Abstract P132 Table 1 Follow up symptoms and radiological findings at first and second assessment post discharge. Analysed by Wilcoxon Rank Sum, median (range)

	First timepoint	Second timepoint	P value
Clinic assessment (months post discharge)	1.5 (1–3)	9 (6–12)	
CT scan (months post discharge)	2.5 (1–4)	8 (6–12)	
MRC score	3 (2–4)	1 (1–3)	<0.0001
CAT score	12 (7–18)	6 (4–14)	0.002
Numbers of CT performed	81	35	
Numbers of CTs performed for isolated ground glass abnormalities (PCVCT1+2)	47	13	
Numbers of CTs performed for fibrosis plus ground glass changes (PCVCT3)	34	22	

Conclusion Those patients found to have PCVCT3 changes on initial CT should receive long term follow up as a proportion (approximately 9%) of them may develop progressive fibrotic changes. However this is likely to only represent less than 1% of all COVID-19 patients discharged from hospital. Longer term follow up is needed to determine the ongoing trajectory of these interstitial changes. These patients may potentially benefit from clinical trials in the future for the use of antifibrotics.

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P133 MEASURING OXYGEN SATURATION ON FOLLOW UP CHEST X-RAY AND RESOLUTION OF RADIOLOGICAL CHANGES AT 6 TO 12 WEEKS POST COVID PNEUMONITIS

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Introduction Recovery course post COVID-19 pneumonia remains poorly understood. This study aims to present data on clinical and radiological characteristics of COVID-19 patients admitted to the hospital, as well as their follow-up after discharge. Data collected before any official guidelines however it was in line with subsequent models recommended by the British Thoracic Society.¹

Methods The study included all COVID-19 patients admitted between mid-March and September 2020 with chest X-Ray (CXR) changes consistent with COVID pneumonitis. Patients had a virtual respiratory clinic review, with a repeat CXR and oxygen saturation (SpO₂), 6 to 12 weeks after discharge. Radiographers were trained in a novel role to measure SpO₂ (with target SpO₂ and local escalation policy).

Results 302 patients were admitted with COVID during the study period, of these 207 (68.5%) had radiological changes consistent with COVID pneumonitis. Ethnicity data was available for 110 (53%) patients. 86% of patients were Caucasians while 14% patients were of Black, Asian and minority ethnic (BAME) background. The median length of stay in the hospital was 8 days (IQR: 13). Smoking status was recorded for 97

Abstract P133 Table 1 Characteristics and outcome of patients with COVID-19 on admission and follow up

	N	Males	Females	Mean age (years)	SD
Total admitted patients*	302	165	137	64	20.65
• Patients with abnormal CXR on admission	207	124	83	67.5	16.74
• Patients with normal CXR on admission	73	31	42	62.9	20.71
• No CXR available at admission	22	10	12	65	22.42
Follow up CXR**					
• Follow up CXR done	155	93	62	65	24
• Follow up CXR normal/baseline changes	122	70	52	62.7	15.8
• Follow up CXR abnormal	33	23	10	68.3	13.6

*Total local population in Guildford and Waverly 225,000 as per 2017 census.

** 6–12 weeks follow up CXR was not done in 52 patients due to multiple patient factors (e.g. mortality, patient did not attend). Mortality rate 7% (N: 21) at time of data collection.

(46%) patients. 54 out of 97 (55%) had a history of smoking. 79% of patients had normal follow-up CXR. 33 (21%) patients had persistent abnormalities including residual infiltrates, atelectasis, pleural effusion and fibrotic changes. Patients with normal follow-up CXR were younger than those with persistent changes ($p < 0.05$). SpO₂ was checked for 95 out of 155 patients (61%). At the time of follow-up CXR, 92 patients had SpO₂ >92% while 3 patients were found to have SpO₂ <92%. The virtual screening clinic appointment take-up rate was 83% (N: 129).

Conclusion Our data shows that the majority of patients with COVID pneumonitis had a normal CXR at 6–12 weeks post discharge. However, a significant proportion of patients still have on-going radiological changes. There was no correlation between target SpO₂ and ongoing radiological changes. Patients with normal follow-up CXR were significantly younger than those with persistent changes. We continue to study this group of patients and post COVID sequelae.

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P134 HEALTH DEPRIVATION AND POST-COVID FIBROSIS: IS THERE A RELATIONSHIP AND WHAT IS THE LONG-TERM IMPACT?

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Introduction and Objectives Health inequalities are associated with worse outcomes of COVID-19 illness.¹ Health deprivation and disability is one domain within the Index of Multiple Deprivation (IMD). We investigated potential correlation between health deprivation and development of new fibrosis in COVID-19 survivors within a mixed catchment area in NW England in which 35% of neighbourhoods are within the 10% most deprived decile for health and disability.

Methods Retrospective analysis of patients identified between March 2020 and January 2021 with either CVCX1 coded

Abstract P134 Table 1

	10% most deprived	Other
Total	20 (43%)	26 (57%)
Male sex	65%	54%
Average age (years)	62.3	62.6
Maximal FiO2 < 0.6	13 (65%)	9 (35%)
ITU admission	4 (20%)	10 (38%)
T2DM	6 (30%)	3 (12%)
Ex-smoker	13 (65%)	11 (42%)
Average score fibrosis	10.06	10.14

CXR or CVCX2 code with positive PCR test for COVID-19, who survived to follow-up at 3 months. Of 912 patients identified, 46 (5%) had new fibrotic changes on CT. Imaging was reviewed by a radiologist using suggested scoring system for COVID-19 follow-up² based on sum of 0–5 severity in 5 lobes (total 0–25) for markers of fibrosis. Deprivation decile was captured from patient postcode.

