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Improving Provider AASM Guideline Adherence for Adult Obstructive Sleep Apnea

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ABSTRACT

With an estimated 10% of the United States adult population impacted by obstructive sleep apnea (OSA), a protocol was created to increase clinical provider adherence to the American Academy of Sleep Medicine's Clinical Guidelines for OSA. Clinic provider responsibilities included screening patients ≥ 18 years old using the Epworth Sleepiness Scale (ESS), referring patients scoring > 9 for a sleep study, educating patients diagnosed with OSA regarding disease and treatment options, prescribing treatment and short-term follow-up. After providing education and resources, 72% of patients ≥ 18 years of age were screened and 19 patients with a positive screen and OSA diagnosis had reduced OSA severity after treatment.

Keywords: CPAP, guideline adherence, obstructive sleep apnea, OSA, sleeping disorder

Obstructive sleep apnea (OSA) is a common condition that affects a significant portion of the population. Although most people have heard of OSA, misconceptions exist among both patients and providers. Providers and patients need to be educated on the implications of undiagnosed OSA, including its associated signs, symptoms, and comorbidities (Figure 1).

The American Academy of Sleep Medicine (AASM) defines OSA as "the occurrence of daytime sleepiness, loud snoring, witnessed breathing interruptions, or awakenings due to gasping or choking in the presence of at least 5 obstructive respiratory events (apneas, hypopneas, or respiratory effort–related arousals) per hour of sleep."[1(p263)] An apnea episode is a pause in breathing during sleep (usually > 10 seconds in adults) and hypopnea is a substantially reduced or ineffective breath.[1] Through identification, primary care providers (PCPs) have the potential to make a difference in the lives of patients at risk for OSA.

LITERATURE

Due to lack of screening using both a thorough history and physical exam and screening protocol and the lack of provider knowledge of OSA, many patients in primary care are not being assessed for OSA, despite the number of risk factors present.[2] Multiple comorbidities, such as refractory hypertension, mood disorders, obesity, gastroesophageal reflux disease, diabetes, and fatigue, have been shown to increase the likelihood a patient has OSA.[2] As the number of comorbidities increases, do does the patient's risk for OSA.[2] The side effects can be both short and long term, with a lifetime of untreated OSA that can lead to forms of dementia and memory loss.[3]

The AASM guidelines stress the importance of a thorough history and physical to screen for sleep-related disorders, including excessive daytime sleepiness, as measured by the Epworth Sleepiness Scale (ESS), snoring, and other comorbid conditions.[2] The ESS measures the likelihood that a patient will doze off during 8 different situations, with an ESS score > 9 representing a positive screen for OSA.[2]

Patients with a positive screen should be referred for sleep study with OSA diagnosis based on the individual's apnea/hypopnea index (AHI).[2] OSA is classified as none (AHI < 5), mild (AHI of 5-15), moderate (AHI of 16-30), or severe (AHI > 30).[2]

Figure 1. Obstructive sleep apnea signs, symptoms, and comorbidities.

After OSA diagnosis is confirmed, patients can be managed by their PCP or a sleep specialist. Although both disciplines have comparable success with treatment of OSA, patient satisfaction is higher when managed by a PCP.[4] Continuous positive airway pressure (CPAP) has been proven to be the most effective form of treatment for OSA, offering the largest reduction in OSA signs and symptoms.[5]

There is a high risk for noncompliance with use of CPAP.[6] The risk for noncompliance is usually determined within the first few weeks of CPAP initiation, making short-term follow-up essential.[6] Because OSA is a chronic condition, patients should be reevaluated within 3-6 months, and then on a yearly basis.[6] Although various studies have shown the many aspects of OSA, there have been no studies or improvement projects producing an effective protocol for screening, diagnosis, treatment, and management of the condition.

METHODS

Design and Setting

This evidence-based quality improvement project was initiated at a small family practice clinic in the south-central US. Every patient $\geq$ 18 years old seen in the clinic during the first 4 weeks of the study participated in the project. The project was approved by the institutional review board as an exempt review.

Preintervention

A preintervention records review demonstrated that 91% of the patients had diagnoses placing them at