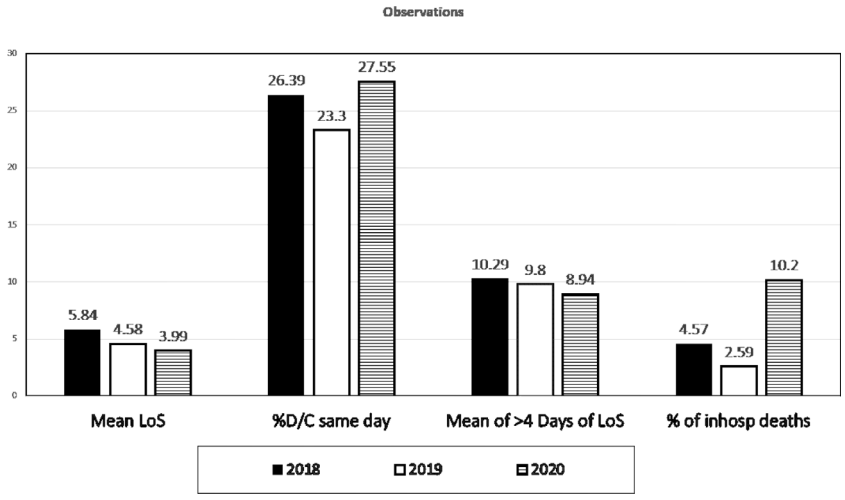

Abstract P33 Figure 1

P34 MITIGATING THE COVID-19 IMPACT ON COPD CARE: RAPID DEVELOPMENT OF REMOTE RECRUITMENT PROCESSES TO A DIGITAL SELF-MANAGEMENT SERVICE

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10.1136/thorax-2020-BTSabstracts.179

Background Shielding requirements and interruptions to routine care resulting from the COVID-19 pandemic present substantial risks to COPD patient's outcomes. Adverse impacts including increased winter admissions, nosocomial infection risks, impaired quality of life and high service costs are anticipated. A digital remote-management service can potentially mitigate these by supporting routine COPD care and self-management.

In the InnovateUK funded 'DYNAMIC' project we've developed a fully integrated COPD digital support service. Patient-held smartphone progressive web application prompts daily patient reported outcome (PRO) completion with red-amber-green self-management advice, rescue medication and linked resources including inhaler, exercise and dyspnoea management videos. Secure asynchronous patient-clinician messaging and EHR-integrated clinician dashboard with PRO data visualisation and structured clinical data enables self-management support and provides a new channel for scheduled care.

Methods As COVID-19 pandemic emerged we paused the RECEIVER trial (NCT04240353) and undertook rapid co-design, governance approval and deployment of an SMS invite and web-based registration system https://support.nhscopd.scot This provides access and remote setup to the DYNAMIC COPD service for all patients in our organisation. Website tracking analytics support service evaluation and process optimisation. Feedback was obtained from 57 patients who registered an interest via website but didn't progress to setup in the service.

Results 2373 high-risk COPD patients were identified from secondary care datasets. 797 patients did not have a known mobile phone number. 1576 SMS invites were sent in batches May – July 2020. 599 unique visits to support site (38%) with 195 completed applications (12.3%) to the digital service were obtained. As of August 2020, 112 patients (7.1%) have completed service setup, which includes clinician virtual review with optimisation of COPD interventions, self-management planning and COPD MDT input as required. Patient app usage in this scale-up cohort matches positive experience from the RECEIVER trial. Qualitative data highlighted requirement for increased information about the service at invitation, which has been addressed.

Conclusions Novel processes for digital recruitment and remote setup have widened access to NHS Scotland COPD support service. This is a model strategy for service implementation and evaluation. Further cycles of mail-based and SMS invites and media awareness campaign will follow.

P35 DELIVERING A COMMUNITY-BASED COVID-19 REHABILITATION SERVICE USING EXISTING PULMONARY REHABILITATION TEAMS IS SAFE AND FEASIBLE

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10.1136/thorax-2020-BTSabstracts.180

Background University Hospitals of Morecambe Bay NHS Trust, witnessed an early peak of COVID-19 with related hospital admissions in early 2020, this created a need for a co-ordinated approach to post COVID-19 rehabilitation needs across the area.

Objectives A three-armed COVID-19 rehabilitation pathway was devised in March 2020 with Arm 1 aiming to assess and address the immediate rehabilitation needs of those leaving hospital following an admission for respiratory complications of COVID-19.

Methods Existing Pulmonary Rehabilitation teams were repurposed by integrated care network (MBRN) to be a new 'Virtual' rehabilitation service. A register of patients discharged from hospital sites was remotely screened for pathway suitability. Then, using a multi-professional template a holistic assessment needs was conducted using telephone and/or home visit consultations. Clinical assessment tools were built into the assessment process. Weekly 'acute-community' virtual in-service training sessions and multi-disciplinary case discussions supported the clinicians.

