

S3 Table. Demographic and clinical characteristics before and after propensity weighting of enrolled patients in the United States, excluding outliers.

Clinical Characteristic	Patient Characteristics before Propensity Weighting (excluding outliers)			Patient Characteristics after Propensity Weighting (excluding outliers)		
	No Respiratory Depression Episode (n=266)	≥1 Respiratory Depression Episode (n=143)	p-value	No Respiratory Depression Episode (n=247) ^a	≥1 Respiratory Depression Episode (n=123) ^a	p-value
Age (yr) (Mean ± SD)	52.6 ± 14.0	62 ± 11.2		55.4 ± 13.8	58.2 ± 11	
<60	67.3% (179/266)	39.9% (57/143)	<.0001	58.4% (144/247)	56.4% (69/123)	.980
≥60 - <70	21.1% (56/266)	33.6% (48/143)		25.3% (63/247)	26.2% (32/123)	
≥70 - <80	9.8% (26/266)	21.7% (31/143)		13.6% (34/247)	14% (17/123)	
≥80	1.9% (5/266)	4.9% (7/143)		2.7% (7/247)	3.3% (4/123)	
Sex (Male)	30.5% (81/266)	50.3% (72/143)	.0001	36.3% (90/247)	43.3% (53/123)	.193
BMI (kg/m²) (Mean ± SD)	32.4 ± 9.6	30.2 ± 6.1				
<20	3.4% (9/266)	2.1% (3/143)	.012	1.6% (4/247)	1% (1/123)	.806
≥20 - <25	17.3% (46/266)	16.8% (24/143)		18% (44/247)	19.4% (24/123)	
≥25 - <30	26.7% (71/266)	35.7% (51/143)		30.1% (74/247)	27.5% (34/123)	
≥30 - <35	19.5% (52/266)	27.3% (39/143)		21.7% (54/247)	26.5% (33/123)	
≥35	33.1% (88/266)	18.2% (26/143)		28.7% (71/247)	25.6% (32/123)	
Race/Ethnicity						
American Indian or Alaska Native	0.4% (1/266)	0% (0/143)	.0002	0.3% (1/247)	0% (0/123)	.931
Asian	1.1% (3/266)	0% (0/143)		0.8% (2/247)	0% (0/123)	
Black or African American	30.1% (80/266)	12.6% (18/143)		23.9% (59/247)	27.1% (33/123)	
Hispanic	0.8% (2/266)	0.7% (1/143)		0.5% (1/247)	0% (0/123)	
White	0.8% (2/266)	0.7% (1/143)		0.8% (2/247)	0.7% (1/123)	
Other	66.9% (178/266)	86% (123/143)		73.7% (182/247)	72.2% (89/123)	
Current Smoker	16.5% (44/266)	15.4% (22/143)	.762	15.9% (39/247)	17.6% (22/123)	.672
Neck circumference	47.9% (127/265)	40.8% (58/142)	.258	46.6% (115/247)	44.5% (55/123)	.708
ASA Physical Status						
ASA I	0.4% (1/256)	0.7% (1/140)	.364	0.7% (2/247)	0.8% (1/123)	.952
ASA II	42.2% (108/256)	36.4% (51/140)		40.5% (100/247)	43% (53/123)	
ASA III	55.9% (143/256)	59.3% (83/140)		56.9% (141/247)	54.2% (67/123)	
ASA IV	1.6% (4/256)	3.6% (5/140)		1.9% (5/247)	2% (2/123)	
Surgery Demographics						
Surgical Patient	94.4% (251/266)	96.5% (138/143)	.338	98% (242/247)	96.9% (119/123)	.478
High Risk Surgery	4.9% (13/266)	7.7% (11/143)	.250	4.5% (11/247)	4.7% (6/123)	.951
Open Surgery	7.5% (20/266)	13.3% (19/143)	.058	10.3% (26/247)	10.1% (12/123)	.934
Length of Surgery (hr)						
0 hour	5.9% (16/272)	4.1% (6/148)	.085	2% (5/247)	3.1% (4/123)	.914
<2	36.4% (99/272)	27% (40/148)		34.7% (86/247)	33.6% (41/123)	
≥2 - <4	44.1% (120/272)	48.6% (72/148)		46.8% (116/247)	46.8% (58/123)	

