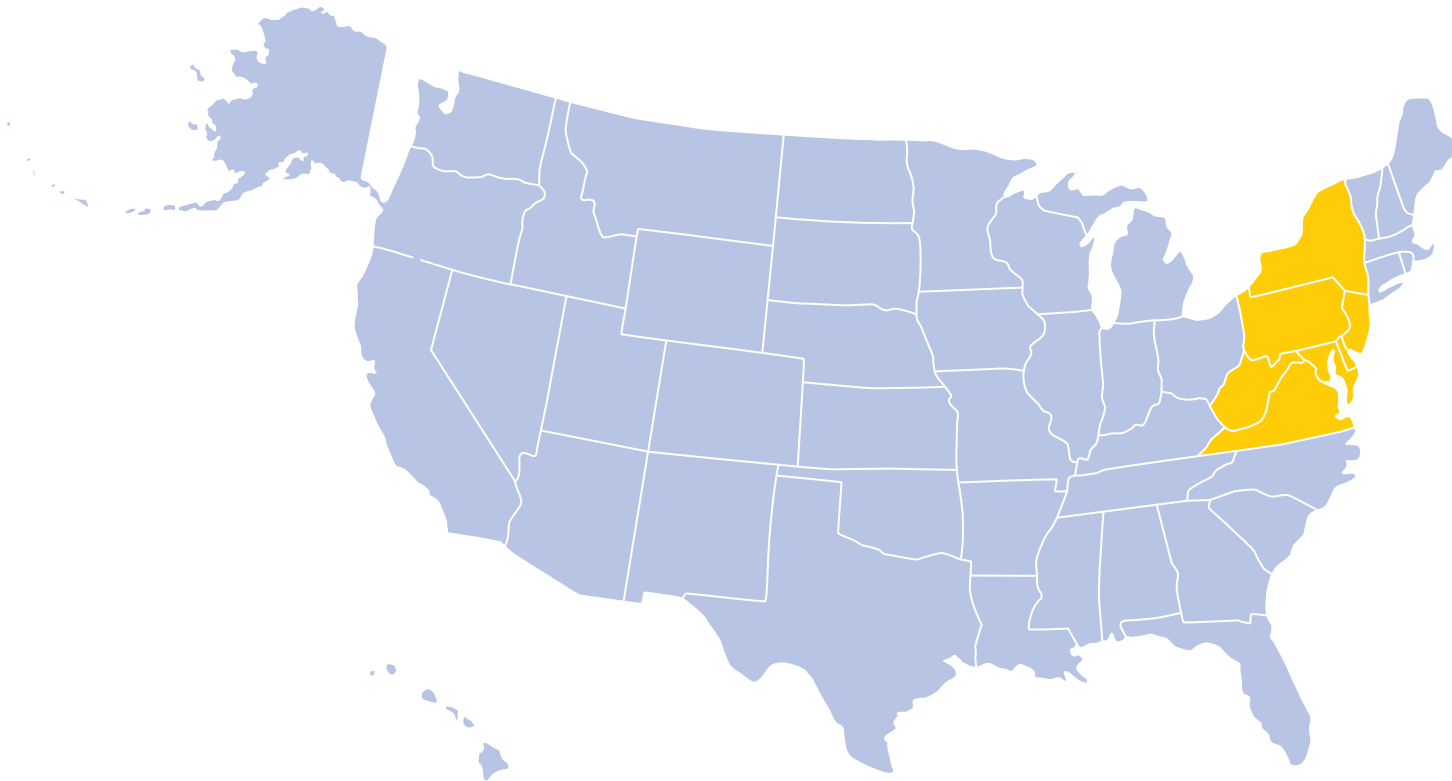


ANESTHESIA WORKFORCE SUMMARY

MID-ATLANTIC CAUCUS



HEALTH POLICY RESEARCH DEPARTMENT

FEBRUARY 2015

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INTRODUCTION

The purpose of this report is to summarize the anesthesia workforce supply¹ in the Midwest Caucus states to help inform ASA member discussions on workforce trends and related issues. The information presented in this inaugural report is based on publicly available data from:

- the National Provider Identifier (NPI) dataset,
- the Medicare Physician Compare National Downloadable File (Physician Compare),
- the American Medical Association (AMA),
- an anesthesia workforce analysis by the RAND Corporation (RAND), and
- the U.S. Census Bureau.



