

Conclusion: When using both equations within the adult population, it is evident the results differ in determining which patients are VL during a CPET. This study shows there is a need for standardisation when predicting MVV.

ePS1.07

Patient experience of virtual consultations: survey results

H. Parrott^{1,2}, L. Funnell², L. O'Connor², L. Bosaeus¹, U. Bertello¹, S. Madge².
¹NuvoAir AB, Stockholm, Sweden; ²Royal Brompton and Harefield NHS Trust, Department of Adult Cystic Fibrosis, London, United Kingdom

Introduction: Digital health tools have the potential to support the care of a growing adult CF population. In addition, virtual consultations paired with home spirometry assessment could reduce the burden and cross-infection risk associated with clinic visits.

Aim: To evaluate patient-reported perceptions of healthcare utilisation and acceptability of NuvoAir technology in patients who have taken part in a virtual consultation service for more than 6 months (the service commenced in 2017). The NuvoAir platform consists of a smartphone application and Bluetooth spirometer, with a healthcare practitioner portal allowing patients to share data with their healthcare team.

Methods: A survey was emailed to eligible patients, including questions on patient-reported healthcare utilisation, use of the technology and understanding of their CF. All patients provided consent.

Results: Response rate: 41/67 (61%); males 46.3%, mean age 37.3 years (SD 10.2), mean FEV₁ 57.3% predicted (range 24.2–103.0). Length of time using the virtual consultation service: mean 13.0 months (range 6.9–25.8). The virtual service reduced the number of booked face-to-face consultations by 30.9% (from mean 5.4 to 3.7 visits/year; $p < 0.001$) and the number of urgent face-to-face consultations by 39.8% (from 2.2 to 1.3 visits/year; $p < 0.01$). A total of 18/41 (43.9%) patients felt that they understood their CF better since starting the virtual service (23 [56.1%] unchanged; 0 worse) and 7/41 (17.1%) said their medication adherence improved (34 [82.9%] unchanged; 0 worse). Overall acceptance of virtual consultations was high (mean 9.4/10 [range 7–10]). The numbers of antibiotic courses and hospitalisations were not significantly changed.

Conclusions: These self-reported data show the acceptability of virtual consultations and the potential to substantially reduce overall healthcare utilisation. These results will help plan the service's further development in a larger population and with a longer follow-up period.

ePS1.08

A pilot study investigating the PlayPhysio Device; a novel addition to oscillatory PEP devices in children with cystic fibrosis

L. Lowndes¹, C. Hamilton¹, A. Russo², N.B. Shoshan¹, D. McShane¹.
¹Addenbrookes Hospital, Cambridge, United Kingdom; ²Università degli Studi di Salerno, Fisciano SA, Italy

Objectives: Cystic Fibrosis (CF) management requires regular chest clearance treatments but it is known that adherence to these treatments is poor. Mobile applications may hold the potential to motivate and strengthen adherence.

PlayPhysio[®] is a device, with an associated app, that can be attached to any oscillatory PEP device. The clinician uses the app to set the length and depth of the blows required as well as the physiotherapy routine. The patient's breaths control actions in games which have been designed to encourage the child to engage with the routine. Data is collected and sent electronically in order to monitor adherence.

The aim of this study was to look into the safety and efficacy of the PlayPhysio device and to investigate the effect of the device on adherence.

Methods: This was a 24-week study in which the CF patients (ages 8–16) use the PlayPhysio[®] device and associated app. Lung function, in app questionnaires and compliance data were all analysed.

Results: 30 patients (14 Female; Mean age 10.9; Mean FEV₁ 94.3%) were consented of which 17 patients completed the study. Interim analysis shows that the mean (S.D) adherence is 59.56 (37.01). Data showed minimal change in adherence during study period. There were no adverse events. Mean FEV₁ at the end of the 6-month trial was 98.5%. Those that withdrew from the study stated that the games were not of interest to them or because of technical difficulties with the device.

