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A quality improvement project to reduce the wait time for initial appointment in an urban outpatient sleep center

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Background

- Weaver TE et al showed in 1997 that the pattern of CPAP utilization is established as early as day 4 of CPAP use.
- According to American Academy of Sleep Medicine, patients should be followed up in the first few weeks to establish utilization pattern and provide remediation if needed
- So until 2015, patients were followed up in the sleep clinic within 1 week after the sleep study
- But this lead to multiple face to face patient- physician contacts which in turn

  -increases health care cost

  -patient inconvenience

  -increase wait time for scheduling new patients

Project aim

In this study we aimed to see if replacing one face to face follow up visit after sleep study with a phone call by a trained office staff will

-decrease the total number of follow up office visits, thus decreasing health care cost

-increase the number of new patients seen during the 6 month follow up period

-Did not decrease patient compliance.

Methods

- retrospective chart review.
- Inclusion criteria-

  Patients who were prescribed a CPAP between January and February of 2015 and

  between January and February of 2016 by a single board certified sleep physician

  were included in the study.
- The patients were followed for 9 months.
- In 2015, patients were scheduled for a face to face evaluation with the physician within 7 days following the sleep study and study results and various aspects of CPAP treatments were discussed during the visit.

Methods

- The office support staffs were educated in late 2015.
- Thereafter in 2016, the same aspects were discussed by a trained office staff over the phone, thus decreasing one follow up visit for most patients.

Results

- 120 patients and 145 patients had a sleep study between the months of January and February, in 2015 and 2016 respectively.
- Patients in both groups were similar except the those seen in 2015 were more likely to be obese (Table-1)
- The average age of the patients were 54.07 and 53.9
- Mean AHI were 31.81 and 30.5 respectively
- 52% vs 56% of the patient had h/o hypertension while 12.5% vs 16.46% of patients had heart disease respectively
- 90% of the patients were obese in 2015 group while only 65% were obese in 2016 group

Year	2015	2016	P value (95% CI)
Number	40	55	
Age	54.07	53.9	0.9394 (-5.07 to 5.47)
Sex (Male)	20/40 (50%)	19/55 (34%)	0.1449
AHI	31.81	30.5	0.8404 (-11.7 to 14.3)
ESS	11	11.7	0.5400 (-3.08 to 1.62)
BMI	40.83	39.36	0.0361 (0.3 to 8.66)
HTN	21/40 (52%)	31/55 (56%)	0.8350
Heart disease	5/40 (12.5%)	9/55 (16.4%)	0.7714
DM	11/40 (27%)	18/55 (32.7%)	0.6556
Obesity	36/40 (90%)	36/55 (65%)	0.0072

Table-1 Baseline patient characteristics

- Compliance was defined by medicare criteria (70% of the nights for more than 4 hrs of CPAP use
- Compliance at 3 month (47% vs 47%) and 6 month (27% vs 28%) were similar in both groups (Table -2)

Result

- Compliance was defined by medicare criteria (70% of the nights for more than 4 hrs of CPAP use
- Compliance at 3 month (47% vs 47%) and 6 month (27% vs 28%) were similar in both groups (Table -2)

Year	2015	2016	P value (95% CI)
Compliance at 3 months	19/40 (47%)	26/55(47%)	1.000
Compliance at 6 months	11/40 (27%)	12/42 (28%)	1.000
Average no. of visits	1.65	1.2	0.0413 (0.02 to 0.88)
Average new patient visits	67.5/month	80.3/month	

- Table-2 Compliance, patient physician face to face visits and average new patient visits

- Average number of visits per patient decreased from 1.65 to 1.2 in this one year
- Average number of patient seen in the clinic per month increased from 67.5 to 80.3.

Conclusion

- The introduction of phone calls after sleep study by trained office personnel significantly decreased the number of follow up visits per patient and increased the number of new patients seen by the provider in the next 6 months.
- The compliance was not affected in spite of significantly less face to face contact with the provider.

Limitation

- Retrospective study
- Patients were evaluated by a single provider and the results may not be generalized

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