snoring (40%), choking (25%), apnoeas (20%), wheeze (32%) and insomnia (53%). Only 43% had spoken to a healthcare provider about their sleep issues and many added they were not given the support they needed. Only 16% had been diagnosed with obstructive sleep apnoea (OSA).

To further assess sleep problems, 62% said they would have been interested in a sleep study, 49% in questionnaires to further assess sleep problems. Of the 57% of respondents who hadn't spoken to their healthcare provider, 70% reported they would like to speak to someone about their sleep issues.

Respondents would regard a good outcome for sleep interventions as: better nights sleep (86%), feeling more refreshed (75%), having more energy (73%), and feeling less sleepy (60%).

Conclusions Despite the high prevalence of sleep problems self-reported in people with COPD, only 43% had sought healthcare professional input. Responses highlight possible underlying undiagnosed OSA in some. Patients with sleep issues want to discuss these further and are willing to undergo investigations. Future research could improve pathways to identify patients requiring sleep evaluation within routine COPD clinics.

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P12 IMPLEMENTATION OF A COMPUTER GUIDED SLEEP CONSULTATION WITH AN INITIAL TECHNICIAN REVIEW ALLOWS EARLY CHARACTERISATION AND PRIORITISATION OF PATIENTS FOR MANAGEMENT

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Background The Liverpool Sleep Centre provides secondary and tertiary level services for sleep disorders. We recently introduced a computer guided consultation (CGC); the CGC has comprehensive, sleep guideline based, clinical decision support system (CDSS) algorithms embedded throughout and creates an Electronic Patient Record. The initial review is by a sleep technician; in proof of principle work, this was as effective as specialist sleep physician assessment. The system also has also a 'clinical dashboard' designed to highlight patients of concern and facilitate multi-disciplinary team management. We wished to examine the discriminatory value of

the technician review particularly in identifying those needing prompt management.

Methodology To confirm faced validity we reviewed the dashboard alerts in patients from March 1st to June 22nd 2021 following CGC implementation. 326 patients with suspected Obstructive Sleep Apnoea(OSA) were assessed using the CGC; 170 male, mean(SD) age 49.1 (14.1) years, BMI 35.9(9.3). The risk profiling of the patients was reviewed; 326 people had an initial consultation at the time of analysis 42 had incomplete sleep study data.

Results Of the 284 with sleep study results, average ESS was 10.5, mean(SD) AHI 18.7 (19.6). A diagnosis of OSA(S) was given in 196 (69%), 51 (16%) had normal polygraphy and in 37(13%) further review was advised. Regarding overnight oxygen saturations 173(61%) had an average < 94%, 98 had >20 minutes SpO2 < 90%. 132 had bicarbonate recorded with 49 ≥ 27mmol/L. There were 223 drivers, Group 1=212; Group 2=8; drivers reporting sleepiness when driving 26 of 223 (12%) (Group 1=24/212; Group 2=1; Provisional=1).

Conclusion The implementation the CGC with standardised consultations and dashboard management system resulted in the identification and prioritisation of sleepy drivers including 8 Group 2 (HGV) for prompt management. Twenty four people (8%) had definite evidence of obesity hypoventilation SpO2 <90% for > 20 mins and bicarb ≥ 27. Only 37(13%) were identified as needing further sleep specialist diagnostic review. The CGC approach in real life performs as was seen in the validation work. The approach increases the capacity and capability of a department by allowing safe delegation of a significant proportion of initial assessments.

P13 SYMPTOMS PREDICTIVE OF SLEEP DISORDERED BREATHING IN POST-POLIO SYNDROME

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Introduction Post-polio syndrome (PPS) can affect patients decades after initial polio-virus infection and is characterised by new slow onset neuromuscular weakness, fatigue and pain. Hypoventilation is a feature when respiratory muscle weakness occurs. We assess the relationship between symptoms of PPS to diagnosed sleep disordered breathing (SDB) in form of obstructive sleep apnoea (OSA) and hypercapnic respiratory failure (HRF) in a cohort of patients referred to PPS specific self-management education programme.

Abstract P13 Table 1

IPPS Variables	No SDB			OSA		
	B	χ ²	OR (95% CI)	B	χ ²	OR (CI 95%)
Pain	.045	.479	1.046 (.921-1.187)	-.015	.034	.985 (.844-1.151)
Atrophy	-.028	.052	.973 (.767-1.233)	-.106	.528	.899 (.675-1.198)
Temperature	.090	.192	1.094 (.732-1.633)	.005	.001	1.005 (.626-1.614)
Bulbar	-.332	5.857	.717 (.548-.939)*	.003	.000	1.003 (.726-1.387)

Multi-nomial logistic regression with HRF as reference population; *p<0.05

Methods Retrospective analysis of a cohort of patients with completed PPS in a national tertiary referral centre who completed the PPS self-management programme from 2006 to 2019.¹ Physical symptoms were assessed via the Index of Post-Polio Sequelae (IPPS) questionnaire. Multi-nomial logistic regression was used to assess IPPS sub-domains of pain, atrophy, bulbar and temperature changes in relation to SDB diagnoses (no treatment; OSA; HRF) using HRF as reference group. Age and symptom score presented with mean and range.