Conclusion: The study results showed that adherence to the physiotherapy routine with, the aid of the PlayPhysio device, remained consistent over a 6-month period. Feedback from participants that completed the study indicated satisfaction with the device and an increased confidence from parents about adherence to effective physiotherapy with fewer arguments. Future developments of the device should take into account feedback from those that withdrew and consider alternative games.

ePS1.09

Urinary incontinence in women and men with end stage chronic lung disease before and after lung transplantation

B. Button^{1,2,3}, M. Poulsen^{1,3}, R. Robinson³, A. Burge³, L. Fuller^{1,3}. ¹The Alfred Hospital, Respiratory Medicine, Melbourne, Australia; ²Monash University, Medicine, Nursing and Health Sciences, Melbourne, Australia; ³The Alfred Hospital, Physiotherapy, Melbourne, Australia

Objectives: In a prospective study to investigate the prevalence of urinary incontinence before and after lung transplantation (LTx) in men and women.

Methods: Once patients were listed for LTx and after informed consent they were asked to complete three questionnaires (Qx): The Leicester Cough Qx (LCQ), The International Consultation on Incontinence Qx (ICIQ) and the ICIQ Quality of Life (QOL) Qx. Three months after LTx they again completed the three Qx. All patients undertook three months of supervised exercise rehabilitation after LTx three times per week.

Results: Of 93 recruited participants, 71 (76%) were transplanted (43% male, mean age 62 [SD 9] years, females 52 [14] years). Prostate problems were reported by 12% of males; 30% of females were nulliparous and 41% postmenopausal. There was a difference between females and males for report of UI pre LTx (42/53 females, 14/40 males, $p < 0.0001$) which was not demonstrated post LTx (20/37 females, 13/34 males, $p = 0.182$). In females scores for UI symptoms (pre: median 3 [IQR 0.3 6], post 1 [0 to 4], $p < 0.0001$) and quality of life (QOL) (mean difference 5.8 [95%CI 1.3 to 10.2]) significantly improved post LTx. Pre LTx UI symptoms scores were lower in males (pre: median 1 [IQR 0 to 2] and no difference was demonstrated post LTx (1 [0 to 3], $p = 0.650$). No difference in scores for quality of life was demonstrated in males (mean difference -0.7 [95%CI -7.1 to 5.7]). For participants with UI pre LTx, no relationship was observed post LTx with improvement in UI and improvement consistent with the minimal important difference for LCQ (females $p = 0.621$, males $p = 0.757$).

Conclusion: Improvement in UI symptoms and QOL scores were observed in females following LTx. Resolution of UI did not appear to be related to change in cough post LTx. The lack of improvement in UI in some participants following LTx indicates the need for further work to identify and treat UI. Routine screening for UI pre and post LTx is recommended.

ePS1.10

Prevalence of female urinary incontinence in the paediatric Cystic Fibrosis Centre of Milan

A. Mariani^{1,2}, F. Carta^{1,2}, S. Gambazza^{1,2,3}, A. Brivio^{1,2}, G. Bassotti^{1,2}, A. Gesuele^{1,2}, E. Caverni^{1,2}, C. Colombo^{1,4}. ¹Fondazione IRCCS Cà Granda Ospedale Maggiore Policlinico Milano, Cystic Fibrosis Centre of Milan, Milano, Italy; ²Fondazione IRCCS Cà Granda Ospedale Maggiore Policlinico Milano, U.O.C Direzione delle Professioni Sanitarie, Milano, Italy; ³University of Milan, Department of Clinical Sciences and Community Health, Milano, Italy; ⁴University of Milan, Department of Pathophysiology and Transplantation, Milano, Italy

Objectives: The reported prevalence of urinary incontinence (UI) in female with Cystic Fibrosis (CF) ranges from 30% to 76%. Currently, the prevalence of UI in Italian CF patients is unknown. Due to the considerable impact of UI on lifestyle, we aimed to determine the prevalence of UI in our centre.

Methods: Validated questionnaires (ICIQ-SF, ICIQ-CLUTS) were administered to the available population during routine assessments over 6 months. Scores were correlated with disease severity (mutations, lung function, bacterial colonization), nutritional status (pancreatic function, BMI, artificial feeding, CFRD), risk factors (urinary tract infections, constipation, hospitalization, gynaecological interventions, physical activity (PA), pregnancy) and with anthropometric measures. A logistic model was then fitted to predict UI probability.