THREE MAJOR
WORKFORCE
DATA SOURCES

The three workforce data sources used in this report (NPI, Physician Compare, and the AMA) are the likely sources used in most published reports on the anesthesia and perioperative workforce. The development and purpose of the data are different for each source and understanding these differences is essential for any review of information using these data. The NPI data are updated weekly; the Physician Compare dataset is as of December 2014; and AMA data represent 2013 information. Both the NPI and Physician Compare data include nurse anesthetists. The AMA data used in this report are derived from the AMA Physician Masterfile. **APPENDIX A** contains additional information about the three data sources used in this report.

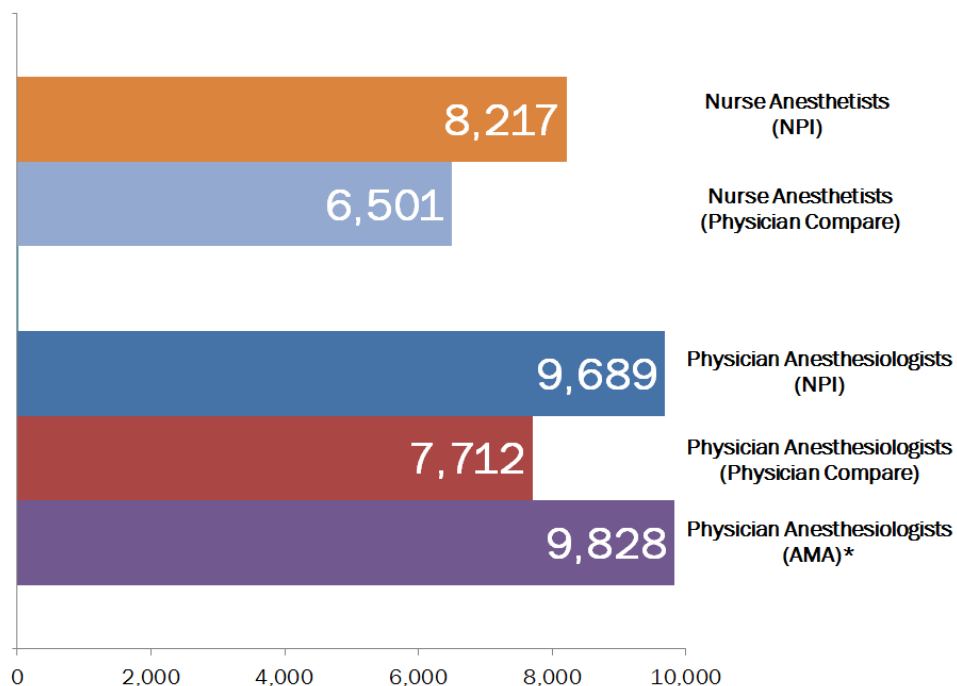
This anesthesia workforce summary includes several state-level and inter-caucus comparisons. The composition of anesthesia practices within a local market may be quite different; and it is important to recognize these differences. The workforce summary can help caucuses better understand differences among their state members and identify regional and national trends. The data should prove useful for evaluating membership goals and understanding differences in policy priorities among states. This information can be supplemented with state society data and other local data sources to form a more accurate profile of the anesthesia workforce in the caucus states.

¹The data reflect total counts for physician and nurse anesthesia professionals and not full-time equivalents (FTEs). That is, the workforce data are not adjusted to account for differences in work hours or productivity.

