concluded that the effectiveness of telemedicine on adherence remains undecided.

Methods A non-blinded, single centre, randomised controlled trial was carried out with patients randomised to 1 of 3 arms (arm 1 standard care and face-to-face appointments; arm 2 modem and virtual follow up clinic; arm 3 modem, Dreammapper™ and virtual follow up appointment). Consecutive moderate-severe OSA patients requiring CPAP were recruited to the study to a sample size of 90. Data was collected at first appointment, at 1st follow up from commencing CPAP (1-2 weeks) and at 6 months from commencing CPAP. Data collection included patient's demographics (table 1), CPAP compliance (average hours of usage in 24 hours), mask leak, apnoea/hypopnoea index (AHI) and Epworth sleepiness scores (ESS). Qualitative data is currently being collected via interviews to explore the patient experience in each arm of the study.

Discussion Preliminary analysis (table 2) indicates that arm 3 demonstrated significant better compliance of 36 minutes at first follow up compared to arm 1, with compliance at 6 months between both these arms levelling out with no significant difference at 6 months. The patient group in arm 2 demonstrated a significantly reduced in compliance compared to the other two groups at both week 1-2 and 6 months. Preliminary results suggest that the type of telemedicine intervention could impact the early compliance experienced by patients.

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56 ROLE OF SLEEP DURATION IN CARDIOVASCULAR MORTALITY AMONG PATIENTS WITH CHRONIC KIDNEY DISEASE

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Growing evidence suggests an association between both short and long duration of habitual sleep and adverse health outcomes. In order to determine whether the population longitudinal evidence supports the presence of a relationship between Chronic Kidney Disease (CKD) and cardiovascular disease (CVD)-mortality, and how sleep duration plays a role in mortality outcomes.

This is a population-based cohort study of National Health and Nutrition Examination Surveys participants between 2005 and 2010 with mortality data obtained through 2015. Adults aged 20 years or older with sleep duration information were categorized into excessive ($\geq$ 8 hours) versus normal. CKD was determined using the Cockcroft-Gault equation and considered positive at GFR<60 mL/min. Outcomes of CVD-mortality were evaluated using Cox regression.

The percentage of deaths from low sleep duration among the population (N=15,586) were higher among individuals without High School (HS) Diploma (12.8%) versus at least some college education (5.7%). The mean follow-up was 7.7 years. For CVD-mortality, the overall unadjusted hazard ratio (HR) of individuals with CKD to no CKD was 1.54 (95% confidence interval [CI], 1.11-2.14, p = 0.01). Adjusted HR was elevated, 1.59 (CI 1.01-2.52, p = .04), among those with excessive sleep duration but closer to 1.0 (0.62 CI 0.25-1.51, p < 0.25) among individuals with normal sleep duration, after controlling for medical (obesity, diabetes, and C-reactive protein) and demographic risk factors (age, gender, poverty-income-ratio, education, and ethnicity).

Our study shows an unambiguous and consistent pattern of increased risk of dying from cardiovascular disease among individuals with CKD. However, this relationship is especially pronounced among individuals who have excessive sleep duration, making it an important determinant of health. Screening for sleep disorders is especially important in the consideration of other chronic diseases like cardiorenal syndrome.

57 UK ADHERENCE RATES TO CONTINUOUS POSITIVE AIRWAY PRESSURE BEFORE AND AFTER THE START OF THE CORONAVIRUS PANDEMIC

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Introduction The most efficacious treatment for obstructive sleep apnoea (OSA) is Continuous Positive Airway Pressure (CPAP). CPAP's benefit is curtailed however, because many patients do not adhere to treatment, estimated from trials at 17-85%.[1] Since the Covid-19 pandemic, US and French CPAP adherence rates have been reported to have changed.[2] We sought to determine CPAP adherence rates of NHS patients pre-and post-pandemic.

Methods 5 sleep centres were recruited. To detect an 18% difference [US Philips Respironics survey% adherent 36% (2019) vs 18% (2020)], 80% power, p 0.05%, 2-tailed test, n =92. Average use at Night 3, 7, 14, 1 and 3 months and clinical data collected from 100 patients starting CPAP for first time in i) April 2019 and ii) September 2020, using Resmed Airview and clinical records. Adherence defined as CPAP use $\geq$4 hrs/night for $\geq$70% of nights, or at Night 3 median use $\geq$4 hrs.

Results See table 1 for patient characteristics. In 2019, in all centres,% of adherent patients fell from Night 3 to 3 months, with 3-month adherence rates between 29%-50% (p=0.025, figure 1). Similar was seen in 2020 in Conquest (CH) and Musgrove Park hospitals (MSH); in CH, higher% seen up to 1 month compared to 2019. In 2020, at Manchester (MH), Derriford (DH) and Guys and St Thomas's hospitals (GSTT) the% of adherent patients did not fall between Night 3 and 3 months; MH and DH maintained similar% to 2019, in GSTT, there was a smaller% starting at Night 3 compared to 2019 (30% vs 55%, p<0.0001). 2020 3-month adherence rates were different between centres (27-51%, p =0.004).

Discussion 3 month adherence rates are low -at best 50%. Rates have changed at some centres since the pandemic, with change varying depending on the treatment pathway modifications implemented.

