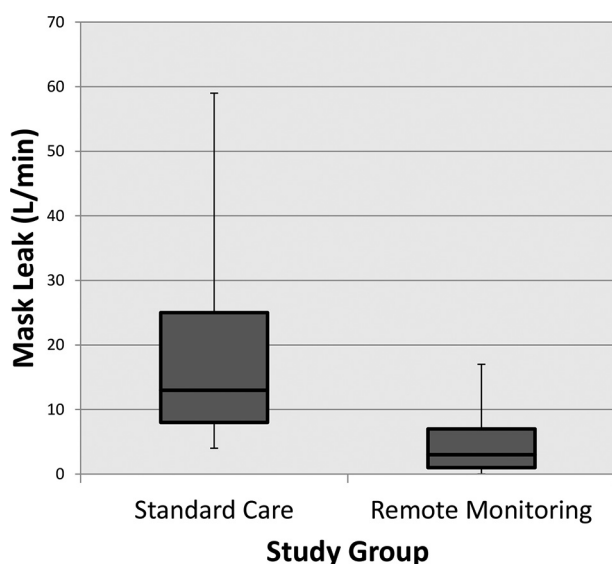


Abstract P035 Figure 1 CPAP Usage



Abstract P035 Figure 2 Excess mask leak

Discussion A novel remote monitoring system implemented within NHS Lothian did not significantly increase patient CPAP compliance. Excess leak from the mask was significantly reduced however, suggesting that compliance may be affected in a study inclusive of a greater number of patients and over a greater period of time. Therefore, more highly powered studies are required to determine if remote monitoring in the treatment of OSAHS patients can help to improve patient compliance.

P036 DESIGN AND DEVELOPMENT OF AN INNOVATIVE NECK STABILISING AID FOR CHILDREN WITH NARCOLEPSY

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Introduction Narcolepsy is a disabling neurological sleep disorder characterised by excessive daytime sleepiness and attacks of muscle weakness precipitated by strong emotions, known as cataplexy. A previous exploratory technology workshop with children from the Sheffield Children's Hospital narcolepsy clinic identified 'Head and neck support in the car' as their most important unmet need in terms of aids to daily living (32/39 participants). There is currently no suitable car seat or effective support on the market for these children. Therefore, this project aimed to design, develop and evaluate concepts for a neck stabilising aid for children with narcolepsy.

Methods Detailed 'needs capture' through a co-design workshop with children with narcolepsy and their parents to map and discuss their travel experiences resulted in an initial specification list. A second creative workshop for idea generation using existing products and early design concepts informed further development.

Results A detailed design specification list has been produced. Seven concept designs have been developed for further evaluation and selection at an upcoming 'dragon's den'-style workshop. Concepts will not reach prototype stage within the scope of the project so worksheets and interactive design activities will be used to capture early subjective user opinions.

Discussion The use of creative, co-design methods have proven effective in capturing the voices of children and families to ensure the project is generating meaningful solutions to the core issues in this area. The project is currently ongoing with a number of possible concepts being proposed and evaluated by children and families. The preliminary concepts and supporting evaluation data will be used to apply for future funding to develop the chosen concept to prototype level and beyond.

P037 BRIDGING THE GAP BETWEEN PATIENTS AND PATIENT-SUPPORT ORGANISATIONS: FOR PATIENTS WITH OBSTRUCTIVE SLEEP APNOEA

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10.1136/bmjresp-2019-bssconf.37

Introduction Patient organisations play a key role in providing patient support, whilst facilitating patient-centred and participatory medicine. The Sleep Apnoea Trust Association (SATA) commissioned a patient review of their website. The objectives of this project were to improve communication between SATA, their members and other patients with Obstructive Sleep Apnoea (OSA), and to invite members' critique of SATA's website.

Methods A mixed-methods questionnaire of 15-items including Likert scales, multiple-choice, open-ended, and demographic questions was designed to assess members' needs and preferences for healthcare communication. The web-based questionnaire was informed by patients, their families and clinicians, and included a structured evaluation of website accessibility, readability, and information quality. 1,318 SATA members were invited by email to participate anonymously. Descriptive

demographic and quantitative, and thematic qualitative data are presented.

