

Online Supplement

Assessment of Obstructive Sleep Apnea Among Patients With Chronic Obstructive Pulmonary Disease in Primary Care

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Supplemental Table 1: Sensitivity analysis with revised primary outcome including OSA diagnostic code as evidence of ‘OSA assessment’.

Patient Characteristics	Multivariate Odds Ratio (95% CI)
Age (/10 year)	0.80 (0.61-1.04)
Male	1.23 (0.70-2.16)
Race	
White	Ref
Black	0.41 (0.22-0.77)
Asian	0.45 (0.14-1.46)
Native American	0.57 (0.19-1.75)
Hispanic	0.20 (0.01-3.80)
Unknown/missing	0.67 (0.22-2.05)
Insurance	
Medicare	Ref
Medicaid	0.76 (0.41-1.41)
Commercial	0.54 (0.17-1.78)
None Documented	0.38 (0.13-1.09)
Married	0.71 (0.37-1.35)
BMI Category	
<25 kg/m ²	Ref
25-29.9 kg/m ²	0.71 (0.36-1.42)
≥ 30 kg/m ²	3.13 (1.69-5.78)
Missing	2.25 (0.80-6.37)
Prior Confirmation of OSA	32.41 (14.26-73.66)
Coronary Artery Disease	0.85 (0.39-1.83)
Congestive Heart Failure	1.70 (0.95-3.04)
Hypertension	0.83 (0.50-1.38)
Type 2 Diabetes Mellitus	2.70 (1.52-4.81)
Major Depression	2.09 (1.29-3.39)
Total Visits (/year)	1.07 (0.99-1.15)
Inpatient Exacerbations (/year)	1.10 (0.74-1.62)
Any Pulmonary Visit	2.96 (1.81-4.85)
County Hospital	1.10 (0.61-1.99)
Percentage of visits with PCP (/10%)	1.05 (0.92-1.20)
PCP Characteristics	
Years of experience (/5 years)	1.06 (0.89-1.27)
Male	0.81 (0.55-1.18)
Role	
Attending	Ref
Resident	1.13 (0.56-2.28)
Advanced Practice Provider	1.62 (0.87-3.00)

Legend: OSA-Obstructive Sleep Apnea; PCP-Primary Care Provider; BMI-Body Mass Index. Multivariate model includes all variables listed. Significant associations in bold.

Supplemental Table 2: Sensitivity analysis limited to the 293 patients with airflow obstruction on spirometry and documentation of FEV1.

Patient Characteristics	Multivariate
	Odds Ratio (95% CI)
Age (/10 year)	0.82 (0.52-1.28)
Male	0.77 (0.27-2.20)
Race	
White	Ref
Black	0.35 (0.10-1.20)
Asian	0.62 (0.08-4.60)
Native American	0.76 (0.07-8.11)
Hispanic	0.01 (0.00-0.20)
Unknown/missing	1.43 (0.40-5.06)
Insurance	
Medicare	Ref
Medicaid	1.03 (0.42-2.56)
Commercial	0.62 (0.07-5.59)
None Documented	0.75 (0.13-4.36)
Married	2.61 (1.06-6.42)
BMI Category	
<25 kg/m ²	Ref
25-29.9 kg/m ²	0.56 (0.14-2.26)
≥ 30 kg/m ²	5.11 (1.74-14.95)
Missing	3.79 (0.64-22.42)
Prior Confirmation of OSA	89.71 (20.34-395.53)
FEV1 % Predicted	
≥ 80%	Ref
65.0-79.9%	2.53 (0.48-13.39)
50.0-64.9%	0.78 (0.17-3.49)
30.0-49.9%	0.69 (0.13-3.65)
<30.0%	0.50 (0.11-2.31)
Coronary Artery Disease	0.83 (0.27-2.56)
Congestive Heart Failure	1.90 (0.59-6.12)
Hypertension	0.55 (0.25-1.20)
Type 2 Diabetes Mellitus	2.11 (0.44-10.18)
Major Depression	1.05 (0.51-2.18)
Total Visits (/year)	1.09 (0.98-1.22)
Inpatient Exacerbations (/year)	1.66 (0.89-3.08)
Any Pulmonary Visit	4.53 (2.11-9.73)
County Hospital	2.25 (0.82-6.16)
Percent of Visits with PCP (/10%)	1.19 (1.01-1.41)
PCP Characteristics	
Years of experience (/5 years)	1.27 (0.94-1.72)
Male	0.55 (0.25-1.22)
Role	
Attending	Ref
Resident	1.95 (0.51-7.44)
Advanced Practice Provider	4.53 (1.49-13.76)

Legend: OSA-Obstructive Sleep Apnea; PCP-Primary Care Provider; BMI-Body Mass Index. Multivariate model includes all variables listed. Significant associations in bold.