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The wider impact of the pandemic

P99 COPD PATIENTS' KNOWLEDGE, TRAINING AND ADHERENCE WITH INHALATION THERAPIES DURING COVID-19

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Introduction and Objectives Effective management of chronic obstructive pulmonary disease (COPD) necessitates inhalation treatment at all disease stages. A previous UK Inhaler Group survey identified patient training and knowledge of their inhaler devices as key factors contributing to inhaler misuse and non-adherence, both known to impact clinical and economic burden. Coronavirus disease 2019 (COVID-19) potentially presents a significant risk of worsening disease management due to virtual consultations, patient shielding and self-isolation. We assessed patient engagement with inhalation therapies by understanding their treatment beliefs, knowledge, training received, and device-related concerns in pre-pandemic and pandemic periods.

Abstract P99 Table 1 Changes in self-reported knowledge, training, and adherence regarding inhaled therapies during COVID-19. Pattern analysis of participants reporting change in adherence indicates the role of patient emotions, beliefs, and experiences. Six reasons inducing adherence-promoting or adherence-limiting behaviour were identified.

Participant identifier	Change in knowledge	Change in training	Change in adherence	Reason(s) for change in adherence
2	No change	No change		Fear of contracting COVID-19
22	Decreased	Decreased		Worsening of symptoms during COVID-19
30	No change	No change		Fear of contracting COVID-19; Worsening of symptoms during COVID-19
38	No change	No change	Increased	Motivation from awareness of COPD as a COVID-19 risk factor
49	Increased	No change		Perception of high therapeutic benefit from new prescription during COVID-19; Motivation from awareness of COPD as a COVID-19 risk factor
17	Decreased	Decreased		Social isolation/depression and neglectful of COPD treatment during COVID-19
23	No change	No change	Decreased	Improvement in symptoms during COVID-19
28	No change	Decreased		Social isolation/depression and neglectful of COPD treatment during COVID-19

Methods A 60-item questionnaire, devised through an iterative process, formed the basis of ~45-minute one-to-one semi-structured telephone interviews with COPD patients. Objective medical data were obtained from electronic records.

Results Of 54 participants (females, 48%; age, 68.8±8.14 years), although 88.9% perceived to possess sufficient knowledge regarding their inhalers, only 55.6% recounted correct therapeutic indications, while 16.7% reported inclusion of an inhaler or nebuliser in their current exacerbation 'action plan'. Device training was primarily delivered non-routinely (41.7%), through face-to-face demonstrations (70.1%) pre-pandemic. However, inhaler technique reviews reduced by over two-thirds (71.4%) in the comparable pandemic period, with virtual face-to-face demonstrations constituting only 42.9% of reviews. A third (33.3%) affirmed a desire for more frequent reviews. Among participants' n=137 prescribed inhalation devices, the pressurised metered-dose inhaler (pMDI), nebuliser, and unit-dose dry powder inhaler (DPI) displayed lower usability scores. 59.3% of participants encountered multiple problems with critical steps of pMDI and DPI technique, and reiterated need for specific inhalation device features. Nevertheless, most participants reported no change in knowledge (85.2%), training (92.6%), and adherence (85.2%) regarding inhalation therapies. Adherence increased by 3.7% and reasons attributed to this change included COVID-19-induced fear, motivation, and altered symptom control likely due to 'shielding' measures.

Conclusions Disparities between patients' perceived and actual knowledge, deficiencies in training delivered, and potential for more appropriate inhalation device selection exist. COVID-19 induces bidirectional change in adherence; the impacts of 'shielding' and disruption to routine care may limit positive change. Although a larger study is required to confirm statistical significance, these findings warrant improved patient education provision.

P100 IMPACT OF THE COVID-19 PANDEMIC ON HEALTH SERVICES UTILISATION IN A LUNG CANCER SCREENING COHORT

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Background The COVID-19 pandemic has caused significant disruption to healthcare services. Participants in lung cancer screening programmes are at elevated risk of lung cancer, have high rates of comorbidities, and therefore may be adversely affected by delayed or cancelled appointments. Analysis of lung health check data collected within the SUMMIT study allow us to quantify the impact on this population.