SUMMARY OF MID-ATLANTIC ANESTHESIA WORKFORCE

Physician anesthesiologists and nurse anesthetists in the Mid-Atlantic Caucus states account for 21.2 percent and 17.7 percent of their respective total workforces in the United States (U.S.) (based on NPI data).

FIGURE 1
MID-ATLANTIC CAUCUS NURSE ANESTHETISTS AND PHYSICIAN ANESTHESIOLOGISTS BY DATA SOURCE

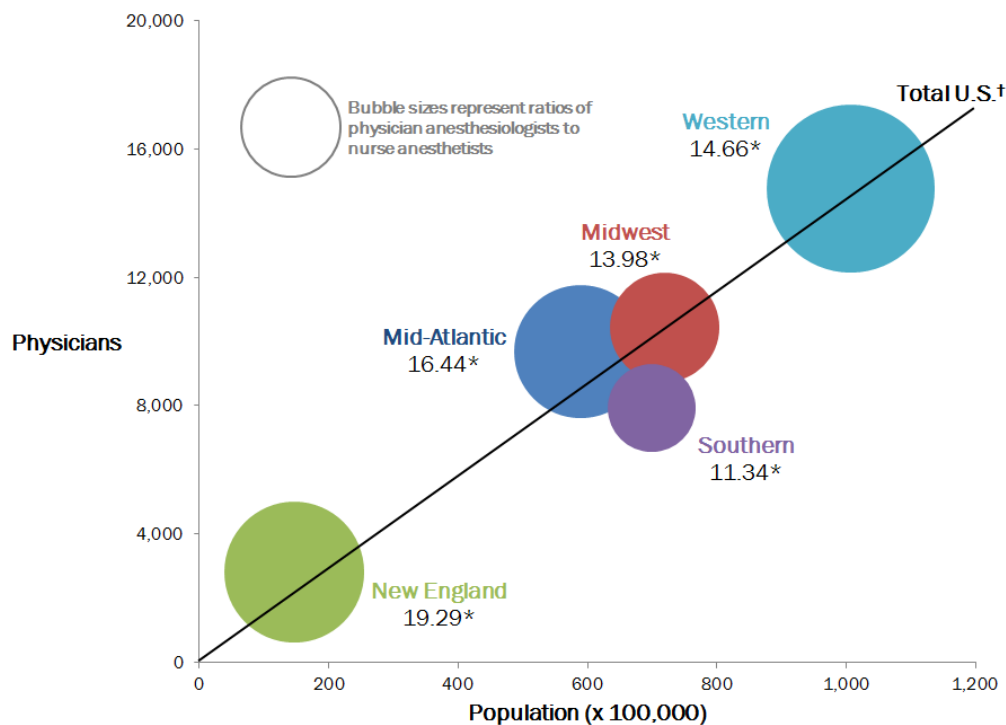


*Includes only physicians who self-reported as being involved in patient care activity.

FIGURE 1 compares anesthesia workforce counts between the three datasets used in this analysis. The ratio of physicians to nurses based on NPI and Physician Compare data are 1.18 and 1.19, respectively. The numbers of physician anesthesiologists in AMA and NPI data are relatively close (<2% difference). The workforce counts based on Physician Compare data are 79-80 percent of the NPI counts.

FIGURE 2

NUMBER OF PHYSICIANS, POPULATION AND WORKFORCE RATIOS BY CAUCUS, JANUARY 2015



Mid-Atlantic Caucus Anesthesia Workforce Ratio	Compared to Rest of U.S., Is:
Physicians to Population	18% HIGHER
Nurses to Population	7% LOWER
Physicians to Nurses	26% HIGHER
Total‡ to Population	ABOUT THE SAME§

‡Total includes physician anesthesiologists, nurse anesthetists and anesthesiologist assistants.

§Less than 5 percent difference.

*Represents ratio of physicians per 100,000 population.