Results 351 (27%) of SATA members responded; 70% were male, 93% ≥45 years and 62% with severe pre-treatment OSA symptoms. 44% learned about SATA via their sleep clinic, 5% from GPs, and 32% via search-engines. Over 87% had visited the SATA website at least twice. Two-thirds were satisfied or very satisfied with the content, 31% were neutral and only 3% were dissatisfied. 49% ‘often’ found the information they sought, 43% ‘occasionally’, and 8% ‘rarely or never’. Areas highlighted for improvement included the dated and cluttered appearance, and difficulty navigating the site. Further information was requested re OSA research, equipment maintenance and reviews, DVLA guidelines, and other patients’ experiences.

Discussion Most SATA members became aware of the patient charity support only after visiting secondary care suggesting the need to create stronger links with the public and primary care. Once aware of SATA’s website, many patients made multiple visits gaining good quality information. Key data was

obtained for phase II of this project, which is to increase accessibility and the interactive nature of the website.

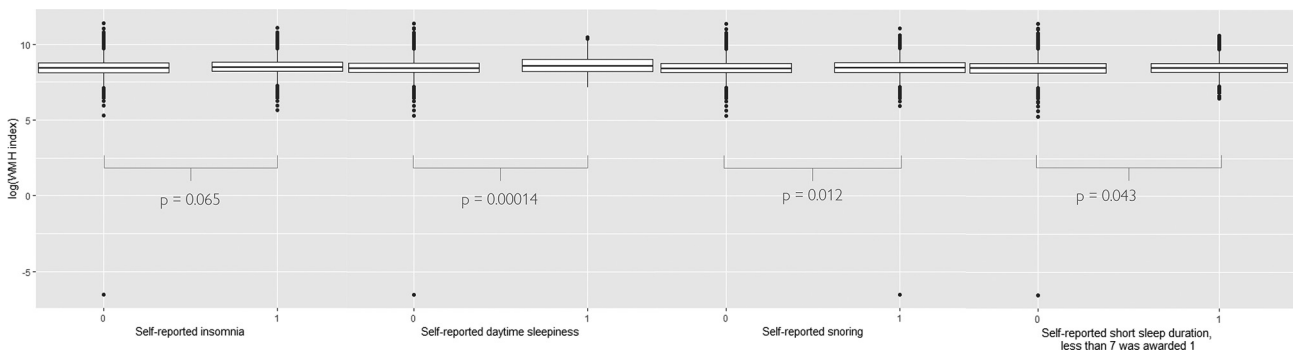
P038

INVESTIGATING THE IMPACT OF POOR SLEEP ON CARDIOVASCULAR HEALTH AND CEREBROVASCULAR BURDEN IN HEALTHY AGEING USING THE UK BIOBANK DATA

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10.1136/bmjresp-2019-bssconf.38

Introduction Poor sleep¹ as well as white matter hyperintensities (WMH), which are macroscale markers of cerebrovascular health indicating white matter lesion,² have been shown to increase the risk of dementia. However, the relationship between these two putative risk factors of dementia is unclear.



Abstract P038 Figure 1 Self-reported variables of poor sleep are linked to a higher white matter hyperintensity (WMH) load. Patients with complaints (score of 1) about insomnia, daytime sleepiness, snoring and short sleep duration (less than 7 hours per night) had a higher WMH load index than those that did not report any complaint (score of 0). T-tests were used to compare all 4 sets of data. The WMH load index is log-transformed.

Variable	Estimate	P-value
Log(sleep burden score)	0.00553	0.027
Age	0.03354	< 2.2 * 10 ⁻¹⁶
BMI	0.01243	6.8 * 10 ⁻¹⁰
Diastolic blood pressure	0.00301	0.0068
Systolic blood pressure	0.00039	0.55
whr	-0.63144	2.33 * 10 ⁻⁹
APOE	0.12987	0.028
Diabetes	0.12803	0.0011
Cholesterol	0.03961	0.090
Hypertension	0.13089	3.24 * 10 ⁻⁵
High blood pressure (disagnosed)	-0.00232	0.94

Abstract P038 Table 1 The sleep burden score, corresponding to the presence of insomnia, snoring, daytime sleepiness and short sleep duration, significantly predicts white matter hyperintensity (WMH) load. A multiple linear regression was performed, controlling for age, body mass index (BMI), blood pressure (diastolic and systolic), waste-hip ratio (whr), the genetic status of alipoproteinE (APOE), health conditions including diabetes, high cholesterol, hypertension and high blood pressure (adjusted R-squared: 0.18, p-value: < 2.2 10⁻¹⁶). Significant variables are indicated in bold.