

Can One Question Increase Identification Of Adult Patients With Sleep Apnea?



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Background

Obstructive Sleep Apnea (OSA) is a common, chronic disorder that disrupts breathing during sleep. OSA may affect up to 170 million people in the Americas with an estimated 80% of those undiagnosed.¹ The effects of fragmented sleep on daytime fatigue and sleepiness are widely recognized;² with other common sequelae to include hypertension, cardiovascular disease, longer hospitalizations, higher health care cost, higher rates of injury and increased rates of motor vehicle collisions. Like much of America, our patient population has a high prevalence of obesity and hypertension as well as other comorbidities associated with obstructive sleep apnea.³ Because routine screening questionnaires such as Epworth Sleepiness Scale and STOP-Bang are time consuming, they are often not completed. Our project sought to evaluate whether a quick, one-question intake form would increase our testing rate, leading to an increase in diagnoses.

Our Question

In adults over the age of 18, can a one-question survey increase identification of OSA?

Methods

During the period of August 1, 2020 to October 31, 2020, we provided a one-question intake form to our patients that asked, "Do you snore?" If the patient circled "Yes" and they were not currently being treated for OSA, physicians would further discuss symptomology with patient as they deemed appropriate. The intake form was to be given to all adult patients who presented for non-procedural, routine visits. We then compared the number of sleep study referrals ordered from this time period to the number ordered during the same time period in 2019.

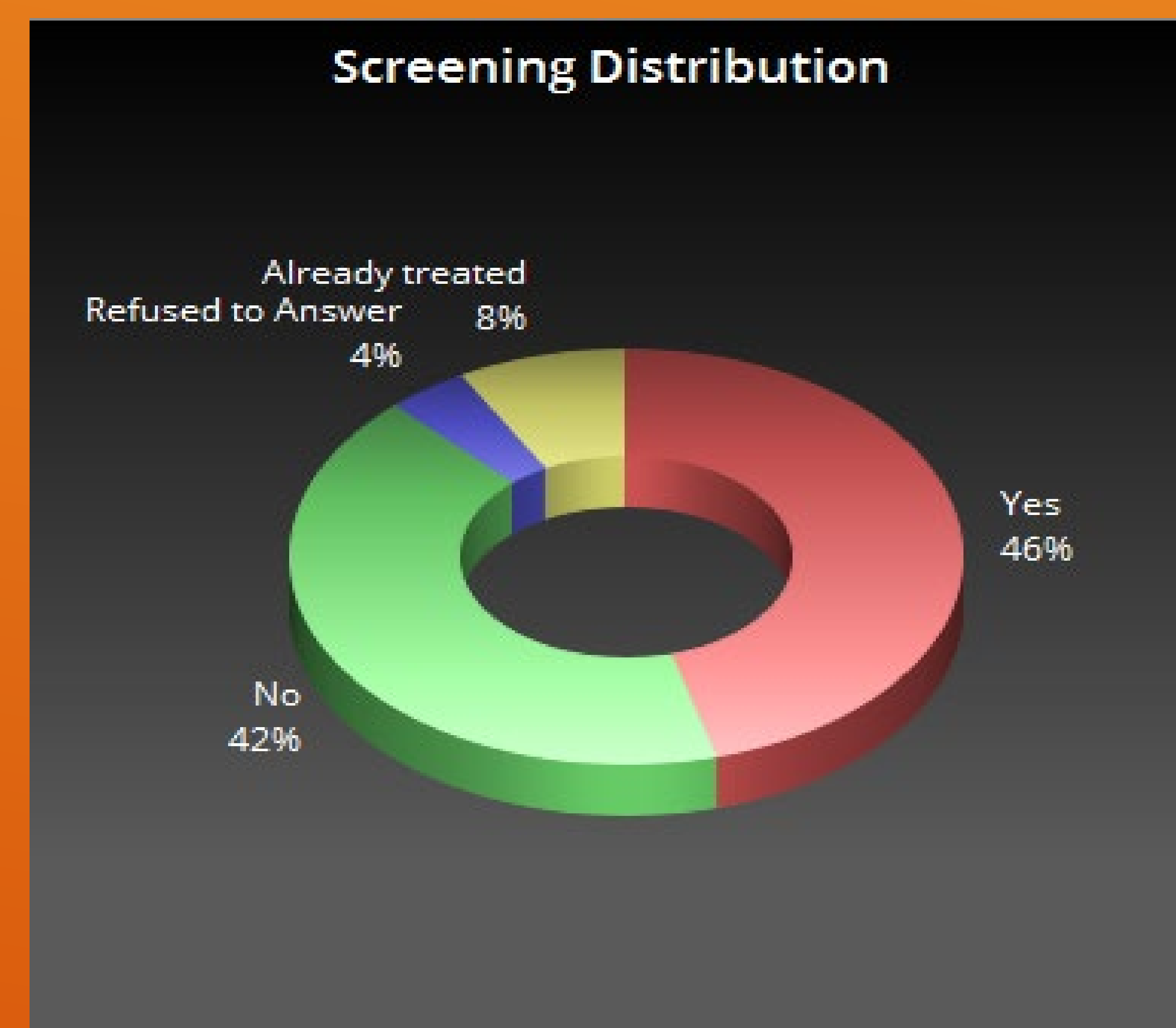


Figure 1. Distribution of screening responses

Resources

1. Malhotra, A. *Estimated Prevalence of OSA in the Americas Stands at 170 Million*. *Sleep*. June 9, 2019.
2. Semelka, *Diagnosis and Treatment of Obstructive Sleep Apnea in Adults*. <http://www.affp.org/aft>.
3. Gonzaga, C. *Obstructive Sleep Apnea, Hypertension, and Cardiovascular Diseases*. *Journal of Human Hypertension*. www.nature.com/jnh 2015. 29 pp 705-712.
4. Hong-po, C. *Obstructive Sleep Apnea Treatment in Adults*. *Wiley Medical Sciences*. DOI: 10.1002/9781118194111.ch6 June 2019.

