

of Rochester (UR) Sleep Center were eligible for the study. Women and men 30-70 years old were invited to participate. The patients were not necessarily referred to the center for evaluation of sleep disordered breathing. Patients with dementia, hearing or visual loss, severe psychiatric or developmental illness, or not fluent in English were excluded. Patients had adequate computer literacy, access to high speed internet, and a computing device with appropriate video camera and microphone. The primary objective of the original study was to assess the interrater reliability between the in-person and telemedicine raters for pre-test probability of sleep apnea (high, moderate, or low). Providers used clinical judgement from the history and examination to determine pre-test probability. For this present analysis, we assessed the inter-method reliability separately for strata defined by reported annual income level: low income (< \$50,000), middle income (\$50,000-\$100,000), and high income (> \$100,000). Reliability was quantified for each stratum using weighted kappa statistics given the ordinal nature of the outcome variable, pre-test probability of obstructive sleep apnea (high, moderate, or low). Weighted kappa statistics were compared between the income strata (high vs. middle, high vs. low, middle vs. low). The operant statistic assumed an approximate standard normal distribution under the null hypothesis of equal kappa values in the two income strata. The Bonferroni method was used to adjust the p-values for the three pairwise comparisons performed among the three income strata.

Results: Data from 53 patients were available for this analysis. 11 of these patients were in the low income group, 22 in the middle income, and 16 were in the high income group. 9 patients did not include their income bracket, and were not included in the analysis. Inter-method reliabilities, assessed using weighted kappa, were 0.83 (low income), 0.24 (middle income), and 0.66 (high income). When comparing between the strata, the kappa statistics were significantly different ($p=0.005$) between the low and moderate income groups. There was a trend between the high and moderate income groups that did not meet statistical significance ($p=0.07$).

Conclusion: The intermethod reliability was substantial in the low income stratum, moderate in the high income stratum, and slight in the middle income group based on the kappa statistic. There was a significant difference in the reliability values of telemedicine versus in-person assessments between the low and middle income brackets, and there was a trend between the high and moderate groups. Since the raters were unaware of the patients' income levels, this association might suggest possible unconscious bias in evaluating for OSA. It may also suggest that beyond access to telemedicine technology, the quality of the care may also be influenced by socioeconomic factors. With telemedicine in its early stages, it is important to develop this technology that will minimize biases that could result from patients' economic fortunes.

Support (If Any): The study was funded by a grant from the American Academy of Sleep Foundation (AASM Foundation grant #163-FP-17).

0357

INTERDISCIPLINARY TRAINING IN PEDIATRIC SLEEP

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Introduction: Sleep is a critical domain of child functioning. However, clinical psychology programs lack formal sleep education while behavioral sleep instruction is deficient in sleep and pulmonary fellowships. Cross-disciplinary training in pediatric sleep is ideal. This

study examined medical and psychology trainee satisfaction with two interdisciplinary experiences: a 1-2 semester clinical rotation for medical fellows and psychology doctoral students and a concentrated annual elective for medical students. The rotation includes 1-2 half-day clinics per week wherein medical sleep fellows and behavioral sleep medicine trainees conduct a sleep interview together and ask specific questions within their discipline. With an attending psychologist and physician, they discuss case conceptualization, differential diagnoses, and possible interventions. The team reviews pertinent findings and collaboratively provides recommendations to the patient. Trainees also participate in weekly didactics presented by psychologists and physicians. The second interdisciplinary training experience, *Frontiers*, is designed to impact physician learners earlier in their careers. Sleep physicians and psychologists teach an annual week-long sleep elective for medical students.

Methods: Evaluations from fellows, psychology trainees, and medical students from the most recent 3 years were analyzed to determine trainee satisfaction with the interdisciplinary rotation and the medical student course.

