

Methods: Our multidisciplinary team used mixed-methods to develop and implement a sleep medicine neighborhood, an extension of the patient-centered medical home, which provides the infrastructure to coordinate care between PCPs, specialists, and other care providers. We then conducted a controlled, clustered trial within a large hospital-based primary clinic to assess the effectiveness of the neighborhood on processes of care.

Results: Prior to intervention, PCPs ordered 122 diagnostic sleep studies (both at-home and in-lab) in control clinics and 131 patients in intervention clinics over 12 months. During the 12-month intervention period, 179 studies were ordered in control clinics and 209 in intervention clinics. Testing was completed in 48.6% of patients from control clinics vs. 56.0% of patients from intervention clinics ($p=0.15$). Of those who completed sleep testing, median time from order to completion was 57 days vs. 48 days ($p=0.048$) in control vs. intervention clinics, respectively. Among patients diagnosed with OSA, evaluation by a sleep specialist occurred in 40.5% vs. 77.7% ($p<0.001$), and continuous positive airway pressure (CPAP) was prescribed in 54.2% vs. 72.9% ($p=0.009$) of patients originating from control vs. intervention clinics. Among those prescribed CPAP, the proportion initiating CPAP was 53.3% vs. 61.4% ($p=0.03$) in control vs intervention clinics.

Conclusion: Patients suspected of having OSA commonly experience delays in care during the complex and fragmented processes of diagnostic testing and CPAP initiation. A collaborative care program aimed at coordinating care between PCPs and sleep specialists can improve the timeliness of diagnosing OSA and ability to implement CPAP therapy, thereby improving the quality of OSA care.

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OUTCOMES IN SLEEP APNEA PATIENTS WITH NOVEL ECONSULT REFERRAL PATHWAY

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Introduction: Improved efficiency of OSA has been shown to lead to decreased risk of cardiovascular disease processes. Access to our academic sleep medicine clinic is limited, with an average wait time of almost three months for new in-person patient visits. In 2017, an asynchronous electronic consult (eConsult) process was developed that allows a patient to be seen by their primary care provider, who can then request an electronic health record (EHR)-based internal referral. The chart is then reviewed by the sleep physician, who either makes recommendations within the EHR or schedules an in-person visit. Utilization of eConsults in other specialties has been shown to improve wait times to access specialist services as well as improved communication between primary care providers and specialists, but no study to date has examined sleep medicine or neurology.

Methods: A retrospective review was conducted on all patients referred to the sleep medicine clinic via the eConsult program from January to October 2017. Data regarding time from eConsult request to sleep provider response was extracted from our EHR. The average time from PCP referral to appointment in the neurology sleep clinic was compared to the average time from PCP referral to the response time by eConsult by the sleep medicine physician. Baseline blood pressure, weight, hospital admission status were compared to final status.

Results: PCPs submitted 142 eConsults to the sleep medicine service from January 2017 through October 2017. The median specialist response time was 2 days versus the average consult response time of 3 months.

Conclusion: PCPs submitted 142 eConsults to the sleep medicine service from January 2017 through October 2017. The median specialist

response time was 2 days versus the average consult response time of 3 months.

Support (If Any): none.

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INTERRATER RELIABILITY IN TELEMEDICINE VS. IN-PERSON EVALUATIONS FOR OBSTRUCTIVE SLEEP APNEA

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Introduction: Telemedicine holds great promise to change health care delivery for all of clinical medicine. There is a paucity of sleep medicine providers nationwide, and online consultations have the promise of reaching remote populations who have limited access to these specialists. Technology exists to conduct telemedicine consultation for patients with obstructive sleep apnea (OSA), but the accuracy of telemedicine evaluations is unknown.

Methods: The clinical trial is a prospective, researcher-randomized and blinded comparison study. The study goal is to determine how telemedicine evaluation compares to in-person evaluation in identifying risk for sleep disordered breathing. The primary objective is to measure the interrater reliability between a telemedicine and traditional clinician in judging pre-test probability for OSA. Goal recruitment is 90 subjects based on power calculations for substantial or excellent interrater reliability based on the true kappa statistic. Three board-certified/eligible sleep specialists recruit subjects from serial referrals in a university setting. The in-person researcher conducts a record review, interview, and upper-airway examination, and the randomized telemedicine researcher does so online. Clinical impressions of pre-test probability (low, moderate, or high) for significant sleep apnea are compared, as well as impressions on home sleep testing. Subject and provider satisfaction are also measured.

Results: 45 subjects have entered the study, and 24 have completed the entire protocol. Based on a sample size of 17 home sleep-study completers, we calculate an interrater agreement (kappa) value of 0.577 (standard error 0.21, 95% confidence interval 0.17–0.98) in determining the severity of OSA based on home sleep testing.

Conclusion: These results demonstrate a moderate agreement between in-person and telemedicine providers in determining the severity of sleep apnea on home testing in this sample. This suggests reasonable concordance in developing evaluation/management plans in-person versus online. Technical concerns as well as individual provider/researcher differences and a small sample size may account for differences in this outcome measure. Outcome studies in subjects with OSA managed with telemedicine are needed to develop reliable clinical telemedicine practices.

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PATIENT SATISFACTION AND PREFERENCES REGARDING A TELEMEDICINE EVALUATION FOR OBSTRUCTIVE SLEEP APNEA - AN UPDATE FOR 2017

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