

existing respiratory condition. Their mean [SD] hospital stay was 10[12] days and 21 (16%) participants required mechanical ventilation. The mean[SD] time to follow up call was 32 [18] days post-discharge. Total CAT scores ranged from 0 to 34 with mean of 11.4[7.8]. 52% of patients had a CAT score  $\geq 10$  with scores highest for the breathlessness, activities, sleep, confidence and energy items. Of the patients without a pre-existing respiratory condition 42% had a score of  $\geq 10$  and in patients with a pre-existing respiratory condition this proportion was 75%. Breathlessness, activity limitations and energy and were the highest reported symptoms for both groups. There were no statistically significant correlations for the CAT with length of stay, number of days ventilated, self-reported physical activity or time from discharge.

**Conclusion** The CAT total and item scores can provide insight into the severity of symptom burden for patients following a hospitalisation from COVID-19. This may be a useful tool to identify rehabilitation needs.

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P171

### WARD VS. EMERGENCY DEPARTMENT DISCHARGE IN PATIENTS WITH COVID-19: DOES IT MAKE A DIFFERENCE TO SYMPTOM BURDEN AND RADIOLOGICAL SEVERITY AT FOLLOW UP?

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**Background** During the COVID-19 pandemic patients were often discharged following assessment within the Emergency Department (ED). However, to our knowledge no data exists on whether these patients are likely to have a better trajectory of recovery. We investigated the symptom burden and radiological severity at follow-up for patients discharged directly from ED compared to those admitted.

**Methods** Patients diagnosed with COVID-19 between 05.03.20 and 05.05.20 discharged from ED or the ward had telephone assessments 8–10 weeks post-discharge. Demographics, co-morbidities, symptom burden (quantified using a numerical rating scale) and psychological health data were collected. Patients were offered a follow-up chest radiograph (CXR) if abnormal on discharge.

**Results** During this period we contacted 188 ED and 471 ward discharges, median (IQR) follow up 77.5 days (65–87) and 64 days (55–82) respectively. The baseline demographic data is shown in table 1. Ward patients were significantly older (62.5 vs. 53.8 years,  $p < 0.001$ ), more likely to be hypertensive (49% vs. 27%,  $p < 0.001$ ), diabetic (31% vs. 16%,  $p = 0.004$ ), frailer (median clinical frailty score 2(2–5) vs. 2(2–3),  $p < 0.001$ ) and have a higher NEWS2 score (5 (2–7) vs. 2 (1–4),  $p < 0.001$ ). There were no significant differences in other characteristics including ethnicity, heart disease and smoking.

115 (61%) ED and 340 (72%) ward patients completed follow-up calls. There were no significant differences in symptom burden (breathlessness, cough, fatigue, sleep quality) and psychological burden (assessed by screening questionnaires). No significant difference was noted in the proportion able to

**Abstract P171 Table 1** Demographics, co-morbidities, symptom burden and radiological severity for Ward and ED discharged-patients

Variable (%)	Ward	ED	P - value
N	471	188	-
<b>Demographics</b>			
Age*(years)	62.5 $\pm$ 17.5	53.8 $\pm$ 16.7	<0.001
Male Sex (%)	287 (61)	104 (55)	0.185
Black, Asian, Minority Ethnic (BAME) (%)	153/338 (45)	62/113 (56)	0.064
<b>Comorbidities</b>			
Hypertension (%)	214/437 (49)	24/89 (27)	<0.001
Ischaemic heart disease (%)	63/442 (14)	7/90 (8)	0.098
Diabetes (%)	131/427 (31)	14/90 (16)	0.004
Respiratory disease (%)	95/442 (22)	13/90 (14)	0.13
Smoking history (%)	115/341 (34)	42/116 (36)	0.627
Clinical Frailty Score	2 (2–5)	2 (2–3)	<0.001
NEWS2 Score	5 (2–7)	2 (1–4)	<0.001
<b>Number contacted for Follow up</b>			
	340	115	-
<b>Mental Health at Follow up</b>			
Total PHQ2	0 (0–1)	0 (0–2)	0.092
Total TSQ	1 (0–3)	1 (0–4)	0.206
<b>Symptom Burden at follow up</b>			
Breathlessness rating 0–10	0 (0–2)	0 (0–2)	0.683
Cough rating 0–10	0 (0–0)	0 (0–1)	0.287
Fatigue rating 0–10	2 (0–5)	1 (0–4)	0.488
Sleep Quality rating 0–10	0 (0–0)	1 (0–4)	0.536
How close to 100% do they feel	90 (80–100)	90 (75–100)	0.807
MRC dyspnoea scale	2 (1–3)	1 (1–2)	0.147
Back to work (%)	90/153 (59)	47/67 (70)	0.111
<b>Radiological Severity at follow up</b>			
Unchanged/Significantly worsened	17/197 (9)	2/41 (5)	0.42

\*Parametric data, mean  $\pm$  SD presented. All other data non-parametric, median and inter-quartile ranges presented.

Abbreviations: PHQ2 – Patient Health Questionnaire 2-item; TSQ – Trauma Screening Questionnaire; NEWS2 – National Early Warning Score 2

return to work (ED vs. ward: 70% vs. 59%,  $p = 0.111$ ). Finally, 5% of ED patients had an unchanged/worsening CXR compared to 9% discharged from the ward ( $p = 0.42$ ).

**Conclusion** Our data confirms that patients admitted to hospital are likely to be more unwell, older, more frail and have hypertension and diabetes. Despite this, there were no significant differences in symptoms or radiological severity at follow up, suggesting that hospitalised patients do not appear to have worse physical or psychological sequelae compared to those discharged directly from ED. We should develop strategies to identify the patients who are more likely to suffer from long-term sequelae post COVID-19, to appropriately establish a targeted follow-up service.