Results: Results of sleep fellow evaluations rated the program as having effective teachers $X=4.67$ (0.62) and high educational value $X=4.6$ (0.83) on a 5-point Likert scale with 5 being the highest. Similarly, psychology trainees rated the overall rotation experience over the past 3 years on a 4-point Likert scale with 4 being the highest as $X=3.74$ (0.43). Medical students who took the *Frontiers* course also rated the training highly on a 4-point Likert scale with 4 being the highest: $X=3.79$ (0.43) in 2021, $X=3.76$ (0.75) in 2019, and, $X=3.73$ (0.47) in 2018. The course was not offered in 2020 due to the pandemic.

Conclusion: Comprehensive pediatric sleep education and training (both clinical and didactic) is feasible within a single interdisciplinary rotation provided simultaneously to both psychology and medical trainees with high trainee satisfaction. Sleep-related in vivo training and didactics are relevant to physician and psychology training programs and prepare trainees for future work in interdisciplinary care.

Support (If Any):

0358

DEFINING EXISTING PRACTICES TO SUPPORT THE SLEEP OF HOSPITALIZED PATIENTS: A MIXED-METHODS STUDY OF TOP-RANKED HOSPITALS

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Introduction: While sleep is critical for health, the hospital is not conducive to patient sleep and few efforts have been made to improve. The current practices to promote hospitalized inpatient sleep at highly-ranked hospitals are unknown.

Methods: A mixed-methods study of Hospital Medicine Section Chiefs at the 2020 US News and World Report Honor Roll pediatric and adult hospitals was conducted to understand the current practices and attitudes towards inpatient sleep between June and August 2021. An anonymous, quantitative survey was disseminated to quantify current practices and satisfaction with sleep-friendly institutional efforts. Survey participants were invited to share their institutions' progress and potential ways to further improve inpatient sleep during structured, qualitative interviews.

Results: Pediatric (n=10) and adult (n=20) section chiefs were queried. Survey response rate was 77% (n=23/30; pediatric n=8/10; adult n=15/20). While 96% (n=22) of hospitalist leaders rated sleep as important, only 43% (n=10) were satisfied with their institution's efforts to improve patient sleep. Although 91% (n=21) of hospitalist leaders rated sleep equity as important, one institution (4%) had practices in place to address the issue. Less than half (n=11) of institutions reported having sleep-friendly practices. Among these institutions, the most common practices included: reducing overnight vital sign monitoring (91%, n=10), decreasing ambient light in the wards (91%, n=10), adjusting lab and medication schedules (73%, n=8), and implementing quiet hours (64%, n=7). Twenty-seven percent of hospitalist leaders (n=8/30; pediatric interviews=3/10; adult interviews=5/20) participated in interviews. Themes included: the importance of having a sleep-friendly culture, environmental changes, modified hospital practices, and external incentives to improve patient sleep.

Conclusion: Hospitalists recognize the importance of improving patient sleep, but few institutions have sleep-friendly practices in place. Most institutions have no sleep health equity practices in place in their hospital. Building sleep-friendly hospital cultures and establishing best practices should be a priority for clinicians.

Support (If Any): The authors thank the Society of Hospital Medicine and the Pritzker School of Medicine for funding support.

0359

CLINICAL PERFORMANCE QUALITY OF A PRECISION ORAL APPLIANCE MADE FROM NOVEL MEDICAL GRADE CLASS VI MATERIAL

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Introduction: Oral appliance therapy device quality is an important factor for successful, efficient treatment of Obstructive Sleep Apnea. Poor device quality, defined in this investigation as the remake rate, is costly. A previous investigation reports that 13% of oral appliance therapy devices required remakes, each costing an estimated \$300 in lost productivity, fees for remakes, and three weeks of lost therapy. Other investigations associate poor quality with even higher costs and an increased propensity for the patient to discontinue treatment.

Methods: In this retrospective study design, quality data for 34,261 consecutively manufactured oral appliance therapy devices made from a novel medical grade class VI material was collected. Quality data was analyzed in total, and with 30-day and 60-day lag periods. The purpose of the lag periods was to account for the time between manufacture and delivery.

Results: Total remake rates were 1.2% (416/34,261). Total remake rates with a 30-day lag period were 1.3% (416/30,946). Total remakes with a 60-day lag period were 1.5% (416/26,964).