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	No Respiratory Depression Episode (n=266)	≥1 Respiratory Depression Episode (n=143)	p-value	No Respiratory Depression Episode (n=247) ^a	≥1 Respiratory Depression Episode (n=123) ^a	p-value
≥4	13.6% (37/272)	20.3% (30/148)		16.5% (41/247)	16.5% (20/123)	
Opioid Demographics						
Opioid Naive	68.8% (183/266)	79.7% (114/143)	.018	73.4% (182/247)	77.5% (95/123)	.401
Multiple Opioids or concurrent CNS/Sedating Medication	98.9% (263/266)	97.9% (140/143)	.426	100% (247/247)	99.7% (123/123)	1
One opioid	2.6% (7/266)	2.8% (4/143)	.334	0.9% (2/247)	0.7% (1/123)	.780
Opioid number >1 - <4	49.2% (131/266)	56.6% (81/143)		52.2% (129/247)	56.5% (70/123)	
Opioid number ≥4	48.1% (128/266)	40.6% (58/143)		46.9% (116/247)	42.8% (53/123)	
Cardiac Disorders						
Aortic Aneurysm	0.4% (1/266)	3.5% (5/143)	.021	0.3% (1/247)	1.4% (2/123)	1
Aortic Valve Disease	0.4% (1/266)	0% (0/148)	1	0% (0/247)	0% (0/123)	---
Chronic Heart Failure	0.4% (1/266)	2.1% (3/142)	.124	0.6% (2/247)	1.1% (1/123)	1
Coronary Artery Disease	2.3% (6/266)	8.5% (12/141)	.004	5.1% (13/247)	5.1% (6/123)	.997
Hypertension	48.9% (130/266)	53.8% (77/143)	.337	50.7% (125/247)	51.3% (63/123)	.908
Mitral Valve Disease	1.5% (4/266)	0.7% (1/143)	.662	1.2% (3/247)	0.4% (1/123)	1
Myocardial Infarction	0.8% (2/266)	3.5% (5/142)	.052	2.2% (5/247)	2.1% (3/123)	1
Orthostatic Hypotension	0% (0/272)	0% (0/148)	---	0% (0/247)	0% (0/123)	---
Pulmonary Hypertension	0.8% (2/266)	0% (0/148)	.544	0% (0/247)	0% (0/123)	---
Sarcoidosis	0.4% (1/266)	0% (0/148)	1	0% (0/247)	0% (0/123)	---
Sepsis	0.8% (2/266)	0.7% (1/143)	1	0.4% (1/247)	0.4% (1/123)	1
Diabetes - Type I	1.5% (4/266)	3.5% (5/143)	.287	2.2% (6/247)	2% (2/123)	1
Diabetes - Type II	13.9% (37/266)	17.5% (25/143)	.337	15.7% (39/247)	18.7% (23/123)	.470
Muscular Dystrophy	0.4% (1/266)	0.7% (1/143)	1	0.4% (1/247)	0.4% (1/123)	1
Kidney Failure	1.1% (3/266)	1.4% (2/143)	1	1% (2/247)	0.8% (1/123)	1
Respiratory, Thoracic and Mediastinal Disorders						
Acute Bronchitis	2.6% (7/266)	1.4% (2/143)	.504	2.3% (6/247)	2.5% (3/123)	1
Asthma	16.2% (43/266)	11.2% (16/143)	.187	13.4% (33/247)	14.8% (18/123)	.707
Chronic Bronchitis	0.8% (2/266)	0% (0/148)	.544	0.5% (1/247)	0% (0/123)	1
Chronic Obstructive Pulmonary	4.5% (12/266)	6.3% (9/143)	.436	5.5% (14/247)	4.5% (6/123)	.679
Chronic Restrictive Lung Disease	0% (0/272)	0.7% (1/143)	.350	0% (0/247)	0% (0/123)	---
Pneumonia	0.8% (2/266)	1.4% (2/143)	.614	0.8% (2/247)	0.9% (1/123)	1
Pulmonary Fibrosis	0.4% (1/266)	0% (0/148)	1	0% (0/247)	0% (0/123)	---
Sleep Disorders	14.5% (38/262)	15.8% (22/139)	.724	14.5% (36/247)	13.4% (16/123)	.776
Vascular Disorders						
Cerebral Aneurysm	0.8% (2/266)	2.1% (3/143)	.348	1.3% (3/247)	1.1% (1/123)	1
Peripheral Vascular Disease	1.9% (5/266)	2.1% (3/143)	1	1.6% (4/247)	1.4% (2/123)	1
Stroke	1.1% (3/266)	2.8% (4/142)	.244	1.6% (4/247)	1.6% (2/123)	1

Clinical Characteristic	Patient Characteristics before Propensity Weighting (excluding outliers)			Patient Characteristics after Propensity Weighting (excluding outliers)		
	No Respiratory Depression Episode (n=266)	≥1 Respiratory Depression Episode (n=143)	p-value	No Respiratory Depression Episode (n=247) ^a	≥1 Respiratory Depression Episode (n=123) ^a	p-value
Transient Ischemic Attack	0.8% (2/266)	1.4% (2/142)	.613	0.9% (2/247)	1% (1/123)	1
STOP BANG Score						
Low Risk (0-2)	48.5% (126/260)	37% (51/138)	.0374	43% (106/247)	40.6% (50/123)	.904
Intermediate Risk (3-4)	33.5% (87/260)	35.5% (49/138)		36.6% (90/247)	37.6% (46/123)	
High Risk (5-8)	18.1% (47/260)	27.5% (38/138)		20.4% (50/247)	21.8% (27/123)	
Procedure			.154			.985
Bone and joint	21.8% (58/266)	18.2% (26/143)		20.8% (51/247)	18.8% (23/123)	
Gastrointestinal	24.8% (66/266)	16.8% (24/143)		22.5% (56/247)	19.1% (24/123)	
Hepatobiliary	2.3% (6/266)	7.7% (11/143)		3% (7/247)	4.3% (5/123)	
Medical	5.6% (15/266)	3.5% (5/143)		2% (5/247)	3.1% (4/123)	
Nervous system, skull and spine	35.7% (95/266)	43.4% (62/143)		41.2% (102/247)	43.1% (53/123)	
Obstetric and gynecological	5.6% (15/266)	6.3% (9/143)		6.8% (17/247)	6.4% (8/123)	
Other	1.1% (3/266)	2.8% (4/143)		1.1% (3/247)	1.5% (2/123)	
Renal and urinary tract	0.4% (1/266)	0% (0/143)		0.3% (1/247)	0% (0/123)	
Respiratory tract	0.4% (1/266)	0% (0/143)		0.3% (1/247)	0% (0/123)	
Therapeutic procedures and supportive care	2.3% (6/266)	1.4% (2/143)	2.2% (5/247)	3.7% (5/123)		

^aPatients missing any demographic or clinical data used excluded from propensity weighting

Abbreviations: ASA = American Society of Anesthesiologists; BMI = body mass index; CNS = central nervous system; SD= standard deviation; STOP BANG = Snoring, Tiredness, Observed apnea, blood Pressure, Body mass index, Age, Neck circumference and Gender