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ePS4.03**Outcomes of COVID-19 in patients with cystic fibrosis in Wales, UK**

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Objectives: Information is emerging on the clinical impact of the novel coronavirus, SARS-CoV-2, on people with cystic fibrosis (PwCF). This survey aims to characterise SARS-CoV-2 infection (COVID-19) in PwCF within the All Wales Adult Cystic Fibrosis Centre (AWACFC).

Methods: Patient data was retrospectively collated using electronic and written healthcare records. Age, sex, FEV₁% pre-infection, chest radiograph (CXR) appearances, symptoms, clinical progress, CFTR modulator use, COVID-19 PCR results and COVID vaccination status were recorded. An AWACFC CF COVID-19 "Virtual Ward" management flowchart was established to standardise and optimise patient care.

Results: Thirty-eight PwCF in AWACFC had COVID-19 in 2020 (n = 10) and 2021 (n = 28). Of those infected, 20 (52%) were male, age range 17–50 yr, FEV₁% range 38–113%, 26 (68%) were on CFTR modulators, with 4 (11%) post-lung transplant. Of the 2021 cohort (n = 28), 21 (75%) were fully vaccinated, 1 (4%) partially vaccinated, and 6 (21%) unvaccinated at time of infection.

Most had mild-moderate symptoms, only 2 (5%) reportedly asymptomatic. Treatment varied: 24 (63%) required oral antibiotics at home (for symptoms or precautionary), 1 received antiviral molnupiravir, 4 (11%) required admission. Of the 4 admitted, 3 (75%) were post-lung transplant: 1 required positive pressure oxygenation, 1 underwent extended invasive ventilation. Of those not admitted (n = 34) there was no change in post COVID-19 CXR appearances in 16 (47%), 3 (9%) registered CXR changes, the rest are awaiting follow-up CXR. There were no deaths or recorded reinfections.

Conclusion: The contrast in COVID-19 incidence between 2020 and 2021 may reflect national shielding for clinically vulnerable groups in the UK in 2020, or emergence of new variants. The majority of PwCF had mild-moderate symptoms and good recovery from COVID-19. Most of those hospitalised were post-transplant, consistent with known risks in this clinically extremely vulnerable cohort.

ePS4.04**Evaluation of burden of the COVID-19 pandemic among the cystic fibrosis community in Brno, Czech Republic**

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Introduction: The current pandemic exposed countries' unpreparedness around the globe. Like the general population, the CF community was able to adapt quickly (wearing face masks, distancing, disinfecting). Some countries were hit harder with high mortality rates, such as the Czech Republic.

Objectives: Evaluate the COVID-19 burden among the CF patients monitored at Cystic Fibrosis Centre in Brno (morbidity, hospitalisation rate, detection success using direct identification tests or specific serology), together with a willingness to get vaccinated against COVID-19.

Methods: We used retrospective data from Registries on COVID-19 tests (PCR and serology), morbidity and vaccinations from the beginning of the pandemic to the end of 2021. Vaccination for children aged 5–11 started at the end of December 2021, so it was evaluated only in patients over 12 years.

Results: 135 patients who came for a check-up in 2020 or 2021 were enrolled. The age of 63 men and 72 women varied from 0 to 51 years (mean 15.8, median 13.6 ± 12.8), 66.6% (N = 90) patients were under 18. 81.5% of patients (N = 110) were pancreatico insufficient, 60% (N = 81) were treated with CFTR modulator therapy at the end of 2021. 21% of patients (N = 29) suffered from COVID-19; a majority had the PCR test positive (N = 18), but 37% (N = 11) had the antibodies positive later. Three patients were reinfected. 44.8% (N = 13) were asymptomatic, 44.8% (N = 13) were

treated at home and 10.3% (N = 3) were hospitalised. No patient died. 86.1% of patients (N = 63) eligible for vaccination (over 12 years) started with the immunisation in the observed period and 49% of those (N = 31) received a booster dose.

Conclusion: Despite the high rate of COVID-19 infection among CF patients monitored at the CF Centre in Brno, only a small number of them had symptoms of the disease. Many patients eligible for vaccination were vaccinated against COVID, probably due to good cooperation with CF centre staff and motivation to protect their health.

ePS4.05**Evolving cystic fibrosis care during COVID-19: a single-centre experience**

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Introduction: The COVID-19 pandemic resulted in a paradigm shift in health care and inadvertently accelerated the expansion of digital health technologies available to clinicians. We report the changes in service delivery instituted at the Leeds Regional Adult CF Centre at the start of the pandemic, and their clinical impact.

Methods: Service reconfiguration included converting routine reviews into video-consultations; phone triage to allow face-to-face (F2F) consultations as required; and setting up a satellite clinic as COVID-free site.

Activity (number and type of consultation, admissions and home visits) were extracted from electronic patients' records (EPR, EMIS[®]) for 9 months before and after the start of the pandemic. Clinical data (lung function and BMI) were collected before (01/09/2019–29/02/2020) and after (01/08/2020–31/01/2021) the service reconfiguration.

Results: The total number of clinic visits increased by 4.4% (1969 vs 2055), with video-consultations accounting for 62% of all reviews. Hospital admission decreased by 21% (334 vs 264), and home IV antibiotics by 46% (221 to 119). Home visits increased by 319% (289 vs 1,210), due to the need to flush indwelling catheters and monitor liver function following the introduction of CFTR modulators.

ppFEV₁ (69% [48–85%] vs 75% [52–91.5%] $p < 0.001$) and BMI (23.6 [21.5–26.5] vs 24.2 [22.15–27], $p < 0.001$) increased, in conjunction with a reduction in pulmonary exacerbations, likely as a result of effective shielding and the impact of triple CFTR modulator therapy.

Conclusion: The restructuring of our services by responsively deploying a hybrid care had no adverse clinical impact. A combined approach of remote consultations, home visits and F2F interactions enabled the clinical team to provide regular assessment, and early intervention to avoid clinical deterioration. These fundamental changes to service delivery will remain part of routine care and evolve according to the future needs and wishes of people with CF.

ePS4.06**Antibody response to administration of 2 doses of the BNT162b2 vaccine against SARS-CoV-2 in people with cystic fibrosis**

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Objectives: To evaluate the antibody response to 2 doses of the BNT162b2 vaccine against SARS-CoV-2 in people with cystic fibrosis (pwCF) and to compare it between patients with a previous infection and those unexposed to SARS-CoV-2.

Methods: All patients aged >12 years, in regular follow-up at the Reference Centre for CF of the Lombardia region, who received 2 doses of the mRNA-based vaccine BNT162b2 between March and October 2021 were included in this prospective study. They underwent a blood sample for