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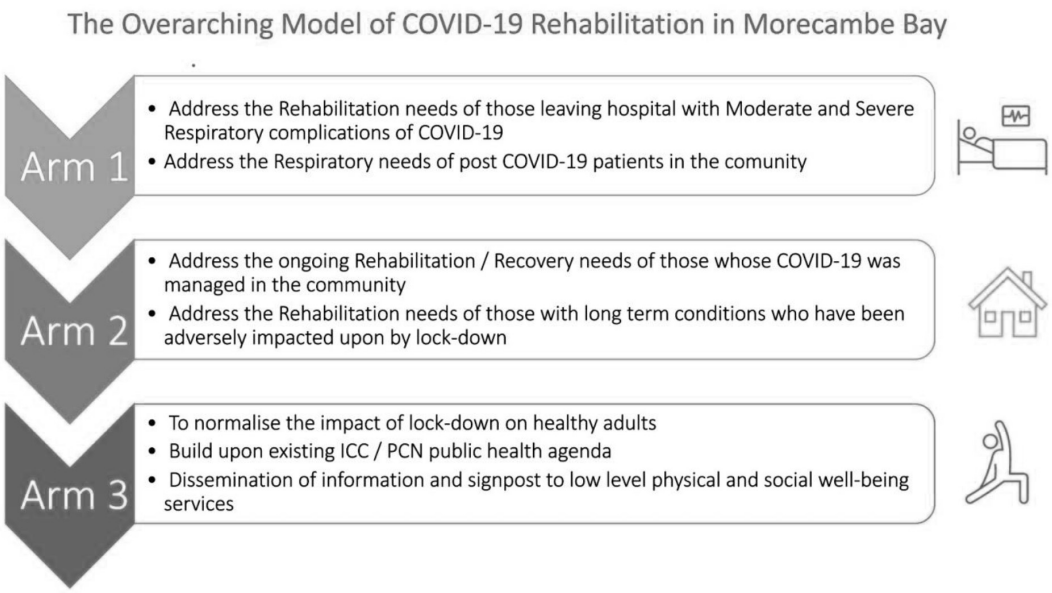

Abstract P35 Figure 1

Results To date 207 patients have entered the service for virtual triage, 138 patients were deemed suitable for further assessment and interventions. 427 direct clinician consultations were delivered to these 138 patients [*122 initial telephone assessments; 53 initial home visit assessments; 168 follow-up telephone consultations; 84 follow-up home visits*]. Two of the 138 patients assessed died, both were expected deaths. No clinical incidents occurred and no staff contracted COVID-19 during this period. Feedback from the services' staff survey was very positive highlighting the supportive value of virtual training and MDT and the enjoyment of being part of creating and delivering this new service to patients recovering from COVID-19.

Conclusions Utilising the skills of pulmonary rehabilitation staff to deliver a holistic rehabilitation and treatment service to those discharged from hospital after suffering respiratory complications of COVID-19 was feasible, safe and well tolerated by staff and patients. This service is now being used to address the needs of post-COVID-19 patients presenting with respiratory needs in the community. We aim also to assess clinical outcome.

P36 COUGH PROVOKED BY LUNG FUNCTION TESTING – SHOULD LUNG FUNCTION TESTING BE TREATED AS AN AEROSOL GENERATING PROCEDURE POST COVID-19?

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10.1136/thorax-2020-BTSabstracts.181

Introduction Lung function testing is not listed as an aerosol generating procedure (AGP) by Public Health England.[1] However, the tests may often generate droplets or aerosols due to the production of high flow rates and cough post manoeuvre. This has led to the BTS/ARTP to recommend appropriate precautions during laboratory assessment.[2] The aim of the study was to investigate cough occurrence during lung function tests.

Method Patients (male = 64, female = 58) age m=62 (24–89), BMI m=28 (14–50), with Asthma (n=13), Cancer (n=11), Bronchiectasis (n=4), COPD (n=7), ILD (n=34), undiagnosed (n=24), post COVID (n=24) and other (n=5), were referred for urgent lung function testing during the COVID-19 pandemic response between June and August. The occurrence of cough was recorded in the laboratory prior to testing, during and after spirometry (FEV_1: 0.45–5.06L, FVC: 1.39–6.11L), transfer factor (TLCO: 1.69–12.21 mmol/min/kPa, KCO: 0.43–1.89 mmol/min/kPa/L) and static lung volumes (TLC: 1.59–8.95L). Pre-existing cough was checked prior to testing.

Results Lung function tests provoked cough as shown in the following table (table 1). Lung function tests provoked a cough in patients who had a pre-existing cough and also those who did not have a pre-existing cough. Spirometry results did not predict cough occurrence during the test, FEV_1: m=82% predicted (19–129% predicted) and FVC: m=92% predicted (39–138% predicted).

Conclusion More than half of patients attending for spirometry coughed immediately after the procedure. Spirometry was more likely to provoke cough, although transfer factor and static lung volume measurements were also associated with post-test cough. Additionally, a patient's coughing history does not predict the absence of coughing. Lung function tests

Abstract P36 Table 1 Cough occurrence during lung function

Cough Occurrence			
	Total	**Pre-existing Cough**	**No pre-existing cough**
Spirometry	*Total*=122	*Total*=44	*Total*=78
	51.64% (*n*=63)	86.36% (*n*=38)	32.05% (*n*=25)
Transfer Factor	*Total*=75	*Total*=27	*Total*=48
	34.67% (*n*=26)	77.78% (*n*=21)	10.42%(*n*=5)
Lung Volumes	*Total*=67	*Total*=26	*Total*=42
	23.53% (*n*=16)	53.85% (*n*=14)	7.14% (*n*=2)

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