Conclusion: The clinical performance quality for a new precision oral appliance made from a novel medical grade class VI material is encouraging. Remake rates were between 1.2% and 1.5% depending on the lag period, which is directionally favorable in comparison with previously reported remake data.

Support (If Any): Data provided by ProSomnus Sleep Technologies.

0360

PAP ADHERENCE, FOLLOW-UP, AND TELEHEALTH DURING THE COVID-19 PANDEMIC

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Introduction: Positive airway pressure (PAP) is the gold standard therapy for OSA. However, patient follow-up and adherence to PAP therapy remains variable. With the onset of the COVID-19

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pandemic, many sleep centers shifted towards telemedicine. In order to evaluate the impact of telehealth, we assessed the rates of follow-up and PAP adherence among patients newly diagnosed with OSA prior to and after the onset of the COVID-19 pandemic.

Methods: Patients aged 18-75 years enrolled in our military sleep center who met eligibility criteria were divided into a pre-pandemic group and a pandemic group. For the pre-pandemic group, initial and follow-up clinic appointments occurred via face-to-face encounters. For the pandemic group, these clinic appointments occurred via telephone encounters. PAP follow-up was defined as a clinic appointment occurring within 6 months of the initial OSA diagnosis and the onset of PAP therapy. Adequate PAP adherence was defined as usage of the device ≥ 4 hours per night on $\geq 70\%$ of nights during a consecutive 30-day period. Differences among the two groups regarding PAP follow-up, PAP adherence, and demographic data were analyzed.

Results: Eligible patients (n=234) were divided into a pre-pandemic group (n=117) and a pandemic group (n=117). Demographic data for the pre-pandemic group vs. pandemic group included the following: mean age 42.2 vs. 40.3 years; 78.6% vs. 88.0% male; 60.7% vs. 76.9% active duty military, mean BMI 30.1 vs. 30.1; mean AHI 28.5/hr vs. 27.7/hr; mean Epworth Sleepiness Scale score 11.7 vs. 12.0; mean Insomnia Severity Index 16.9 vs. 16.8. The rates of PAP follow-up were 59.0% (pre-pandemic group) vs. 41.0% (pandemic group). The rates of adequate PAP adherence were 34.8% (pre-pandemic group) vs. 25.0% (pandemic group).

Conclusion: There were higher rates of PAP follow-up and PAP adherence among patients seen via face-to-face encounters occurring prior to the onset of the COVID-19 pandemic. While utilization of telehealth in our center did not result in improved outcomes, there may still be utility in offering telehealth to the sleep patient population. Additional studies are needed to identify effective interventions that can be implemented to improve rates of PAP follow-up and PAP adherence.

Support (If Any): There were higher rates of PAP follow-up and PAP adherence among patients seen via face-to-face encounters occurring prior to the onset of the COVID-19 pandemic. While utilization of telehealth in our center did not result in improved outcomes, there may still be utility in offering telehealth to the sleep patient population. Additional studies are needed to identify effective interventions that can be implemented to improve rates of PAP follow-up and PAP adherence.

0361

PENNPALS: AN INNOVATIVE, BIDIRECTIONAL TEXT MESSAGING SYSTEM USING PAP USAGE DATA TO INCREASE PATIENT ADHERENCE WITH PAP THERAPY

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Introduction: Cloud-based systems that collect PAP data provide patients and providers with near real-time usage information, but a system that identifies/intervenes with patients at risk of PAP non-adherence has not been available to date. The Penn PAP Automated Learning System (PennPALS) is an automated, bidirectional text messaging system that uses PAP data to initiate text messaging conversations to patients in a timely manner.

Methods: PennPALS was created using Way to Health, an evidence-based patient engagement platform, to leverage PAP data, such as daily average hours of use and time spent with a large mask leak, to identify and initiate automated text messages to help patients troubleshoot issues. Depending on their responses, patients were given a pre-defined recommendation via text or escalated to a