

Quality Practice Improvement: Identifying and preventing delay of Sleep Study testing in outpatient primary care patient population



Ali Baher, DO FM PGY-3

Abstract

Quality Practice Improvement (QPI) to ensure optimization of the ordering process for diagnostic sleep study for Obstructive Sleep Apnea (OSA) within Inspira Health Network (IHN) primary care outpatient setting. Review of the ordering process for diagnostic sleep study within IHN revealed the following elements are required to schedule sleep study testing: office visit note with symptoms of sleep apnea discussed, physician order form for sleep study, and completed note faxed to Inspira Sleep Center. Audits of 14 patient charts which clinicians identified as having risk factors for OSA were reviewed to identify areas of improvement in the sleep study ordering process. Elements analyzed from chart audits examined for delays based on date of initial clinical encounter compared to: the date of office visit note completion, date of sleep study order, date of sleep center request for physician note, and date of completed note faxed to Inspira Sleep Center. Secondary outcome measures involved individualized qualitative audit from the date of sleep study completion as compared to the date of initial clinical encounter in order to identify for any trend elements towards delay of obtaining sleep study which revealed patient non-compliance in obtaining sleep study as a major contributing factor for delay in testing. The main target goal of this QPI was to ensure clinician notes/orders were adequately completed as a fundamental part of the process of obtaining sleep study testing, and remained non-contributory in the process of obtaining sleep diagnostic testing for OSA. Review of elements audited indeed revealed physician note completion was non-contributory towards any delay for obtaining sleep study testing for OSA. Audit did reveal a lack of utilization of standardized approach towards the discussion of risk factors discussed for OSA in the office visit note. This QPI hopes to make recommendations based on current AASM guidelines for OSA risk factor screening and implementation of such via the utility of EMR quick phrases for clinician note completion.

Objectives

- Ensure physicians complete clinical encounter note and sleep study order same day as clinical encounter to prevent diagnostic testing delay.
- Ensure Clinicians are using adequate screening measures for OSA
- Ensure utilization of EMR in optimal manner to reduce burden of documentation and potential for delay in scheduling of diagnostic testing
- Qualitative audit for trend elements causing delay after sleep study completion order/testing

Methodology

- ❖ Review of patient charts at random in an outpatient primary care IHN affiliate group using Cerner EMR identified 14 adult patients with documented concern for OSA in clinical encounter note.
- ❖ Audit of the above 14 charts analyzed date of clinical encounter in the following manner to identify for delays in obtaining sleep study:
 - EMR timestamp date of clinical note completed as compared to start date of initial clinical encounter.
 - EMR timestamp date of sleep study order as compared to start date of initial clinical encounter.
 - EMR timestamp documentation of sleep center request for clinical note as compared to start date of initial clinical encounter.
 - EMR timestamp documentation of clinical notes faxed to sleep center as compared to start date of initial clinical encounter.
 - EMR timestamp date of completed sleep study compared to start date of initial encounter.
 - ◆ Retrospective qualitative audit of each of the 14 patient charts after sleep study completion in order to identify any secondary outcome measure delay trend: revealed patient non-compliance with sleep study order.

