Methods: Measurements of apnea-hypopnea index (AHI) were available Pre-enrollment, Baseline (2 nights), Month 4 and Month 12/15. Except for Pre-enrollment, AHI values were calculated by an independent core laboratory from polysomnographic recordings. All subjects with complete data were included for analysis. AHI trajectories were constructed for early and late THN activation (Treatment[T], N=83, Month 1 and Control[C], N=45, Month 4, respectively) by computing median values. Confidence intervals were calculated by bootstrapping each median (N=30,000). Patient-reported outcome measures (PROMs) were treated similarly.
Results: AHI (Median (95% CI)) trajectories demonstrated a consistent pattern of pre-implant alignment (Pre-enrollment T:39.1 (36.0-45.0), C:38.0 (32.0-41.0); Baseline 1 T:36.1 (33.0-39.9), C:31.3 (27.2-38.6); Baseline 2 T:37.0 (34.3-41.0), C:35.2 (32.3-38.2)), divergence at the conclusion of the randomization period (Month 4 T:15.6 (11.9-25.3), C:30.6 (23.7-38.6)) and reconvergence following 11 months of treatment (Month 12/15 T:20.7 (16.0-26.4), C:18.1 (16.3-23.3)). Non-standardized Pre-enrollment AHI was slightly higher than Baseline values. Trajectories were similar for oxygen desaturation index (Baseline 1 T:35.3 (31.9-38.0),C:34.3 (27.5-40.3); Baseline 2 T:37.1 (33.4-39.3),C:36.8 (33.9-38.3); Month 4 T:19.5 (16.2-28.5), C:33.8 (25.4-41.1); Month 12/15 T:19.5 (16.0-25.6), C:19.7 (16.3-26.0)), the Epworth Sleepiness Scale (Baseline T:11.0 (10.0-13.0),C:11.5 (8.5-14.0); Month 4 T:6.0 (5.0-7.0), C:11.5 (8.0-12.5); Month 12/15 T:6.0 (4.0-7.0), C:5.5 (4.5-6.0)), the Functional Outcomes of Sleep Questionnaire (Baseline T:15.3 (14.0-16.5),C:14.7 (13.3-16.6); Month 4 T:18.3 (17.7-18.8), C:16.7 (14.9-17.7); Month 12/15 T:18.8 (18.3-19.3), C:18.5 (17.5-19.5)) and the Snore Outcomes Survey (Baseline T:26.6 (21.9-31.3),C:21.9 (18.8-31.3); Month 4 T:60.9 (56.3-67.9), C:29.7 (23.4-42.9); Month 12/15 T:62.5 (59.4-68.8), C:68.8 (62.5-71.9)).
Conclusion: Group trajectories of sleep-disordered breathing and PROMs further demonstrate the robust effects of THN in patients with moderate to severe OSA and the value of parallel-arm RCTs. Similar results may be expected in the ongoing OSPREY confirmatory trial of THN.
Support (If Any): LivaNova

0767

CLINICAL IMPLEMENTATION OF A PROGRAM TO IMPROVE PAP ACCEPTANCE AND ADHERENCE FOR SLEEP DISORDERED BREATHING AMONG VETERANS: PRELIMINARY RESULTS

Monica Kelly[1], Isabel Moghtaderi[1], Ruoyan Zhu[2], Nathaniel Yuan[1], Kayvon Sarrami[1], Jay Patel[1], Mahtab Moshtagh-Sisan[1], Cathy Alessi[1], Michelle Zeidler[1]
VA Greater Los Angeles [1] University of Arizona, Phoenix School of Medicine [2]

