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## DEVELOPMENT OF PEDIATRIC OSA HEALTH COMMUNICATION MESSAGING FOR AND WITH PARENTS

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**Introduction:** Pediatric obstructive sleep apnea (OSA) is often undetected, due in part to gaps in parental awareness of OSA symptoms. To activate parents to talk to their child's provider about OSA symptoms, there is a need for effective OSA health communication messaging.

**Methods:** We developed a health communication message in the form of an infographic, designed to help parents recognize the link between nighttime and daytime OSA symptoms. The message encouraged parents who saw these symptoms in their child to speak with their child's provider. The infographic was iteratively reviewed, rated, and refined through a series of twelve virtual focus groups with three types of stakeholder: parents of children with OSA symptoms (n=24), primary care providers (n=9), and sleep medicine specialists (n=4). During groups, we elicited reactions and asked participants to rate various aspects of the message.

**Results:** Stakeholder feedback (semi-structured sessions and anonymous ratings) was elicited for the initial draft and two subsequent iterations of the message that incorporated prior feedback. Anonymous stakeholder ratings were measured on a scale from 1-5, with 5 denoting stronger endorsement of the construct. Parents rated the message positively for content (M=4.77; SD=0.44), literacy demand (M=4.92, SD=0.28), graphics/design (M=4.69, SD=0.63), and activation (M=4.77, SD=0.44). Sleep medicine providers perceived the message as accurate (M=5.0, SD=0) and primary care providers rated it as acceptable (M=4.67, SD=0.58) and feasible (M=4.33, SD=0.58) for display and dissemination in primary care settings.

**Conclusion:** We developed a pediatric OSA health communication message that was rated highly by parents, primary care providers, and sleep medicine specialists. Next steps are to disseminate and evaluate the impact of the message on pediatric OSA detection.

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## 0529

## AVERAGE VOLUME-ASSURED PRESSURE SUPPORT AS RESCUE THERAPY AFTER CPAP FAILURE IN PEDIATRIC OBSTRUCTIVE SLEEP APNEA

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**Introduction:** Average volume-assured pressure support with autotitrating EPAP (AVAPS-AE) is an automatically titrating mode of noninvasive ventilation (NIV) which provides a targeted tidal volume through adjustment of inspiratory pressures within a set range. In pediatric obstructive sleep apnea (OSA), adenotonsillectomy (AT) is often the first-line treatment and CPAP is often poorly tolerated as an alternative. We aimed to evaluate the efficacy of AVAPS as a potential option for children in whom CPAP titration is unsuccessful.

**Methods:** Retrospective review of records of children diagnosed with OSA with failed CPAP titration and in whom an in-laboratory AVAPS titration was performed.

**Results:** A total of 9 patients with OSA (8 male, age (95% CI) = 6.7 ± 2.6, BMI percentile (95% CI) = 81.0 ± 18.9) were identified. Of these patients, 6 had prior AT. All 9 patients had failed CPAP titration prior to AVAPS titration: 3 failed due to inability to control the apnea-hypopnea index (AHI, events/hour), 2 due to persistent hypercapnia, 2 due to treatment-emergent central sleep apneas, and 2 due to pressure intolerance. All 9 patients showed improvement in AHI following AVAPS titration (mean change = -17.9, 95% CI = 17.9 ± 9.5) as well as improvement in AHI from initial PSG to AVAPS titration (mean change = -42.5, 95% CI = 42.5 ± 24.6). 7 patients had reduction in total sleep time with oximetry recording below 90% (T<90) from CPAP to AVAPS titration (mean change = -4.7 minutes, 95% CI = 4.7 ± 14.7), while 8 patients had reduction in T<90 from initial PSG to AVAPS titration (mean change = -14.0 minutes, 95% CI = 14.0 ± 24.5). 7 patients had increase in REM sleep from CPAP to AVAPS titration (mean change = +15.9 minutes, 95% CI = 15.9 ± 18.3), while 6 patients had increase in REM sleep from initial PSG to AVAPS titration (mean change = +7.7 minutes, 95% CI = 7.7 ± 26.6).

**Conclusion:** In this case series of children with OSA and with failed CPAP titration, AVAPS is an effective treatment modality.

**Support (If Any):**