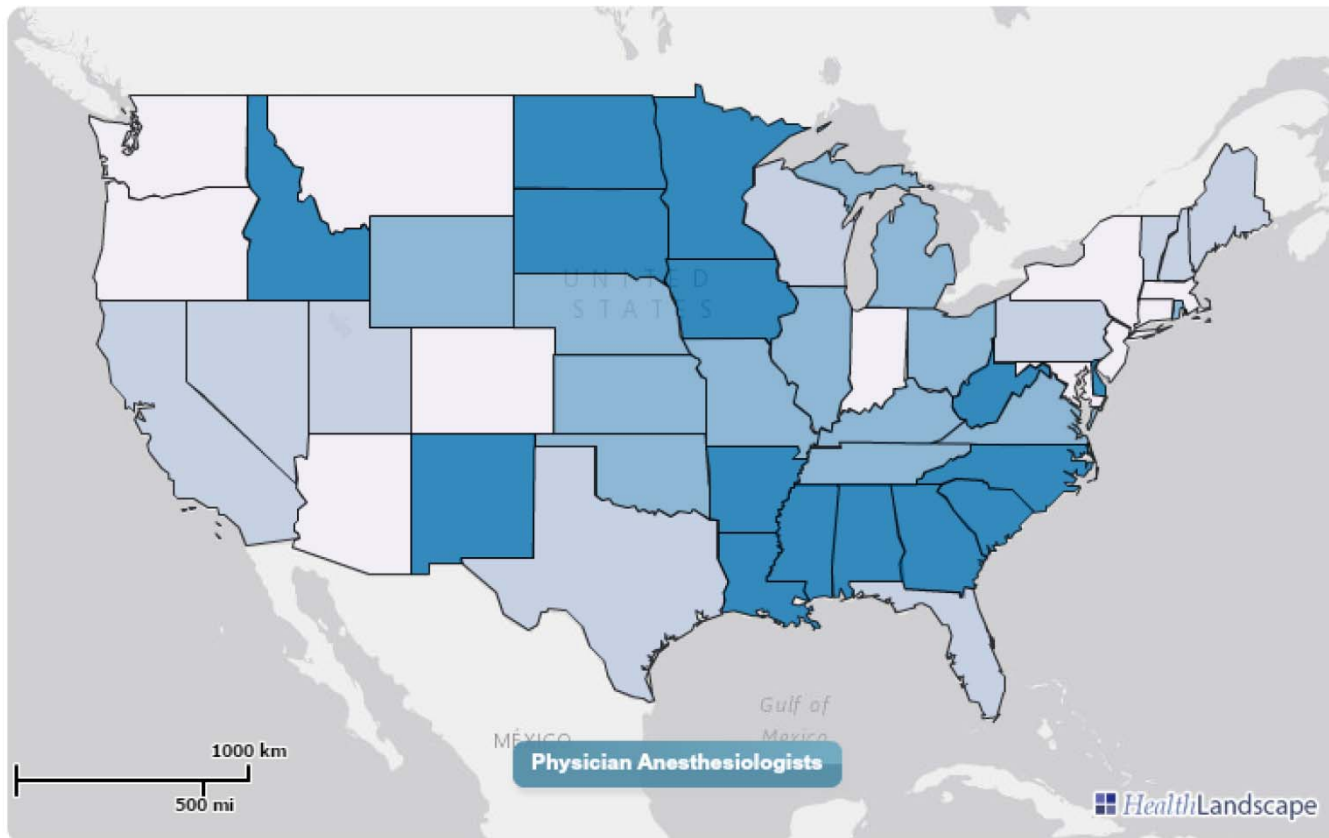
†Slope of line represents overall U.S. ratio of physicians per 100,000 population (14.44).

Sources: Workforce data from Medicare National Plan & Provider Enumeration System (NPPES). Population data from U.S. Census Bureau (estimates for July 2013). Calculations by ASA Health Policy Research Department.

FIGURE 2 compares physician anesthesiologist workforces across all five ASA caucuses, including ratios of physician anesthesiologists to population and to nurse anesthetists. The accompanying table compares anesthesia workforce ratios for the Mid-Atlantic Caucus with the combined other four caucuses.