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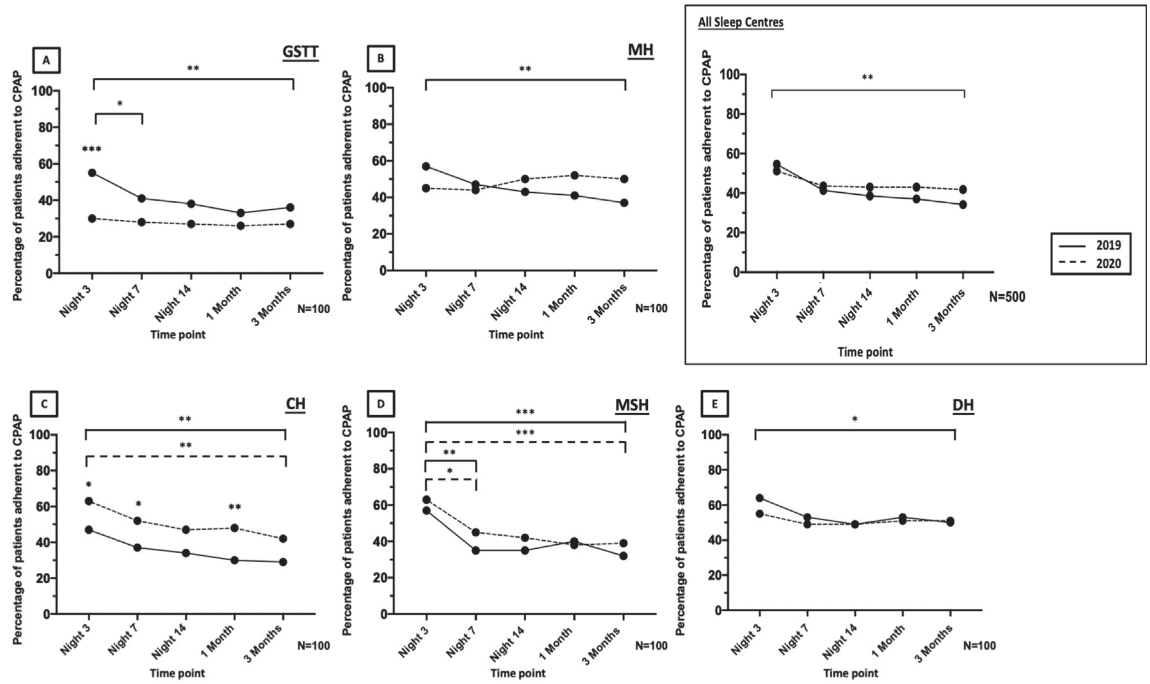

Abstract 57 Figure 1 Percentage of patients adherent at each time point over 3 months at each centre and at all centres combined in 2019 compared to 2020 Abbreviations: GSTT: Guy's and St Thomas's Hospital, MH: Manchester Hospital, CH: Conquest Hospital, MSH: Musgrove Park Hospital, DH: Derriford Hospial Comparisons assessed using a Chi-square test (*p<0.05, **p<0.01, ***p<0.001). Significant differences between between 2019 and 2020 values denoted by asterisk(s) above the value. Significant differences between 2019 values denoted by a solid line drawn between timepoints compared and asterisk(s) above bar, and similarly significant differences between 2020 values denoted by a dashed line between timepoints compared and asterisk(s) above bar

Abstract 57 Table 1 Table of patient characteristics at each centre

	GSTT			MH			CH			MSH			DH			P-value 2019	P-value 2020
	2019	2020	P-value (2019 vs 2020)	2019	2020	P-value (2019 vs 2020)	2019	2020	P-value (2019 vs 2020)	2019	2020	P-value (2019 vs 2020)	2019	2020	P-value (2019 vs 2020)		
Age (years) (N=100)	51 (43,58)	49 (38,58)	0.434	52 (43,61)	51 (40,60)	0.452	54 (45,63)	56 (45,65)	0.644	56 (46,65)	53 (44,64)	0.345	54 (45,63)	52 (43,62)	0,199	0.032*	0.012*
Sex (% males) (N=100)	73	76	0.626	61	68	0.301	64	67	0.655	67	72	0.443	61	65	0.558	0.999	0.999
BMI (kg/m²) (N=68-100)	33 (30,39)	32 (28,40)	0.314	36 (30,43)	33 (29,36)	0.009**	35 (30,42)	34 (29,39)	0.542	34 (29,41)	35 (30,41)	0.554	36 (30,42)	33 (28,40)	0.118	0.530	0.156
ESS (N=87-100)	12 (7,16)	11 (7,15)	0.660	11 (8,15)	13 (8,17)	0.037*	13 (7,17)	11 (6,15)	0.045*	13 (10,16)	13 (9,16)	0.984	14 (10,17)	13 (10,17)	0.237	0.043*	0.002**
Mild OSA %	16	12	0.415	19	7	0.012*	10	27	0.002**	51	32	0.006**	26	42	0.017*	<0.001***	<0.001***
Moderate OSA %	39	27	0.071	30	47	0.013*	39	32	0.301	18	34	0.010**	31	38	0.298	0.027*	0.027*
Severe OSA %	45	61	0.023*	51	46	0.479	51	41	0.156	31	34	0.651	43	20	<0.001***	0.022*	0.022*

Abbreviations: GSTT: Guy's and St Thomas's Hospital, MH: Manchester Hospital, CH: Conquest Hospital, MSH: Musgrove Park Hospital, DH: Derriford Hospital. ESS: Epworth Sleepiness Score, OSA: Obstructive Sleep Apnoea, BMI: body mass index. Comparisons assessed using a Chi-square, Mann Whitney U or Kruskal Wallis test (*p<0.05, **p<0.01, ***p<0.001).

Abbreviations: GSTT: Guy's and St Thomas's Hospital, MH: Manchester Hospital, CH: Conquest Hospital, MSH: Musgrove Park Hospital, DH: Derriford Hospital. ESS: Epworth Sleepiness Score, OSA: Obstructive Sleep Apnoea, BMI: body mass index. Comparisons assessed using a Chi-square, Mann Whitney U or Kruskal Wallis test (*p<0.05, **p<0.01, ***p<0.001).