Results 168 participants (108 female) were included: 136 required no treatment for SDB (age: 62.8; 34–85), 20 (11.9%) with OSA (60.0; 43–73), 12 (7.1%) with HRF (64.7; 47–79). HRF suffered greater bulbar symptoms (score out of 10) compared to no treatment group (4.5(2–8) vs 2.7(0–10)) but was no different to OSA (4.5 vs 4.3(0–8)). No significant relationship was found between pain, atrophy and temperature sub-domains to SDB diagnoses in multi-nomial regression analysis (table 1).

Conclusion Bulbar symptom domain in IPPS (including respiratory symptoms) predicted diagnosis of SDB independent of other symptom domains including general muscle atrophy. However, it does not differentiate between OSA and HRF. Patients with any bulbar or respiratory symptoms should be referred for SDB assessment with particular focus on hypercapnic respiratory failure.

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P14 THE ROLE OF A VENTILATION MULTIDISCIPLINARY TEAM MEETING (VMDT) IN OPTIMISING CRITICAL CARE RESOURCE-USE

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Introduction Critical care beds are a scarce, valuable resource needing optimisation. Discharge delays result in high occupancy rates, reduced service efficiency and responsiveness, reduced bed availability and increased costs. Number/proportion of critical care level 1 bed days (table 1) were, therefore, highlighted as an NHS quality indicator. Discharge strategies are required to prevent transfer delay of patients without level 2/3 bed day needs. We previously reported a reduction in level 1 bed days and discharge delay following introduction of a weekly physician-led Ventilation Multidisciplinary team meeting (VMDT) (April 2014).¹ Organisational changes have since lead to VMDT cessation (August 2017). We aimed to investigate the impact of VMDT cessation on level 1 bed-days.

Methods Local ICNARC data was analysed before and after VMDT cessation, ((1/8/2014–31/8/2016; Period 1) and (1/8/2017–31/07/2019; Period 2), respectively). Delay in discharge was defined as critical care patients with level 1 needs remaining in critical care >24 hours.

Results There was an increase in number of level 1 bed days in critical care after VMDT cessation from 45/767 discharges (5.9%) in period 1, to 75/818 discharges (9.2%) in period 2 ($p < 0.002$). This corresponded with an increase in delayed

Abstract P14 Table 1 The 2001 Department of Health (UK) definitions of critical care levels

Level 0	Normal ward-based care in an acute hospital
Level 1	Patients at risk of deteriorating or those relocated from a higher level of care.
Level 2 [also known as 'High Dependency Units' (HDU)]	Patients that may need more detailed frequent observation or intervention, including support for single failing organ support.
Level 3 [also known as 'Intensive Care Units' (ICUs) or 'Intensive Therapy Units' (ITUs)]	Patients that require advanced respiratory support alone ± multiorgan support.

Department of Health. Comprehensive Critical Care: a review of Adult Critical Care Services. May 2000.

discharges from 33 (4.3%) in period 1, to 96 (11.7%) in period 2 ($p < 0.001$).

Conclusions A reduction in Level 1 bed-days following VMDT introduction was previously demonstrated,¹ without similar contemporaneous reduction in the similarly sized sister hospital, under same hospital management with identical policies, but no VMDT.² Our present results, demonstrating increased level 1 bed days following VMDT cessation, add further support to its importance in facilitating timely discharge and suggests adoption of a Physician-led MDT approach would be advisable for general critical care units. We see this as one of many tools in facilitating flow across critical care units and the wider hospital.

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P15 THE IMPACT OF COVID-19 ON RESPONSE TIMES FOR ACUTE NON-INVASIVE VENTILATION SET-UPS

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Introduction Acute non-invasive ventilation (NIV) is a life-saving treatment and early therapy improves physiological outcomes, reduces intubation rates and shortens length of stay in hypercapnic exacerbations of chronic obstructive pulmonary disease (COPD). A new 2018 BTS quality standard indicates that patients meeting evidence-based criteria should be started on NIV treatment within 60 mins of their decision-making arterial blood gas (ABG). The National Improvement Objective is >60% of patients meeting this target. We aimed to audit the local NIV set up times before and after COVID-19 to generate insights for ongoing quality improvement.

Methods Data was extracted from our NIV unit's quality database for two time periods before and after the start of the COVID-19 pandemic, 1st April – 1st September 2019 and 2020, respectively. Continuous variables were compared using a Mann-Whitney U test and categorical variables using Chi-Squared test.