Methods The SUMMIT study aims to assess the implementation of low-dose CT (LDCT) for lung cancer screening in a high-risk population and to validate a multi-cancer early detection blood test (NCT03934866). Enrolled participants attend three annual lung health checks. Participants attending their second (Year 1) lung health check were asked about the impact COVID-19 had on their health service utilisation the preceding year.

Abstract P100 Table 1 Factors influencing reduced utilisation of healthcare services during the covid-19 pandemic

	Reduced use of healthcare services due to the COVID-19 pandemic/Total	Relative risk (RR)
Total	3333/8304 (40.1%)	
Respiratory comorbidities:		
One or more respiratory comorbidities	1388/2957 (47.0%)	RR 1.29, p = <0.001*
No respiratory comorbidity	1945/5344 (36.4%)	
Gender:		
Male	1823/4855 (37.5%)	RR 1.16, p = <0.001*
Female	1510/3446 (43.8%)	
Age:		
55-59	545/1356 (40.1%)	-
60-69	1710/4216 (40.6%)	RR 1.01 p = 0.835
70-79	1078/2729 (39.5%)	RR 0.98 p = 0.696
Deprivation quintile:		
Quintile 1 (most deprived)	983/2474 (39.7%)	-
Quintile 2	932/2327 (40.0%)	RR 1.01, p = 0.845
Quintile 3	599/1510 (39.7%)	RR 1.00, p = 0.995
Quintile 4	606/1431 (42.3%)	RR 1.07, p = 0.117
Quintile 5 (least deprived)	152/418 (36.6%)	RR 0.92, p = 0.247

Results 8,304 participants completed a Year 1 lung health check between June 2020 and May 2021 (mean age 66.3, IQR 61–71, 4855 (58.5%) male).

3333 (40%) reported reduced health service utilisation due to the COVID-19 pandemic. Of those, 3062 (91.9%) stated this was due to the NHS cancelling or delaying appointments, whilst in 204 (6.1%) appointments were cancelled by the participant. Reasons given by participants included not wanting to burden the NHS, difficulty with telephone consultations, and concern from media reports of hospital overcrowding.

Participants with a respiratory comorbidity (COPD, bronchiectasis, asthma, fibrosis, or sarcoidosis, as self-reported at initial study visit) (RR 1.29, $p < 0.001$) and female participants (RR 1.16, $p = < 0.001$) were more likely to report impacted healthcare utilisation (table 1). Reported impact on healthcare use was not significantly affected by age or socioeconomic quintile.

Conclusions 40% of individuals in a cohort at high risk of lung cancer and respiratory comorbidities reported reduced utilisation of health care services due to the COVID-19 pandemic.

Limitations to our data include the lung health check questions not distinguishing between primary and secondary care or routine and urgent visits, and self-reported co-morbidity data limited to selected respiratory conditions. Nevertheless, we provide evidence for the scale of the problem and highlight that individuals with chronic respiratory conditions are particularly likely to be impacted.

Please refer to page A193 for declarations of interest related to this abstract.

P101 MORTALITY IN PATIENTS REQUIRING HOME MECHANICAL VENTILATION DURING THE COVID-19 PANDEMIC: EXPERIENCES OF A REGIONAL SPECIALIST VENTILATION UNIT

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Introduction Deaths from severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) infection continue to increase in the UK. Patients with pre-existing comorbidities, including obesity and chronic respiratory disease, have been shown to be at increased risk of adverse clinical outcomes. The impact of COVID-19 on the survival of patients established on home mechanical ventilation (HMV) for chronic respiratory failure is currently unknown. We aimed to evaluate longitudinal trends in mortality amongst patients requiring HMV at a UK tertiary specialist ventilation unit.

Methods 20-year single-centre retrospective observational cohort study. Medical records of HMV users were used to determine mortality status and date of death. Primary cause of chronic hypercapnic respiratory failure was coded as chest