Results

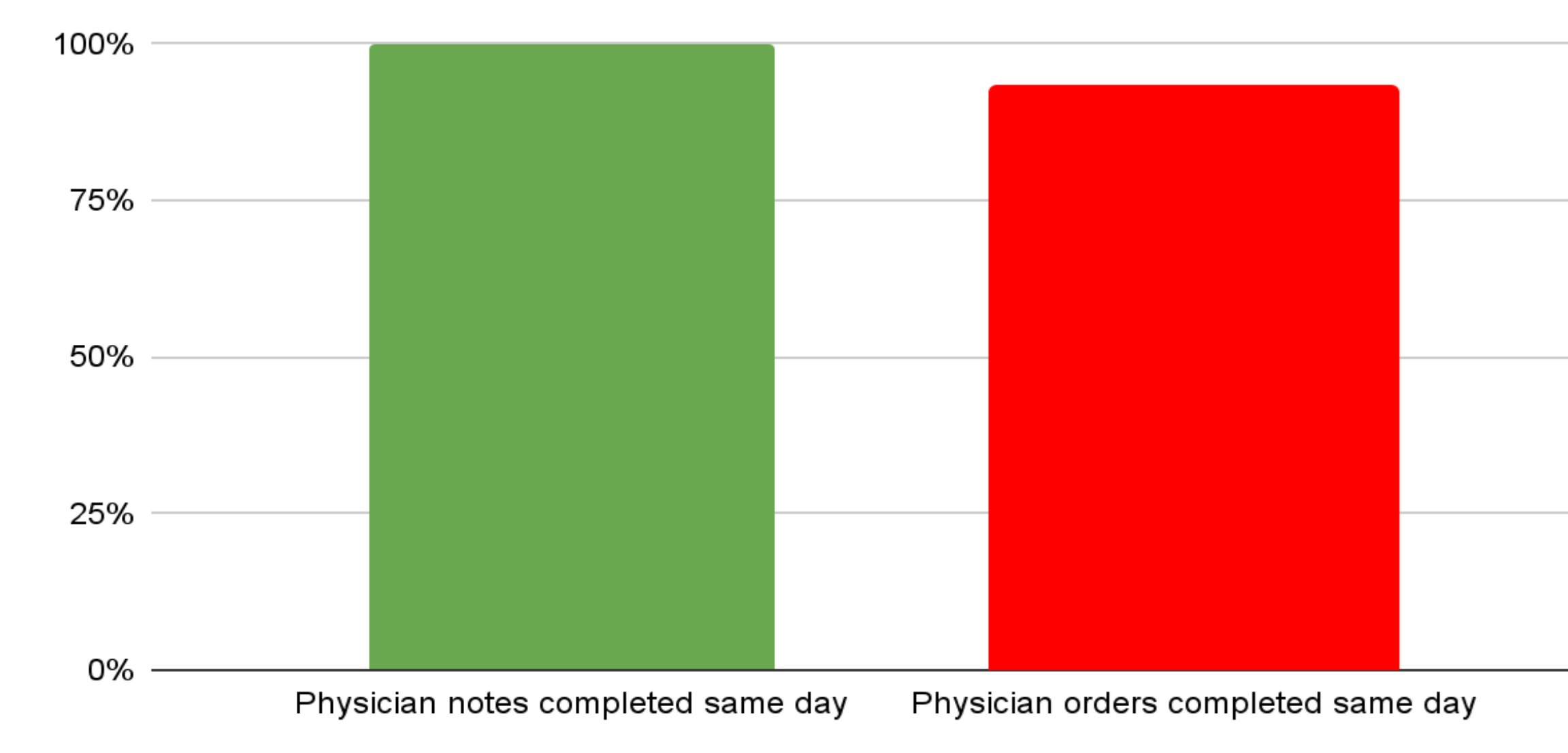
14 Adult patients in the IHN outpatient primary care physician office were chosen at random after retrospective review of their EMR records revealed that they were identified by their clinicians as having concern for OSA in their clinical encounter note. To prevent any conflict of ethical research patient ages and genders are hidden. The length of retrospective review was from 8 months to 16 months varying per individual case. 13 out of 14 patients identified as concern for OSA had accompanying sleep study order.. 1 out of 14 patients was counseled for risk factors for OSA, and the patient declined sleep study opting for clinical observation and weight loss. Out of the 13 sleep studies that were ordered chart review presented in data table below showed that all clinical encounter notes were completed same day by the clinicians causing no delay in sleep study an ideal primary outcome measure. However, 1 out of 13 sleep studies were delayed by the clinician forgetting to order the sleep study causing significant delay, which was rectified in subsequent encounter. Secondary outcome measure revealed that patient non-compliance with obtaining sleep study order was the main factor for 4 out of 13 patients who did not complete sleep study as ordered. Each individual non-compliance case showed a heterogeneous reasoning for non-compliance, and there was no common denominator noted for non-compliance. Out of the 10 patients who did complete sleep study as ordered, 9 out of 10 were diagnosed with OSA by sleep study. 1 out of 10 patients who did obtain sleep study, and was not diagnosed with OSA was noted by both sleep study report and subsequent encounter with primary physician to have not tolerated sleep study ending it early. Sleep study was reordered for same patient who was agreeable to attempt sleep study after counseling by primary, and is pending. The results of this QPI revealed that primary care clinician notes were not a factor in delay of patient's obtaining sleep study, as all clinical encounter notes were adequately completed same day and led to no rejection by insurance providers. However, 1 out of 13 clinical encounters with primary care led to significant delay due to reason of redundant sleep study order form not being completed. Review of all cases revealed that primary care encounter notes were heterogeneous in documentation and did not adhere to any single form of identifying patients as at risk for OSA. Furthermore, review of sleep study order form revealed that completion or lack of completion beyond placing the order form did not delay sleep study or lead to insurance rejection for scheduling sleep study. Concluding that sleep study order form which has extensive request for information may be redundant and potentially an area of improvement to limit data requested in order to place sleep study.

