Conclusion Inpatient rehabilitation for patients with Long Covid was associated with improvement in exercise performance, lung function and psychological parameters with and without hospitalization during the acute COVID-19 infection. Results indicate the usefulness of rehabilitation to reduce and avoid long-term consequences of a COVID-19 infection independent of the severity of the acute course of the disease.

P72 USING THE MULTIDIMENSIONAL DYSPNOEA PROFILE IN COVID-19- THE DIFFERENT SENSATIONS OF BREATHLESSNESS AND THEIR IMPACT

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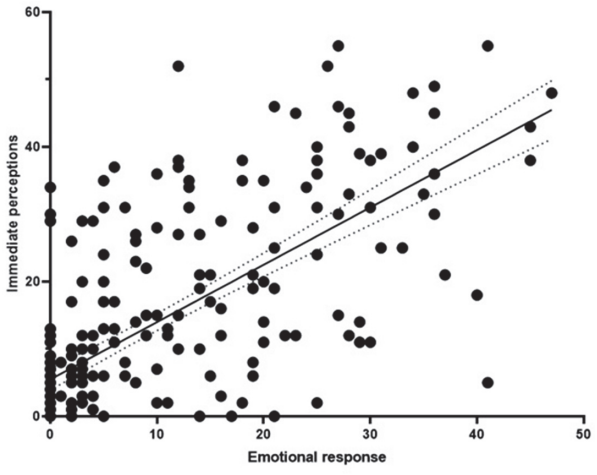
Introduction Patients with COVID-19 can experience breathlessness during the acute phase of the illness and as a long-term symptom following infection. Breathlessness can be a distressing symptom that manifests as a number of different sensations. The Multidimensional Dyspnoea Profile (MDP) explores different sensations of breathlessness and the emotional impact of these sensations. The aim of this study is to understand the prevalence/severity and sensations of breathlessness following COVID-19.

Methods Patients with COVID-19 who were discharged from the University Hospitals of Leicester between March 2020 and November 2020 were called as part of routine clinical follow up and invited to take part in this research. The MDP was administered over the phone by a clinician. Data was analysed in SPSS, using an independent t-test. The MDP is presented as immediate perception and emotional response (scored out of 60 and 50 respectively, higher=more severe).

Results 280 patients (mean [SD] age 57[13] years, gender n=161 (56%) male, n=155(54%) white British, 80(29%) with a pre-existing respiratory condition) completed the assessment. The mean [SD] length of stay was 10[15] days, time to follow up 47[31] days, and 25 (9%) of patients were ventilated. The mean [SD] of the MDP was 13[15] for the immediate perception and 9[11] for the emotional response (figure 1).



Abstract P72 Figure 1 Immediate and emotional domains of the Multidimensional Dyspnoea Profile

Of those reporting breathlessness (177 (63%)) mean [SD] of 20[15] in the immediate perception and 13[12] for the emotional domain. The most prevalent sensation was hyperventilation and, emotion was frustration. There were no statistically significant differences between the mean [SD] of the immediate response or emotional domain between ventilation status, and length of stay. Females reported a statistically significantly higher immediate and emotional response than males (mean [SD] difference 7[2], p=<0.01; 6[2], p<0.01 respectively). There were no significant differences in the immediate or emotional domains in those with or without a pre-existing respiratory condition (p=0.25).

Conclusion 63% of patients following COVID-19 identified at least one sensation of breathlessness that persisted after discharge. The severity and emotional response to breathlessness was not influenced by length of stay, ventilatory status during admission or pre-existing respiratory condition.

Virtually perfect: remote medicine and digital health

P73 IMPLEMENTATION OF A COMPUTER GUIDED CONSULTATION (INTELLIGENT CLINICAL DECISION SUPPORT SYSTEM SOFTWARE) IN THE LIVERPOOL SLEEP SERVICE: THE CREATION OF A DIGITAL ECOSYSTEM TO TRANSFORM PATIENT PATHWAYS

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Background The Liverpool Sleep Centre provides secondary/tertiary level care for a range of sleep disorders. An increasing volume of referrals and the impact of Covid threatened to overwhelm the service resulting in increasing clinical risk and decreased patient satisfaction. We describe how the use of technology addressed these challenges through the implementation of a Computer Guided Consultation system i.e. clinical decision support software (CDSS).

Methodology The CDSS is a digital ecosystem comprising multiple intelligent consultations encompassing the entire OSA pathway including Assessment and diagnosis, CPAP set up, CPAP monitoring and issuing consumables thus acting as an end to end system solution and an Electronic Patient Record. The CDSS also features a 'clinical dashboard' allowing the service to track activity, monitor RTT performance and identify high risk patients e.g. sleepy drivers, hypoventilation in 'real time'.

