

## Supplementary Online Content

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**eTable 1.** Characteristics of the Entire 1995 to 2006 Cohort

**eTable 2.** Association of Consultation With Patient-, Provider-, Facility-, and Geographic-Level Characteristics—Sensitivity Analysis Based on Multiple Imputation

**eFigure.** Consultant Specialty by Year, as Percent of All Consultations in Each Year

This supplementary material has been provided by the authors to give readers additional information about their work.

**eTable 1. Characteristics of the entire 1995 to 2006 cohort<sup>a</sup>**

	Consultation N=76,762	No consultation N=479,875	Absolute Standardized Difference, %	P value
<b>Demographics</b>				
Age, mean (SD)	77.0 (6.2)	76.6 (6.2)	6.7	<0.001
Age, 10-year categories				
66-74	28,442 (37.1)	193,540 (40.3)	6.7	
75-84	38,976 (50.8)	231,600 (48.3)	5.0	<0.001
≥85	9344 (12.2)	54,735 (11.4)	2.4	
Female	49,175 (64.1)	305,549 (63.7)	0.8	0.04
African-American	3406 (4.4)	28,711 (6.0)	7.0	<0.001
<b>Rural-Urban Status</b>				
Isolated rural town	3302 (4.3)	33,993 (7.1)	12.0	
Small rural town	3764 (4.9)	41,738 (8.7)	15.1	<0.001
Large rural city	7728 (10.1)	66,921 (13.9)	12.0	
Urban	58,910 (76.7)	333,391 (69.5)	16.4	
Unknown	3058 (4.0)	3832 (0.8)	21.0	
<b>Comorbid Disease</b>				
Ischemic heart disease	22,158 (28.9)	124,544 (26.0)	6.5	<0.001
Cerebrovascular disease	8537 (11.1)	47,761 (10.0)	3.8	<0.001
Chronic renal insufficiency	2272 (3.0)	12,177 (2.5)	2.6	<0.001
Congestive heart failure	9915 (12.9)	57,752 (12.0)	2.7	<0.001
Diabetes	19,391 (25.3)	107,359 (22.4)	6.8	<0.001
Peripheral vascular disease	11,425 (14.9)	59,301 (12.4)	7.4	<0.001
Dementia	1485 (1.9)	9605 (2.0)	0.5	0.21
Chronic pulmonary disease	16,206 (21.1)	97,317 (20.3)	2.1	<0.001
Rheumatic disease	3733 (4.9)	20,651 (4.3)	2.7	<0.001
Peptic ulcer disease	1799 (2.3)	12,107 (2.5)	1.2	0.003
Liver disease	1922 (2.5)	10,373 (2.2)	2.3	<0.001
Paraplegia and hemiplegia	673 (0.9)	4297 (0.9)	0.2	0.60
<b>Cancer</b>				
Primary malignancy	10,522 (13.7)	60,377 (12.6)	3.3	<0.001
Metastatic disease	951 (1.2)	5636 (1.2)	0.6	0.13
<b>Charlson Comorbidity Index<sup>b</sup></b>				
0	27,054 (35.2)	185,421 (38.6)	7.0	
1	18,650 (24.3)	118,010 (24.6)	0.7	
2	12,448 (16.2)	75,808 (15.8)	1.1	<0.001
3	8204 (10.7)	47,051 (9.8)	2.9	

	Consultation N=76,762	No consultation N=479,875	Absolute Standardized Difference, %	P value
4	4519 (5.9)	23,508 (4.9)	4.4	
≥5	5887 (7.7)	30,077 (6.3)	5.5	
<b>Revised Cardiac Risk Index</b>				
0 points	37,480 (48.8)	252,184 (52.6)	7.5	
1 point	22,963 (29.9)	139,541 (29.1)	1.8	<0.001
2 points	10,960 (14.3)	60,856 (12.7)	4.7	
≥3 points	5359 (7.0)	27,294 (5.7)	5.3	
<b>Surgical Facility</b>				
Ambulatory surgical center	31,944 (41.6)	210,673 (43.9)	4.6	
Office	4645 (6.1)	40,172 (8.4)	9.0	
Inpatient hospital	871 (1.1)	2814 (0.6)	5.9	<0.001
Outpatient hospital	38,725 (50.4)	223,021 (46.5)	8.0	
Unknown	577 (0.8)	3195 (0.7)	1.0	
<b>Anesthesia Provider</b>				
Non-medically directed CRNA	11,890 (15.5)	111,869 (23.3)	19.9	
Medically directed CRNA	24,695 (32.2)	138,139 (28.8)	7.4	<0.001
Anesthesiologist	33,686 (43.9)	162,055 (33.8)	20.9	
Unknown	6491 (8.5)	67,812 (14.1)	18.0	
<b>Geographic Region</b>				
South	20,051 (26.1)	198,566 (41.4)	30.9	
West	6654 (8.7)	73498 (15.3)	19.6	<0.001
Midwest	19,458 (25.3)	127,674 (26.6)	0.9	
Northeast	27,460 (35.8)	76,091 (15.9)	49.7	
Unknown	3139 (4.1)	4046 (0.8)	21.0	

Abbreviation: CRNA, certified registered nurse anesthetist

<sup>a</sup>Data are expressed as count (%) unless otherwise specified.

<sup>b</sup>Charlson comorbidity index is calculated using the Quan modification of this index.

