibrosis care. Also, this study was completed prior to widespread use of Trikafta/Kaftrio, so it is possible that use of this medication would alter the outcomes seen. Regardless, it highlights the importance of assessing the effect of telehealth-based care on cystic fibrosis outcomes.

What's next?

Ideally multi-centre, prospective studies assessing the affect of telehealth on outcomes, conducted outside a pandemic, and in the current Trikafta/Kaftrio era. We can also use registry data to understand the impact of telehealth on outcomes. Lastly, given the strong desire of the CF community to continue telehealth, we should iteratively improve telehealth-based care to ensure the best outcomes.

Original manuscript citation in PubMed

<https://pubmed.ncbi.nlm.nih.gov/36890065/>