adult service, 1 patient had been discharged and 2 patients did not attend. Adherence was optimal in 10 (44.5%), suboptimal in 9 (40.9%) and poor in 3 (13.64%) patients (see figure 1). Their mean BEC was $0.35 \times 10^9/l$ (± 0.33), FeNO 48.7 ppb (± 38.1) and FEV1% was 86.8% (± 12.2).

Conclusion While there was an incremental improvement in adherence during the first year of adult care with resultant improvements in asthma biomarkers, on-going support is needed to further increase medicines use and to ensure this behaviour persists.

S35 CREATING BEHAVIOURAL PERSONAS TO DRIVE BETTER DESIGN IN HEALTH TECHNOLOGY FOR ASTHMA SELF-MANAGEMENT

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10.1136/thorax-2021-BTSAbstracts.41

Introduction and Objectives The health burden from asthma can be reduced through better provision of basic care and better self-management. Most health technology products tend to target a narrow range of behaviours with limited behaviour change techniques (BCTs), take a homogeneous approach towards the diverse population of people with asthma and have poor uptake.

Objective to identify and characterise distinct behavioural self-management archetypes among UK adults with asthma with the aim of creating behavioural personas that can be used by product developers to better address the needs of people with asthma.

Methods We conducted a scoping review of grey and academic literature, followed by workshops with subject matter experts to identify key behaviours and influences relevant to asthma self-management. We then conducted a rapid review and behavioural analysis on these key behaviours which were then synthesised into a behavioural systems map. A survey was constructed to explore a subset of key behaviours and influences in more detail including asthma management, asthma control, inhaler use, support seeking, monitoring, and technology use. The survey was administered to 2,324 people reflective of the UK adult asthma population. The results were analysed and synthesised using mixed methods. Data were segmented using Multiple Correspondence Analysis and k-means cluster analysis, and further statistical analysis was performed to identify factors independently associated with adherence behaviour. The results were synthesised into behavioural personas that characterise people with optimal vs. suboptimal preventer inhaler adherence in behavioural terms, alongside relevant design prompts and suggested BCTs.

Results Segmenting by inhaler use revealed behaviours distributed as shown in figure 1. Segmenting by adherence to preventer-type inhalers alone revealed pronounced differences between optimal and sub-optimal behaviour clusters in terms of age and behavioural factors (including: skills, decision making, behavioural regulation, environmental opportunities, attitudes, motives, intentions, beliefs, identity, and emotions).

Conclusions We have developed unique insight into behaviours of people with asthma and the influences on these behaviours.

Abstract S35 Figure 1

We believe this work can contribute to a paradigm shift in the design of asthma health technology products, towards targeting new behaviours and their influences for change and ultimately driving better self-management and fewer asthma deaths.

S36 PRESCRIBING PATTERNS AND TREATMENT ADHERENCE IN PATIENTS WITH ASTHMA DURING THE COVID-19 PANDEMIC

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10.1136/thorax-2021-BTSAbstracts.42

Introduction and Objective The COVID-19 pandemic has witnessed a reduction in asthma exacerbations in the UK. Several factors may underpin this, including reduced transmission of seasonal viruses and improved use of or adherence to inhaled corticosteroids (ICS). This study aims to investigate whether ICS use has changed during the pandemic for patients with asthma.

Methods Using the OpenPrescribing database, we analysed prescribing patterns of ICS, salbutamol and peak flow meters from January 2019 to January 2021 across England. Additionally, using a sample asthma cohort from 3 primary care practices, we assessed individual prescription patterns and ICS adherence across the two-year period. ICS adherence has been defined according to the medication possession (MPR) ratio: good ($\geq 75\%$), sub-optimal (50–74%), poor (25–49%) and non-adherence ($< 25\%$).

Results A sharp increase in national ICS prescriptions was observed at the start of the pandemic in March 2020 representing a 50% increase compared to February 2020. Thereafter national ICS prescription rates appear to have returned to normal levels. The sample asthma cohort included 1132 patients (762 patients treated with ICS across 2019 and 2020). Overall, adherence to ICS improved in 2020 ($P < 0.001$), with the proportion of patients meeting 'good adherence' ($\geq 75\%$) increasing from 34% to 42% ($P < 0.001$). Analysis of this cohort suggested the March 2020 spike predominantly reflected improved adherence rather than a hoarding effect of multiple inhalers or new prescriptions for ICS-naïve individuals. Increasing age was associated with higher