Patient#	Clinical encounter note completed	Sleep Study ordered	Request for clinical note	Notes faxed	Sleep study complete	Misc. trend
1	0 days	0 days	8 days	22 days	215 days	patient delay in f/u
2	0 days	0 days	n/a	3 days	43 days	no issues
3	0 days	0 days	3 days	5 days	46 days	no issues
4	0 days	0 days	2 days	2 days	31 days	no issues
5	0 days	4 days	65 days	70 days	171 days	patient did not f/u
6	0 days	0 days	n/a	n/a	16 days	PCP office prior auth
7	0 days	0 days	1 day	2 days	n/a	self pay unable to afford
8	0 days	n/a	n/a	n/a	n/a	clinical observation
9	0 days	0 days	2 days	6 days	n/a	patient did not f/u
10	0 days	0 days	5 days	5 days	n/a	patient did not f/u
11	0 days	0 days	2 days	2 days	19 days	no issues
12	0 days	0 days	1 day	4 days	156 days	patient delay in f/u
13	0 days	0 days	8 days	8 days	49 days	no issues
14	0 days	0 days	1 day	2 days	6 days	no issues

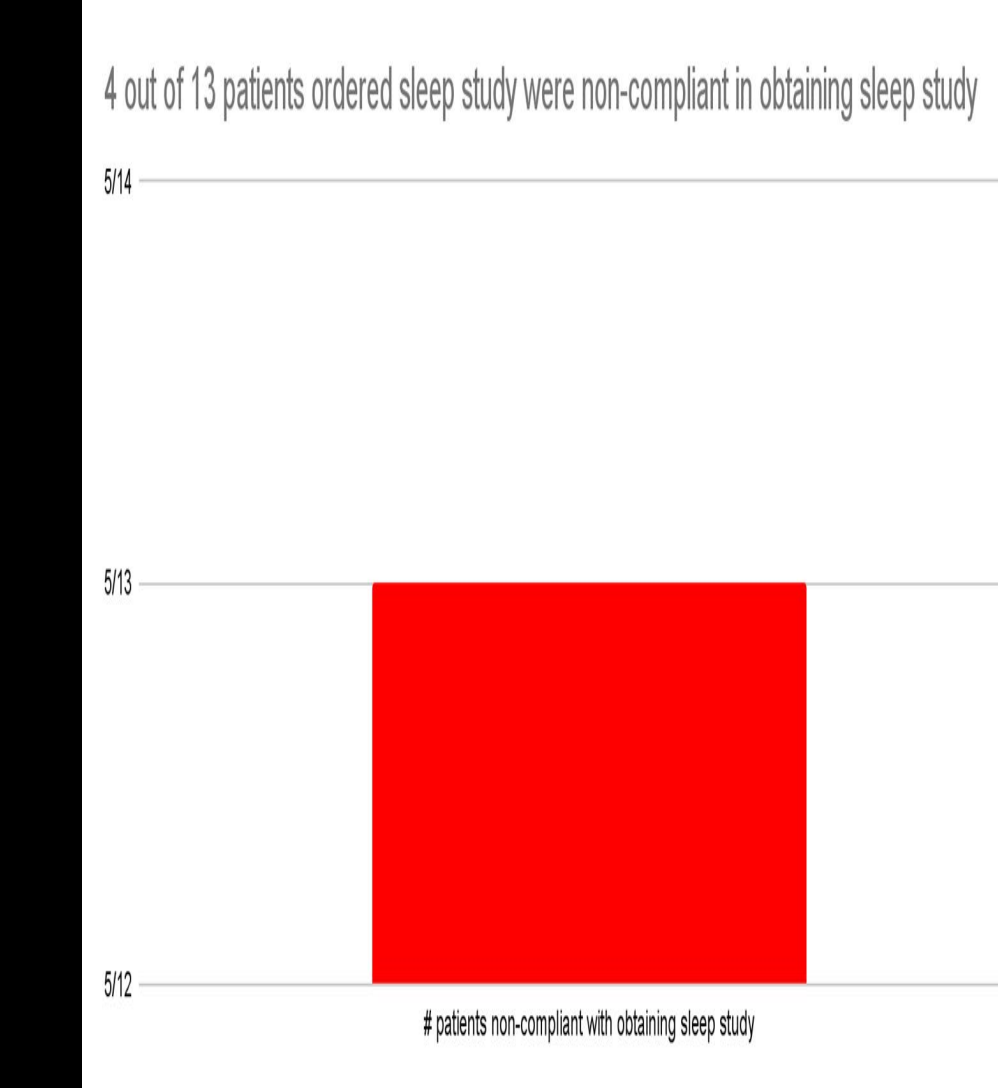
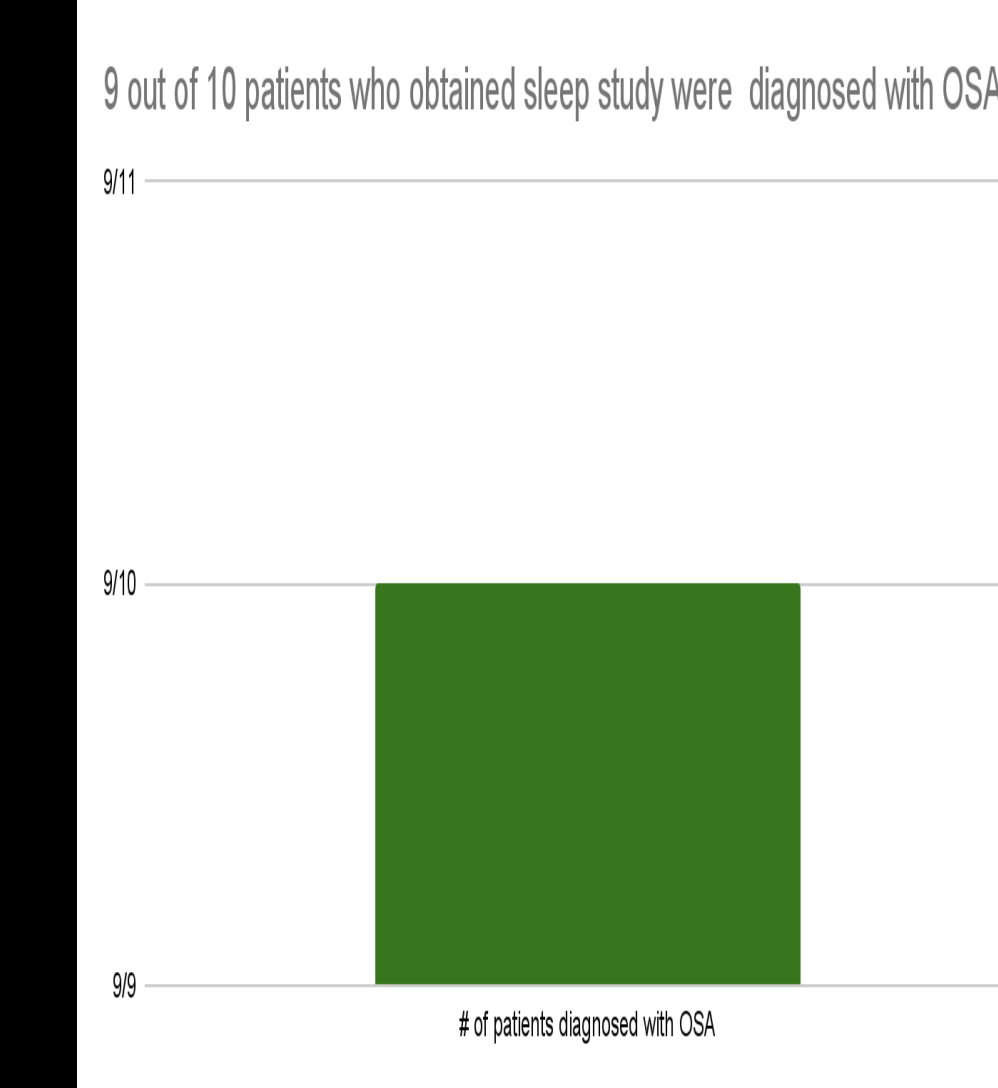
*Number of days from date of initial clinical encounter