**eTable 2.** Association of consultation with patient-, provider-, facility-, and geographic-level characteristics—sensitivity analysis based on multiple imputation

	Unadjusted OR (95% CI)	P value	Adjusted OR (95% CI)	P value
<b>Demographics</b>				
Age				
66-74 years	Referent		Referent	
75-84	1.22 (1.18, 1.27)	<0.001 <sup>a</sup>	1.09 (1.04, 1.13)	<0.001 <sup>a</sup>
≥85 years	1.29 (1.22, 1.37)		1.04 (0.98, 1.11)	
Female sex	1.04 (1.01, 1.08)	0.02	1.02 (0.98, 1.06)	0.44
African-American	0.72 (0.66, 0.78)	<0.001	0.70 (0.64, 0.77)	<0.001
<b>Charlson Comorbidity Index<sup>b</sup></b>				
0	Referent		Referent	
1	1.07 (1.02, 1.12)		1.02 (0.97, 1.07)	
2	1.10 (1.04, 1.15)		1.00 (0.94, 1.05)	
3	1.12 (1.05, 1.19)	<0.001 <sup>a</sup>	1.02 (0.95, 1.08)	<0.001 <sup>a</sup>
4	1.23 (1.14, 1.33)		1.08 (1.00, 1.18)	
≥5	1.31 (1.23, 1.40)		1.09 (1.02, 1.17)	
<b>Rural-Urban Status</b>				
Isolated rural town	Referent		Referent	
Small rural town	0.79 (0.71, 0.88)		0.94 (0.83, 1.06)	
Large rural city	1.16 (1.05, 1.27)	<0.001 <sup>c</sup>	1.48 (1.33, 1.65)	<0.001 <sup>c</sup>
Urban	1.85 (1.71, 2.00)		1.69 (1.53, 1.86)	
<b>Surgical facility</b>				
Ambulatory surgical center	Referent		Referent	
Office	0.70 (0.66, 0.75)		0.84 (0.78, 0.91)	
Inpatient hospital	2.76 (1.99, 3.82)	<0.001 <sup>c</sup>	1.19 (0.79, 1.79)	<0.001 <sup>c</sup>
Outpatient hospital	1.25 (1.21, 1.30)		1.09 (1.05, 1.14)	
<b>Anesthesia provider</b>				
Non-medically directed CRNA	Referent		Referent	
Medically directed CRNA	2.06 (1.96, 2.16)		1.24 (1.17, 1.32)	
Anesthesiologist	2.00 (1.91, 2.09)	<0.001 <sup>c</sup>	1.15 (1.09, 1.23)	<0.001 <sup>c</sup>
<b>Geographic Region</b>				
South	Referent		Referent	
West	0.98 (0.92, 1.04)		0.97 (0.73, 1.28)	
Midwest	1.76 (1.68, 1.84)	<0.001 <sup>c</sup>	1.88 (1.44, 2.45)	<0.001 <sup>c</sup>
Northeast	3.82 (3.65, 4.00)		2.40 (1.84, 3.13)	
<b>Revised Cardiac Risk Index<sup>d</sup></b>				
0 points	Referent			
1 point	1.04 (1.00, 1.09)			
2 points	1.10 (1.04, 1.15)	<0.001 <sup>a</sup>		
≥3 points	1.20 (1.12, 1.28)			

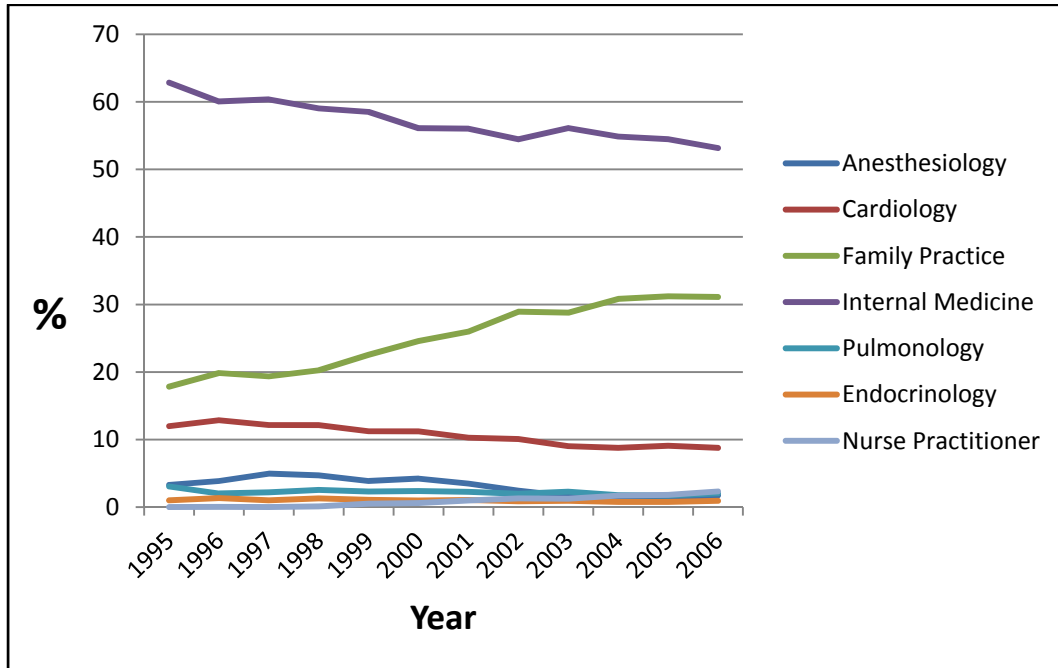
Abbreviation: CRNA, certified registered nurse anesthetist

a Test of linear trend of ordered categories within variable

b Charlson comorbidity index is calculated using the Quan modification of this index.

c Group test of all categories within variable  
d Not incorporated into multivariable analysis

**eFigure.** Consultant specialty by year, as percent of all consultations in each year



**eFigure 1.**