Results

From August 1, 2020-October 31, 2020, 304 patients were given the one-question screening, "Do you snore?". Of those screened, 46% (139) reported snoring, 42% (128) denied snoring, 4% (13) had no response. Eight percent (24) reported snoring and were already being treated for OSA. During this time period, the number of sleep study referrals ordered was 9; during the same time period 1 year ago, the number of sleep study referrals ordered was just 3. Our number needed to screen was 38.

Conclusions and Next Steps

Using our one-question screening, the number of referrals increased when compared to the previous year. We believe that using this method will identify more patients with OSA. Further study needs to be completed as to whether those captured with this form actually have sleep apnea.

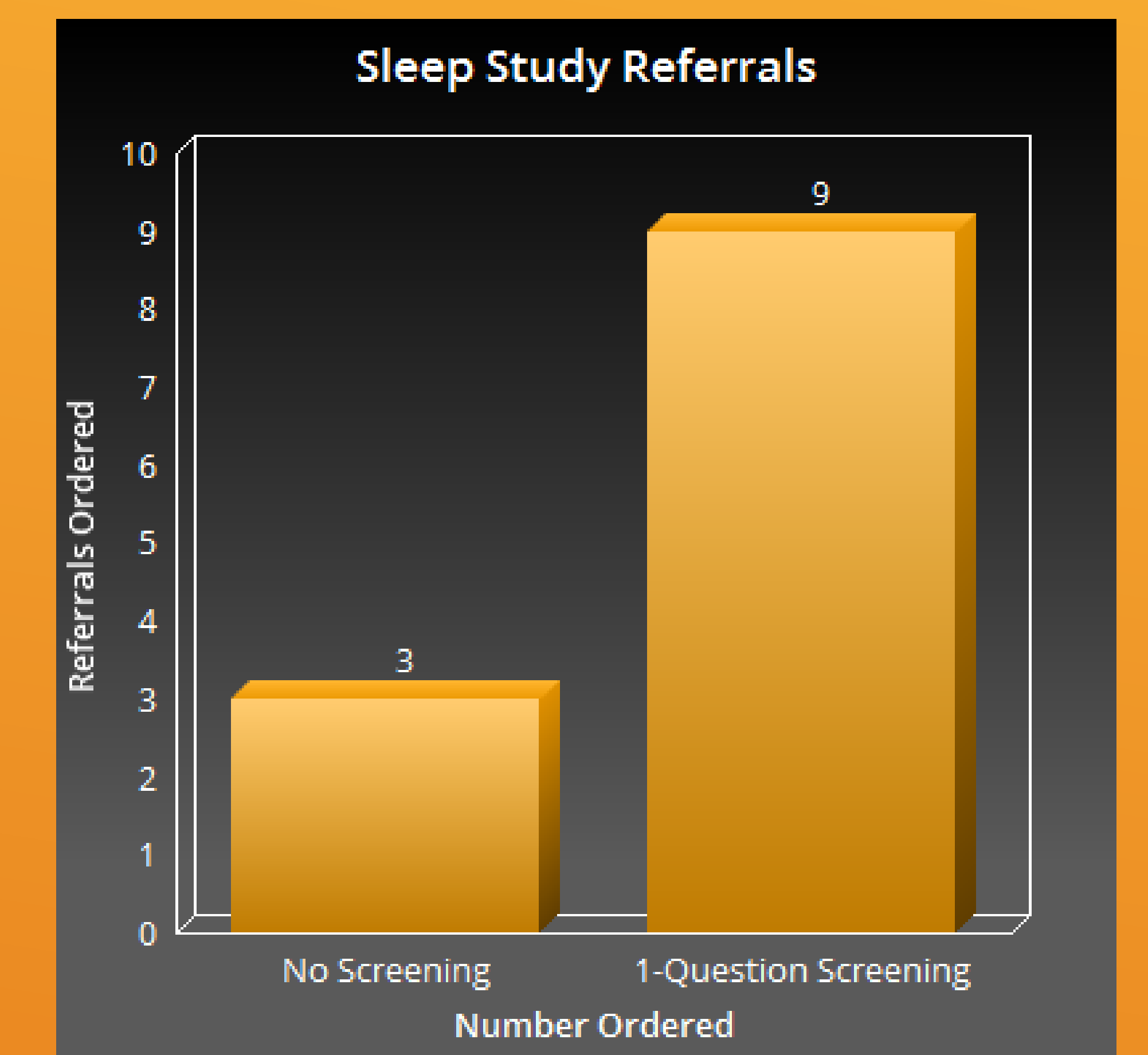


Figure 2. Referrals ordered

Reflections and Limitations

This project took place during the COVID-19 pandemic when many of our visits were performed on telehealth platforms, which made a full sleep H&P impossible. Our hospital's sleep lab is closed indefinitely as it is being used as our COVID unit; while we may refer patients for sleep studies, patients will not be scheduled for several months. This may have reduced the number of studies ordered as physicians were aware that the test would not take place soon. An additional area for study will be the optimal interval for using the intake form. This project did highlight the need for additional training in recognizing sleep apnea. The authors found that sleep studies are under-ordered in our clinic as evidenced by the low numbers both before and after our intervention. Given the surprisingly large number of patients found to report snoring, it makes one question if this is correlated to the population being Native American or if this finding would be comparable with other populations with similar average BMI.