EPS1.03

Recommended shielding against COVID-19 impacts physical activity levels and adherence to airway clearance therapy in patients with cystic fibrosis

E. Hatziagorou[1], P. Peftoulidou[1], I. Toulia[1], E. Tasika[1], E.-A. Chrysochoou[1], J. Tsanakas[1]. [1]*Aristotle University of Thessaloniki, CF Unit, 3rd Paediatric Dept, Hippokration Hospital, Thessaloniki, Greece*

Background: Physical activity and physiotherapy are recommended as components of the cystic fibrosis (CF) treatment regimen.
Objectives: To assess the impact of the lockdown during the second wave of the COVID-19 pandemic on daily airway clearance and physical activity levels among patients with CF.
Methods: A telephone-based survey on adherence to physiotherapy and physical exercise was conducted among CF patients attending our CF Unit during the "second wave of the pandemic" (November 2020–January 2021).
Results: A total of 120 patients were included, mean (StDev) age 13.8 (8.1) years, mean baseline FEV_1 pp 101.0 (24.7) %. Before the lockdown, 79.5% of the patients reported performing physiotherapy daily, 8.2% reported performing physiotherapy 2–4 times per week, and 12.3% of the patients reported performing no physiotherapy at all. Most of the CF patients (69%) did not change the frequency of their daily physiotherapy practice during the COVID-19 pandemic. Moreover, 49.2% of the CF patients performed assisted airway clearance by having a physiotherapist visiting their home once a week through a home care program. Only 6.3% of them increased, 33.7% stopped, and 60% did not change the frequency of assisted physiotherapy during the study period. Concerning physical exercise, before the COVID-19 pandemic, 81% of the CF patients reported performing regular exercise. During the quarantine period, 58.4% of the patients needed to change the type of exercise, while 29% reported increasing the frequency, and 48% performed less exercise than before.
Conclusions: Strict lockdown measures affected patients' physical activity levels and their daily airway clearance practice. It is of vital importance to monitor CF patients and give incentives to maintain/increase the adherence to exercise and physiotherapy during such difficult circumstances.

EPS1.04

Audit of virtual exercise class during COVID-19 in children with cystic fibrosis

Z. Johnstone[1], J. Hyson[1]. [1]*Royal Hospital for Sick Children Edinburgh, Physiotherapy, Edinburgh, United Kingdom*

The UK CF Trust Physiotherapy Standards of Care document (2020) advocates that physical activity & exercise should be part of the routine management for people with cystic fibrosis (pwCF) at any age for health & quality of life (QOL). During the COVID-19 pandemic we were unable to offer face to face exercise sessions in the community. Weekly virtual group exercise sessions were offered in place of this.
Objectives: To implement a virtual exercise class including children with CF during COVID-19 and audit any cost & time savings.
Methods: From a cohort of >150, 25 children were identified as requiring additional support to engage with exercise. 13 children accepted the offer of classes. A two-way interactive session was initiated where the physiotherapist provided specialist advice, monitoring & prompting, thereby enhancing engagement in the classes. Classes ran once weekly for 6 weeks. The regular format of the class was high intensity interval training (HIIT). The class attendees were all asked to consent to being seen on screen by the physio & the other class attendees, with parental/carer supervision within the home. General advice around pacing of activity & hydration was provided in addition to more specific advice to those where needed.
Results: 100% of participants reported the classes to be beneficial. They were attended by children with a wide variety of baseline exercise levels (<1 hour to >4 hours/week). Length, intensity and enjoyment of the classes were described as 'excellent'. 100% of responding attendees would recommend the classes to other families.

Table 1:
Summary of financial and time savings

	Face-to-Face exercise support in community	Virtual exercise class	Cost and time-saving
Time per annum based on 6 × 6-week blocks	63 hours	36 hours	27 hours
Cost per annum based on 6 × 6-week blocks	£2704.32	£515.16	£2189.16

Conclusions: Children attending the classes found them beneficial. Virtual classes were both time and cost-effective. A downward trend of attendance was noticed when schools reopened and shielding eased.
Recommendations: Qualitative data on whether this platform provides some peer support to pwCF would be recommended.

EPS1.05

Evaluating impacts of the change from clinic to home spirometry on clinicians and adults with cystic fibrosis

T. Daniels[1,2], B. Budden[2], J. Metcalfe[2], K. France[1], K. Hasney[1], K. Lee[1], N. Robson[1], R. Thomas[1]. [1]*York Teaching Hospital NHS Foundation Trust, York, United Kingdom;* [2]*York St John University, York, United Kingdom*

Background: During the COVID-19 pandemic, people with cystic fibrosis (pwCF) were considered clinically vulnerable & asked to shield. A national scheme supported purchase of spirometers enabling pwCF to do home spirometry to support virtual clinics. PwCF attending the York Hull adult CF centre (YHACFC) were provided with NuvoAir spirometers.
Objectives: To evaluate how the change from clinic to home spirometry impacted on the experiences of pwCF & clinicians, focusing on anxiety levels & use of time.
Methods: Online questionnaires were sent to pwCF & clinicians at YHACFC. Mock scenarios established potential differences in time taken for home spirometry (HS) & clinic spirometry (CS).
Results: 28/70 pwCF & 8/15 clinicians responded. PwCF & clinicians were confident that pwCF could use HS. Frequently used words for both groups were "quick," "convenient" & "easy" when describing HS. When describing CS, "expertise" & "helpful" featured for pwCF and "time", "stressful" & "accurate" for clinicians. PwCF reported the main benefit of CS was regular contact with clinicians. 62.5% of clinicians agreed that the change to HS gave better time efficiency & 87.5% agreed clinic flow was more efficient with HS. Timed scenarios indicated 7½ minutes per test saved with HS. Most clinicians believed pwCF are anxious with spirometry, 50% linking anxiety to the clinic setting. Most pwCF reported never being anxious about HS or CS. Only 4% reported anxiety with CS; however, when describing CS, the words "anxious" & "worry" were used frequently. The preference for 82% of pwCF for future care was access to a combination of spirometry in the home & clinic.
Conclusion:

- Home spirometry saved time for pwCF & clinicians.
- Virtual technology has an important & developing role in the care of pwCF but relationships remain valued.
- Style of questioning affects response from pwCF about spirometry anxiety.
- Disparity between pwCF reported anxiety & clinicians' perceptions of anxiety needs further investigation.

EPS1.06

A retrospective audit of home-based spirometry quality in a large UK adult cystic fibrosis centre

I. Waller[1], J. Daulby[1], H. Langman[1], V. Yarwood[1], J. Mitchell[1], A. Jones[1], H. Green[1]. [1]*Manchester Foundation Trust, Cystic Fibrosis, Manchester, United Kingdom*

Objectives: Spirometry measurement is the gold standard for assessing disease severity in cystic fibrosis (CF). Poor-quality spirometry tests can