



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

E-Poster Sessions

ePS1 – What have we learned from the psychosocial impacts of COVID-19?

ePS1.01

Home spirometry and virtual visits in children with cystic fibrosis - the child's perspective

F. Olofsson¹, V. Mellqvist¹, A. Bäckman¹, E. Karlge Nilsson¹, K. Björkman², E. Jansson³, I. Durand De Monestrol D'Esquille⁴, M. Svedberg^{1,5}. ¹Queen Silvias children hospital, Department of paediatric, Gothenburg, Sweden; ²Skåne University Hospital, Department of Paediatric, Lund, Sweden; ³Uppsala University Hospital, Department of Paediatric, Uppsala, Sweden; ⁴Karolinska University Hospital, Department of Paediatric, Stockholm, Sweden; ⁵Institute of Clinical Science at the Sahlgrenska Academy, University of Gothenburg, Department of Paediatric, Gothenburg, Sweden

Objectives: Children with cystic fibrosis (CF) in Sweden are routinely monitored at the hospital more often than the recommended CF guidelines. The COVID-19 pandemic has challenged the healthcare system and the use of digital tools and virtual visits has rapidly increased. The aim of this study was to investigate how children experienced home spirometry (HS) and virtual visits.

Methods: A prospective multicentre study including children aged 5–17 years from all 4 Swedish CF centres were conducted between May 2020 to November 2021. All participants received a home spirometer AirNext (NuvoAir, Stockholm, Sweden). Physical visits could be converted to virtual visits during the study and the children were instructed to perform HS prior to both virtual and a physical visits. An anonymous survey was conducted at the end of the study.

Results: A total of 60 children with CF were included in the study. During the mean (range) study period of 6.8 (3.1–11.5) months, they completed on average 2.3 (1–4) virtual visits and 3.0 (2–4) physical visits. The survey was completed by 55 (92%) participating children with a mean age of 11.5 (5–17) years. The virtual visits were rated just as high as the physical meetings. No child felt more stressed with the opportunity to perform HS; on the contrary, some children (22%) felt less stressed with this possibility. After the introduction of HS, almost all children (98%) responded that they felt calmer or as before the introduction of HS. Half of the children responded that they now understand their CF-disease better than before. Virtual visits reduced the burden of travel time to the hospital and shortened the mean time away from school up to 3.0 (1.3–4.0) days over a year.

Conclusion: Home spirometry increased the understanding of the CF lung disease and did not cause more stress in children with CF. Virtual visits were very appreciated and provide a possibility to decrease school absenteeism due to fewer physical visits at the hospital.

ePS1.02

Long-term psychological impact of COVID-19 on adult patients with cystic fibrosis, including transplanted patients

T. Havermans¹, N. Seyen², K. Luyckx², R. Vos¹, L. Dupont¹. ¹University Hospitals Leuven, Leuven, Belgium; ²University of Leuven, Leuven, Belgium

Objectives: As a follow-up of our 'impact of COVID-19 study' in 2020 (Havermans et al 2020), patients were asked to report on their status one year after the start of the pandemic.

Methods: Cystic fibrosis (CF) patients aged 16 and older (incl. lung transplant (LTX) recipients with CF) were sent a link to a questionnaire via the Mynexuzhealth app (linked to their medical records). Items were identical to the 2020 study (T1) and covered the emotional impact of the pandemic (symptoms of overall tiredness (OT); symptoms of depression and symptoms of post-traumatic stress (PTS)), changes in health-protecting behaviours, CF-related concerns and treatment. Demographic and medical data included age, gender, lung function & BMI. In 2021 (T2), additional questions were asked, e.g. about coughing in public and safety of vaccination.

Results: 103 patients participated at T1 & T2 (48 LTX). No differences between CF and CF-LTX groups were found. No significant changes were found in FEV₁%pred. Repeated measures analyses of variance showed significant changes on OT ($p < .001$) and on symptoms of PTS ($p < .001$). No changes were found for symptoms of depression. Pairwise comparison of symptoms of OT showed an increase from T1 to T2 ($p < .001$) and a decrease in symptoms of PTS ($p < .001$). Changes in health-protecting behaviours and CF concerns reported at T1 had decreased at T2, apart from the use of face masks. The improved adherence to some treatment modalities at T1 was not found at T2. At T2, 42% reported more shame for coughing; 24% reported to feel bad when coughing; 55% reported concerns about safety of the vaccines.

Conclusion: One year after the start of the COVID-19 pandemic, patients with CF (w/wo LTX) report more overall tiredness, but fewer symptoms of post-traumatic stress. Many patients are ashamed of their cough. The increase in adherence to treatments in 2020 was not sustained. It seems that patients have adapted to the pandemic, but, like the general population, are tired and frustrated with it.

ePS1.03

The impact of the COVID-19 lockdown and introduction of precision medication Symkevi and Orkambi on cystic fibrosis patients at Sheffield Children's NHS Foundation Trust, UK (SCFT)

K. Braisdell¹, N.S. West¹. ¹Sheffield Children's NHS Foundation Trust, Sheffield, United Kingdom

Objectives: To evaluate the change in BMI (zscore), FEV₁ (% predicted) and number of respiratory exacerbation before and after lockdown 2020 and compare that to the same period in 2019. To establish if there were any differences between the cohorts receiving precision medication compared to the cohort who did not qualify for precision medication.

Methods: This was a retrospective case note review of all children with CF attending SCH. Exclusion criteria included children under the age of 2 and pancreatic sufficient patients.

2020 vs 2019	Precision Rx	No Precision Rx	Overall
↑BMI z score	56% (34/59)	56% (15/26)	56%
↓ BMI z score	44%	38%	42%
↑Oral ABx courses	14%(9/64)	16% (5/31)	15%
↓ Oral ABx courses	61%	42%	55%
↓IV ABx courses	35 % (21/59)	27% (7/26)	29%*
↑ FEV ₁	75% (28/37)	58 % (7/12)	71%
↓ FEV ₁	25% (9/37)	42% (5/12)	26%

*68% required no/same IVAB.