

current follow-up study is to evaluate the sleep pattern of the same swimmers after 2 years.

Methods: Using an open-label prospective approach, the study investigated swimmer's event time changes, total sleep time, daytime sleepiness, and other sleep measures after 2 years of the initial changes during the first study. 8 healthy swimmers on the Makos swim team filled follow-up questionnaires and participated in a 100-yard freestyle race. Descriptive statistics, frequency distributions, and correlation using SPSS 14.

Results: Eight (6F; 2M) of the initial nine seasonal teen swimmers participated (age 13-17). Four swimmers reported headaches and one reported sore throat in the morning. Three (37.5%) reported feeling sleepy during the day and 3 reported falling asleep when riding in a car. Two reported leg movements during the night. In two years after the initial study, 100-free race time significantly improved (65.01 ± 5.38 vs 59.32 ± 5.43 $p=0.003$), but the positive effect of ETST+WB on recorded sleep time was lost and returned to baseline. There was a clear trend, but no significant difference in total sleep time among the 3 groups: (initial $8:45 \pm 0:32$; after ETST+WB $9:17 \pm 0:32$; after 2 years $8:08 \pm 0:30$).

Conclusion: The improvement of total sleep time with weighted blankets and encouragement during the initial study correlated with improvement of 100 free race time in seasonal teen swimmers. This improvement in total sleep time was lost and returned back to baseline after 2 years follow up.

Support (If Any): The authors report no financial relationship with any company whose products are mentioned in this manuscript, or with companies of competing products. Participants will be able to keep SKY Grand activity trackers at the end of their participation.

0502

HARMONY IN THE SLEEP LAB: A FOCUS ON RECOGNITION OF HYPOVENTILATION AND DIRECT FEEDBACK IMPROVES QUALITY OF PEDIATRIC TITRATIONS

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Introduction: Over 350 pediatric polysomnogram titrations (T-PSGs) are performed each year at the Sleep Laboratory at Children's Hospital of Philadelphia in three locations by 24 different polysomnography technologists (PSGTs) on a diverse patient population, typically performed as outpatient procedures and occasionally at the bedside as inpatients. PSGTs are responsible for titration of continuous or bilevel positive airway pressure based on flow, work of breathing, arousals, and/or gas exchange. PSGTs have varying degrees of experience; thus, maintaining quality of T-PSGs is challenging. We hypothesized that a quality improvement (QI) approach to reviewing T-PSGs with interdisciplinary education and regular feedback would improve T-PSGs. Our goal was to have $\geq 80\%$ of titrations of optimal quality.

Methods: Each T-PSG record was reviewed by a sleep physician for optimal quality, defined as appropriate signal integrity, titration, and documentation to permit definitive interpretation. Exclusion: RAM cannula use, illness, or external signal interference. Titration QI (T-QI)

comments were reviewed by the sleep lab QI team bi-weekly to plan feedback. Improvement interventions for PSGTs included didactic education: lectures, presentations, and cases focusing on recognition of hypoventilation; direct feedback with teaching points by sleep physician and small group sessions with clinical supervisors to review areas for improvement; and communication of specific titration goals. Satisfaction surveys regarding recognition/titration for OSA/hypoventilation, transcutaneous CO₂ signal integrity, and documentation were administered to sleep physicians.

Results: From September 2020-November 2021, PSGT education included: 1 synchronous and 2 asynchronous didactic presentations; 1:1 review of didactics with each night PSGT (n=24); T-QI feedback (2/week); and small group review sessions (4/week). 408 titrations were completed; 42 (10.3%, 2.8/month) were excluded; 366 (89.7%, 24.4/month) were reviewed for T-QI. 54.8% [50,71%] were deemed optimal during the first three months (pre-intervention) vs. 80.1% [63,96%] during the intervention period. QI satisfaction survey showed improvement in 3 of 4 domains.

Conclusion: Quality of T-PSG is enhanced by QI review of each titration, highlighting teaching points and areas for improvement via direct feedback and small group review. Education and communication among physicians, supervisors and technologists are important to support development which can result in better titrations and satisfaction.

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0503

THE RELATIONSHIPS BETWEEN THE IMPACT OF COVID-19 PANDEMIC, PARENT INSOMNIA, INFANT TEMPERAMENT, AND INFANT SLEEP: A PATH ANALYSIS

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Introduction: Increased sleep problems in adults have been repeatedly reported during the COVID-19 pandemic. However, infant sleep was understudied. We aimed to examine the relationships between the impact of the COVID-19 pandemic, parent insomnia, infant temperament, and infant sleep during the COVID-19 pandemic.

Methods: Parents from the Phoenix metropolitan area with a full-term healthy infant (<1 year) were recruited through social media from 2/27/2021 to 8/7/2021. A sample of 70 parents (baby age 5.5 ± 3.5 mo; parental age: 31.7 ± 5.0 y) completed the COVID-19 Exposure and Family Impact Survey Part 2 (CEFIS-Part 2, range: 12-60), a measure of the impact of the COVID-19 pandemic on families with higher scores indicating greater negative impact/distress; the Brief Infant Sleep Questionnaire-Revised (BISQ-R, range: 0-100), with higher scores indicating better sleep quality, more positive sleep perception, and parent behaviors promoting healthy sleep; and the Insomnia Severity Index (ISI, range: 0-28, cutoff: 10). Infant temperament was assessed with the Infant Behavioral Questionnaire-Revised (IBQ-R), including the subscale Negative Affect. Path analyses were conducted based on the Transactional Model of Infant Sleep to identify the direct effect of CEFIS scores, and indirect effects of parent ISI scores and infant IBQ-R Negative Affect scores on BISQ-R scores, with z scores of all variables and infant age as a covariate.

Results: The parent sample was predominantly female (94.3%), identified as White (72.9%), had obtained a bachelor's degree or above (71.5%), was married or in a domestic partnership (98.6%), and had household incomes >