FIGURE 3

RATIO OF POPULATION TO PHYSICIAN ANESTHESIOLOGIST WORKFORCE BY STATE, 2013
 Created with AMA Health Workforce Mapper

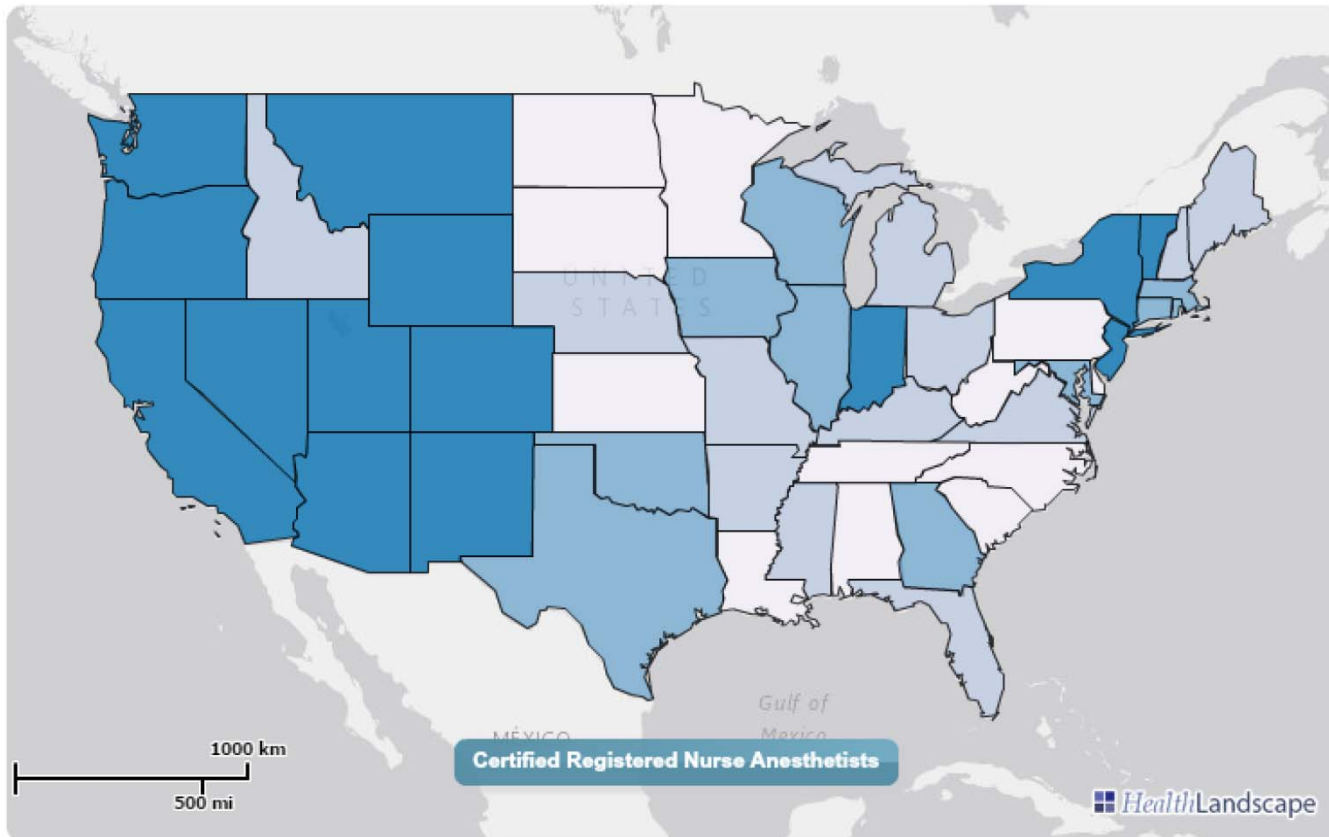


- Population per Provider**
- 2,686 to 7,056
 - 7,142 to 7,925
 - 8,246 to 9,976
 - 10,077 to 14,251

Source: American Medical Association Health Workforce Mapper. Accessed February 18, 2015 from <http://www.ama-assn.org/ama/priv/advocacy/state-advocacy-arc/health-workforce-mapper-a.page>.