Primary Outcome Measures

14/14 notes completed same day as clinical encounter only 1 encounter had missed sleep study order form same day.

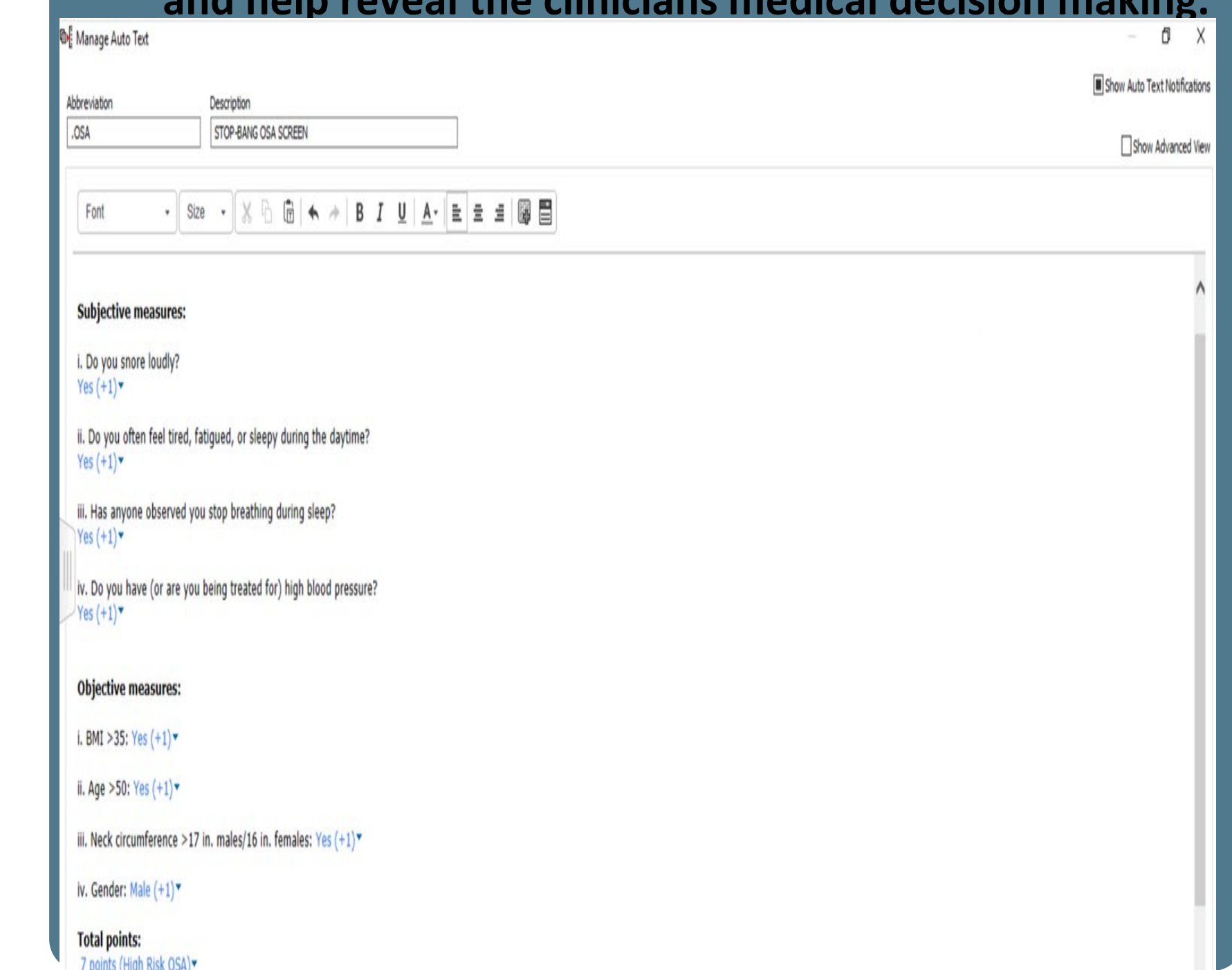


Secondary Outcome Measures



Discussion

Per the AASM: Obstructive sleep apnea (OSA) is a potentially lethal disease that increases the risk of numerous health problems, including cardiovascular disease. Patients with OSA are diagnosed and treated with either positive airway pressure (PAP) or an alternative treatment can experience improvements in their sleep quality, heart health and overall well-being. It is imperative for primary care providers and other health professionals to identify patients with symptoms of OSA. Inspira Health Network acknowledges the above endorsed statements from the AASM and openly broadcasts to our patient network that their physicians may refer directly in or to a specialist to conduct a sleep apnea test. The AASM endorses patient in high risk groups be screened using a validated OSA questionnaire such as STOP-BANG criteria. This QPI revealed the clinical acumen of our primary care providers in detecting OSA to be remarkably precise as the previous results revealed that 9 out of 9 patients who completed sleep study in entirety did indeed have OSA. However, there is room for improvement in that utilizing a validated OSA questionnaire in clinical encounter for suspicion of OSA should be encouraged. Fortunately, Cerner EMR enables for quick phrases which all IHN providers are trained in. Using the advantage of quick phrase as demonstrated below will aid in the diagnosis of OSA and help reveal the clinicians medical decision making.



Conclusion

- ★ Based off this small sample review IHN primary care affiliates are adequately ordering and diagnosing OSA.
- ★ An area of potential improvement is incorporating AASM recommended validated OSA questionnaire through optimizing EMR quick phrases.
- ★ Ordering form redundancy is a potential for delay in sleep study which should focus further review

References

Aurora RN, Quan SF. Quality measure for screening for adult obstructive sleep apnea by primary care physicians. J Clin Sleep Med 2016;12(8):1185-1187.
Adopted by the AASM Board of Directors: August 18, 2017