Results Prior to implementation of the CDSS, all suspected OSA referrals underwent a sleep study and the results of which together with the information contained in the referral letter would have been reviewed by a Consultant in a 'Virtual clinic' with treatment decisions made in such clinics. In order to meet this demand, the service required 8 clinics weekly (5 Consultant 'Virtual' clinics consisting of 20 patients each and 3 'Combined' Consultant/Physiologist clinics). Since March 1st to June 2021 following CDSS implementation, 325 patients (see table 1 for demographics) with suspected OSA were assessed by paramedical staff using the CDSS. Only 15% of these patients subsequently required a Consultant review either in a 'Virtual' or a 'Face to Face' manner (translating into just 0.5 clinics weekly), no 'combined' clinics were required with

Abstract P73 Table 1 Demographics of study population (n=325)

Age (mean SD)	49 (14)
Gender	48% female
BMI	35.9 (9.3)
AHI (valid sleep study at time of analysis in 282)	18.7 (19.6)
ESS	10.5
Diagnostic breakdown	Mild OSA (21%); Mod OSA (18%); Severe OSA (22%); Other (39%)

the 'clinical dashboard' used to highlight difficult cases for a weekly MDT. The CDSS generates automated clinical letters for each review thus greatly reducing secretarial time/costs for the service as no typing is required.

Conclusion The implementation of an intelligent Computer Guided Consultation system has resulted in pathway transformation enabling scarce Consultant resource to be channelled to where it is most required and enhancing service capacity, efficiency and patient safety. Adopting the system results in multi-level health economic benefits and facilitates greater service oversight.

Please refer to page A192 for declarations of interest related to this abstract.

P74 DIGITAL TRANSFORMATION – THE BEATING HEART OF A MODERN COPD SERVICE

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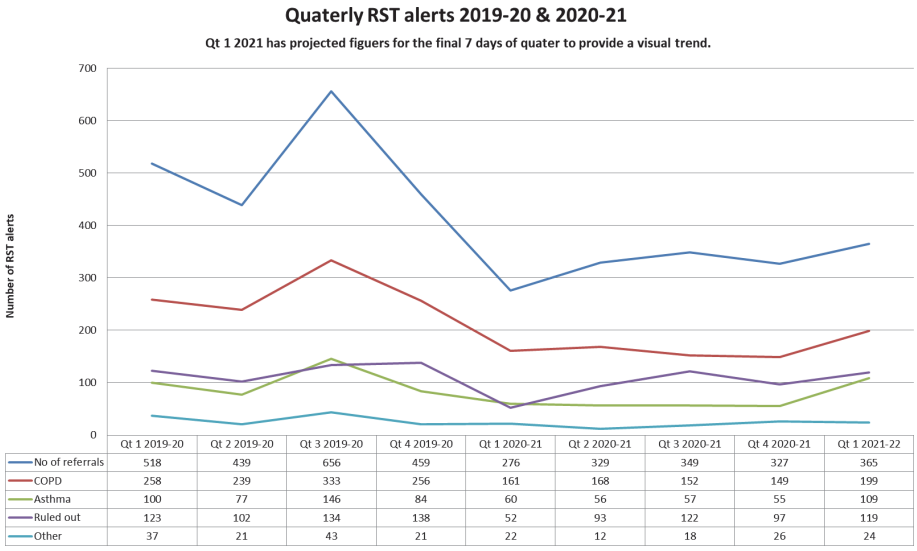
Introduction and Objectives We commenced an early supported discharge (ESD) service for COPD patients in March 2020. We describe the number of patients presenting to our hospital since then, our virtual in-patient multi-disciplinary team (MDT) ward-round and the benefits that this has brought to our COPD service.

Methods A pilot ESD service developed jointly between the acute hospital and community respiratory team uses co-prescription of prednisolone ≥30mg AND regular nebulised bronchodilators in our electronic prescribing information and communication system (PICS) to send an alert to the Blackberries of our specialist respiratory nursing/physiotherapy team (RST). They conduct a remote assessment to identify those patients with COPD, and attend the bedside to complete a comprehensive COPD discharge bundle. They also provide clinical advice to the in-patient medical team on prescribing, inhaler device selection, target saturations, etc, calculating an initial DECAF score, and using this with a respiratory consultant's support to identify patients for ESD.

Results and Service Description Completion of the COPD bundle generates an in-patient virtual COPD ward allowing the respiratory consultant to conduct a virtual ward-round each morning. DECAF score is finalised, suitable patients are identified for ESD, and advice about treatment, investigation and follow up are written in PICS; changes in prescriptions are made where required. The consultant and RST communicate by email and/or phone about the management of the patients providing a virtual in-patient MDT ward-round.

The virtual ward is also used to: support door-to-mask time quality improvement; to optimise run chart data entry for the National Asthma and COPD Audit Programme (NACAP; smoking cessation, oxygen prescription, spirometry results) and to populate our NACAP returns; to optimise the remainder of the COPD care bundle including antibiotic prescription, thromboprophylaxis, steroid and nebulised bronchodilator prescription, with advice about respiratory failure and ward destination using our COPD care bundle mnemonic (AECOPD-R^2D^2). The COPD bundle is sent automatically to the GP portal when the patient is discharged from hospital.



Abstract P74 Figure 1 Total no. of alerts (upper, blue line) and COPD alerts (second uppermost, red line) sent to RST over time – the impact of COVID on acute admissions can clearly be seen by the marked reduction in Q1 2020–2021 which also corresponds with when the pilot service started
(Asthma – RST also review patients with asthma. Ruled out = on clinical review patient had neither COPD nor asthma; Other = not reviewed by RST (short stay, self discharge or died prior to review)).