Introduction: Positive airway pressure (PAP) is the gold standard in treating sleep disordered breathing (SDB); however, consistent use of this therapy has challenges such as comfort and equipment optimization. Despite various educational, technological, psychosocial and pharmacological strategies, the average adherence rate of 34% have changed very little over the past 20 years. A recent study of 3013 US veterans determined a baseline average PAP adherence rate of 50%. We developed and implemented a novel PAP readiness education program (PREP) for veterans newly diagnosed with SDB in a Veterans Administration sleep clinic to promote greater PAP acceptance and adherence.
Methods: Patients (N=63, Mean age 62.2±12.4 years) with newly diagnosed SDB were offered a 1-hour telehealth session prior to initiating PAP therapy that included psychoeducation about SDB and PAP treatment expectations, with troubleshooting techniques (i.e. scheduled practice, mindfulness). A 1-week follow-up call was conducted to communicate PAP data and address treatment barriers. PAP use reports were downloaded and analyzed at 1-7 days (first week), 1-30 days (first month), and 31-60 days (60-days) post-PAP initiation. PAP acceptance was defined as ≥1 day of use and adherence as ≥4 hours of use at each timepoint.
Results: Among 63 Veterans offered PREP, 66.6% (n=42) participated in PREP. Among participants, acceptance of PAP was as follows: 57.1% used ≥1 day in the first week, 64.3% used ≥1 day in the first month, and 45.2% used ≥1 day at 60-days post-PAP initiation. Percent of days with use ≥4 hours was 28.9% ±30.4 in the first week and 24.9% ±30.0 in the first month. PAP adherence at 60-days post-PAP initiation was 34.3% ±38.5 at 60-days.
Conclusion: Implementation of a 1-session plus 1-week follow-up call PAP readiness education program within a sleep medicine clinic was well received by patients and resulted in PAP acceptance by 2/3 of veterans in the first month post-PAP initiation. PAP adherence results may have reflected the impact of a nationwide PAP device recall that occurred during the study period. Further work is needed to test this intervention in a clinical population and to identify predictors of PAP acceptance and adherence in real-world clinical settings.
Support (If Any): AASM Foundation #211-FP-19, VAGLAHS GRECC and CSHIIP

0768

A MILLION DREAMS: IMPROVING COMPLIANCE AND TREATMENT OF OBSTRUCTIVE SLEEP APNEA VIA UPPER AIRWAY STIMULATION THERAPY. REAL-WORLD OUTCOMES.

Deborah Goss[1], Fariborz Ashtyani[1], Laura Ashtyani[1], Maria Martinez[2], Lauri Leadley[2], Patricia Patterson[3], David Moore[3], Damien Stevens[4], Kevin Faber[5], Kent Lee[6], Matheus Araujo[7]
Hackensack Sleep and Pulmonary Center [1] Valley Sleep Center [2] University of Alabama [3] University of Kansas [4] Sanford Health Sleep Medicine [5] Inspire Medical Systems [6] University of Minnesota [7]

Introduction: Patient compliance to continuous positive airway pressure (CPAP) has been about 50% at 4-years despite numerous improvements in mask design, flow algorithms, education, and monitoring software. Compliance, however, is not equivalent to efficacy. Upper Airway Stimulation (UAS) is an alternative for select CPAP intolerant patients. We used a patient management platform to track UAS compliance and efficacy.
Methods: Anonymized, aggregated device usage and outcomes data was analyzed from a HIPAA compliant patient management platform (Inspire Cloud, Inspire Medical Systems, Golden Valley MN) through October 2021. Demographic data is not collected. We used this database to understand therapy outcomes. Data are presented as mean and standard deviation, unless otherwise noted.
Results: There were 1.74 million usage nights for 5,709 patients across 550 clinics. Patients increased median stimulation amplitude from 1.4 to 2.2 volts between activation to 90 days after activation. Typical therapy was activated at 11:44pm, and turned off at 5:51am, with one 13-minute pause per night, and therapy was on 89% of nights.Usage was 5.5 ± 1.8 hours per nights overall, and 6.0 ± 1.9 hours per night used. At 90 days, 90% of patients had usage > 4 hours per nights overall, and 96% had usage > 4 hours per night used.Average pre-implant AHI was reduced from 35 ± 15 events/hour (n=2760), to 9 ± 12 (n=1609) after therapy. ESS was reduced from 11 ± 5 (n=1254) to 7 ± 5 (n=1164).