Results 42/46 (91%) lived in a neighbourhood within the 50% most deprived for health and disability in England; 20 (43%) within the 10% most deprived. Comparison is shown in table 1.

Conclusions We have shown patients surviving COVID-19 who developed new fibrosis are significantly more likely to live within a deprived postcode. Patients within the 10% most deprived postcodes for health and disability are more likely to be male and ex-smokers. We also noted patients developing fibrotic changes on CT within lowest 10% for deprivation had lower rates of ITU admission and required lower FiO2 (indicating less severe disease) but with equivalent radiological findings to those within less deprived areas. Severe deprivation may in itself increase risk of developing long-term respiratory complications from COVID-19, propagating the ongoing cycle of health and deprivation.

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CLINICAL, FUNCTIONAL AND PSYCHOLOGICAL CHARACTERISTICS OF SURVIVORS OF SEVERE COVID-19 PNEUMONIA: A COMPARISON OF OUTCOMES FROM THE FIRST AND SECOND WAVES

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Introduction and Objectives The UK has experienced two major waves of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infections, peaking in April 2020 (Wave 1) and January 2021 (Wave 2). Critical care survival rates in

Abstract P135 Table 1 Patient demographics, self-reported scores and functional test results by wave

	1st wave	2nd wave	p-value
Demographics			
n=167		n=141	
Age	59±13	58±12	0.564
Female	60 (35.93; 28.94–43.40)	62 (43.97; 35.97–52.22)	0.15
BMI (kg/m ²)	30.5 (26.6–35.2)	32.1 (28.5–37.9)	0.009 **
BAME	115 (69.7; 62.39–76.32)	72 (59.5; 50.62–67.94)	0.073
Number of comorbidities	2 (1–3)	2 (1–3)	0.144
Patients Receiving Drugs			
Dexamethasone	11 (6.63; 3.57–11.17)	138 (97.87; 94.43–99.40)	<0.001 ***
Remdesivir	18 (10.84; 6.79–16.24)	81 (57.45; 49.20–65.39)	<0.001 ***
Other Immunomodulator	2 (1.20; 0.25–3.81)	31 (21.99; 15.76–29.35)	<0.001 ***
Questionnaire Scores			
n=164		n=132	
NRS Breathlessness	2 (0–5)	3 (0–5)	0.153
≥4	56 (34.78; 27.75–42.36)	52 (37.14; 29.47–45.34)	0.67
NRS Cough	0 (0–2)	0 (0–3)	0.439
≥4	17 (10.56; 6.52–16.00)	18 (13.64; 8.59–20.26)	0.419
NRS Fatigue	3 (0–5)	3 (0–5)	0.867
≥4	65 (40.63; 33.24–48.35)	48 (36.92; 28.99–45.43)	0.52
NRS Pain	0 (0–5)	1 (0–3)	0.682
≥4	44 (27.50; 21.03–34.78)	30 (23.08; 16.48–30.86)	0.39
NRS Sleep disturbance	2 (0–5)	2 (0–5)	0.558
≥4	52 (32.50; 25.61–40.02)	49 (37.40; 29.47–45.89)	0.382
Pre-COVID-19 mMRC	1 (0–2)	1 (1–2)	0.478
Post-COVID-19 mMRC	0 (0–1)	0 (0–1)	0.329
Post-COVID-19 mMRC	66 (40.99; 33.61–48.70)	49 (38.58; 30.45–47.23)	0.678
≥2			
PCFS	2 (0–3)	1 (0–2)	0.055
PCFS ≥2	80 (50.00; 42.31–57.69)	51 (42.15; 33.62–51.05)	0.191
PHQ-9 ≥10	32 (20.38; 14.66–27.19)	29 (23.02; 16.33–30.92)	0.592
GAD-7 ≥10	34 (21.38; 15.56–28.24)	16 (12.80; 7.81–19.49)	0.059
TSQ ≥6	43 (27.56; 21.01–34.94)	27 (22.31; 15.60–30.33)	0.319
Functional Tests			
n=160		n=139	
4MGS <0.8 (ms ⁻¹)	67 (42.41; 34.89–50.19)	47 (35.07; 27.38–43.40)	0.201
1STS repetitions	18 (12–23)	17 (12–21)	0.460
<2.5 percentile	96 (60.00; 52.29–67.36)	108 (77.70; 70.25–84.00)	0.011 *
Desaturation ≥4%	52 (34.67; 27.40–42.52)	42 (32.31; 24.73–40.67)	0.677

Parametric data are presented as mean ± standard deviation, non-parametric data are presented as median (interquartile range) or frequency (proportion; 95% confidence interval). Statistical significance indicated by * (p<0.05), ** (p<0.01), *** (p<0.001). BMI = Body mass index, BAME = Black, Asian or minority ethnic, NRS = Numerical rating scale (0–10), mMRC = modified Medical Research Council for dyspnoea (0–4), PCFS = Post-COVID-19 functional status scale (0–4), PHQ-9 = Patient health questionnaire 9 (0–27), GAD-7 = General Anxiety Disorder-7 scale (0–21), TSQ = Trauma screening questionnaire (0–10), 4MGS = 4-metre gait speed, 1STS = 1-minute sit-to-stand.