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### EARLY CLINICAL EXPERIENCE OF A LARGE HOSPITAL TRUST VIRTUAL COVID-19 FOLLOW UP CLINIC

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**Introduction** A Virtual Covid-19 Follow-up Clinic was designed in response to the need to review a large number of in-

patients, at a large hospital trust, recovering from Covid-19 but without any significant increase in resources.

**Methods** Patients complete a structured online/telephone symptom and psychological health questionnaire and have a chest x-ray 12 weeks after their illness. These results, and their medical records, are reviewed asynchronously by the medical team in a virtual clinic. Patients are then triaged to further virtual review, telephone review, face to face review, or are discharged. All patients receive comprehensive written information to aid their recovery.

**Results** During the first 8 weeks of the service, 388 patients have completed the questionnaire (63% online) and been reviewed. Current symptoms are shown in figure 1. The questionnaire has identified the holistic needs of patients and allowed triaged follow-up with 122 discharged and 53 urgent face-to-face review appointments completed. 25 CT pulmonary angiogram scans were arranged for patients with typical symptoms of pulmonary emboli; no thromboembolic disease was identified.

**Conclusion** This early experience of a new service has highlighted 5 learning points:

1. Virtual review is not necessarily quicker than clinic review in person, with holistic review taking 15 minutes per patient (excluding phone calls).
2. Patients appreciate clinical contact and this is particularly relevant in the post-Covid era of restricted healthcare attendance. All patients who attend for face to face review are extremely grateful.
3. A multidisciplinary team is necessary bringing together respiratory, cardiology, rheumatology, radiology, psychology and immunology in one holistic review. Patients benefit from therapy input, with 13 of 49 patients assessed by the physiotherapist in clinic diagnosed with breathing pattern disorders.
4. Medical staff redeployment during the pandemic, and the extreme pressures at that time, meant aspects of planned care were not arranged at discharge. Virtual review of medical records has addressed this, for example, re-arranging a referral for a pacemaker and arranging haematological review

of a patient newly diagnosed with chronic lymphocytic leukaemia.

5. Regular multi-disciplinary strategy meetings have allowed guidelines to be revised weekly, based on increasing evidence, and experience disseminated.

**P173 OUTCOMES OF A COVID-19 RESPIRATORY FOLLOW UP CLINIC IN A LARGE TERTIARY REFERRAL CENTRE**

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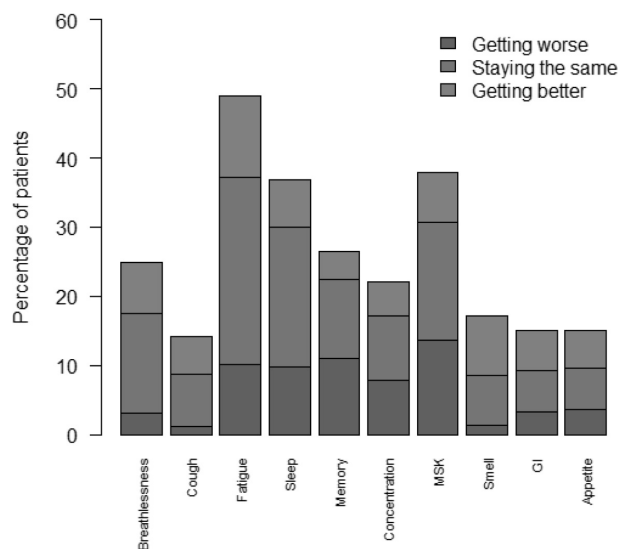
10.1136/thorax-2020-BTSabstracts.318

**Introduction** Current guidelines for follow up of COVID-19 patients are based on experience with outbreaks with Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS), with the aim to identify patients likely to develop post infectious fibrosis. The COVID-19 pandemic is on a much larger scale and requires investigation regarding the most effective way to follow up these patients.

**Abstract P173 Table 1** Characteristics in those who were still symptomatic at 6 weeks (requiring clinic review) and those who were not (Discharged or X-ray only). Statistics presented: median [IQR], n (%), Kruskal-Wallis test

Characteristic	No ongoing symptoms (therefore not seen in clinic) n= 293	Ongoing symptoms at 6 weeks (seen face to face) n=65	P value
Age	65 [51, 80]	57 [46, 65]	0.001
Male	158 (54%)	35 (54%)	0.814
Previous lung disease	53 (18%)	17 (27%)	0.174
Admission Chest X-ray			
Normal	43 (15%)	7 (11%)	
Mild change	83 (28%)	14 (22%)	
Moderate change	70 (24%)	25 (38%)	
Severe Change	19 (6%)	10 (15%)	
Other non-Covid diagnoses	19 (6%)	3 (5%)	
Not done	59 (20%)	6 (9%)	
Admission CT			
Normal	8 (3%)	1 (2%)	
Mild change	13 (4%)	3 (5%)	
Moderate change	17 (6%)	6 (9%)	
Severe change	14 (5%)	7 (11%)	
PEs	6 (2%)	5 (8%)	
Not done	233 (80%)	46 (71%)	
Smoker (pack years)	20 [5,30]	19 [4.5,40]	0.908
MRC score pre-COVID	1 [1,2]	1 [1,2]	0.470
MRC score post-COVID	2 [1.5,3]	3 [2,4]	0.026
mCAT	4 [1,8]	15 [8, 22.5]	<0.001
GAD questionnaire	11 [8,12]	14 [13,15]	0.02
PHQ questionnaire	7.5 [6.5,10]	17 [14,21]	<0.001
Hospital Anxiety and Depression Score			
Anxiety	1 [0,5]	4 [2,9]	0.007
Depression	1 [0,4]	4 [1,9]	0.003

**Symptoms after COVID**



**Abstract P172 Figure 1**