FIGURE 4

RATIO OF POPULATION TO NURSE ANESTHETIST WORKFORCE BY STATE, 2013
 Created with AMA Health Workforce Mapper



Population per Provider
 □ 2,460 to 4,376
 □ 4,486 to 6,585
 □ 6,913 to 9,954
 □ 11,051 to 27,278

Source: American Medical Association Health Workforce Mapper. Accessed February 18, 2015 from <http://www.ama-assn.org/ama/priv/advocacy/state-advocacy-arc/health-workforce-mapper-a.page>.

MID-ATLANTIC CAUCUS ANESTHESIA WORKFORCE PROFILE

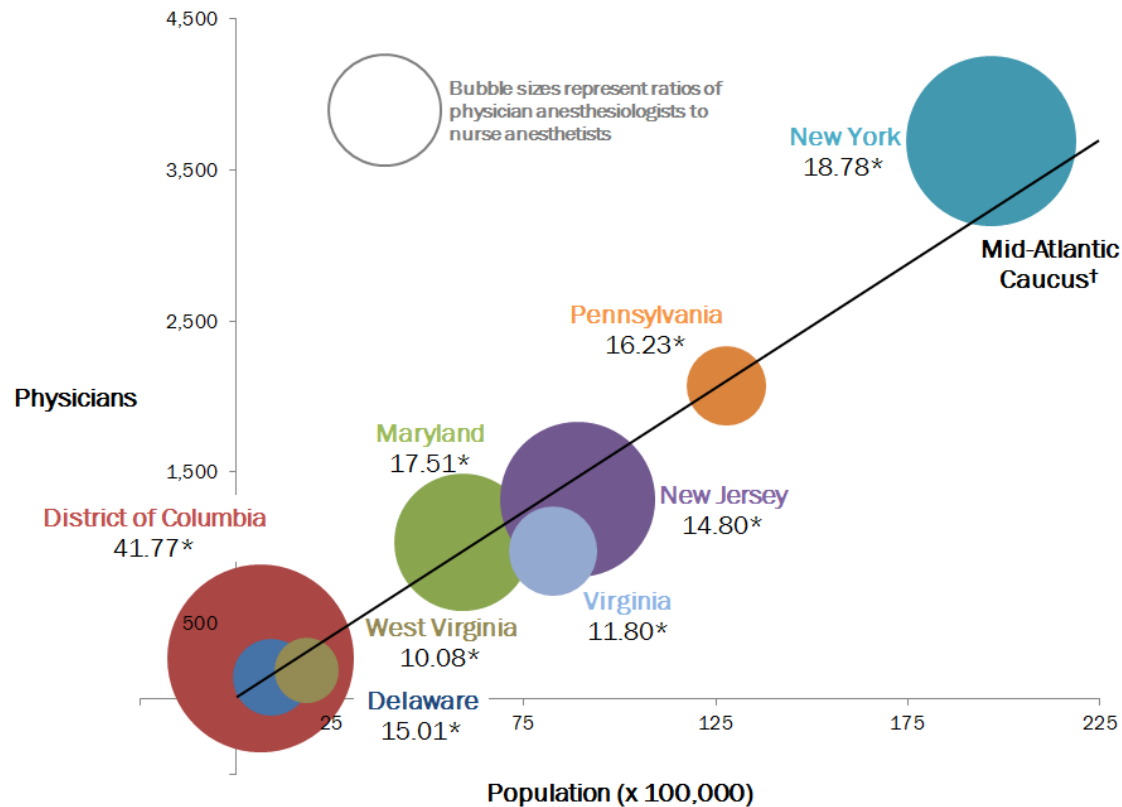
FIGURE 5 and TABLES 1-3 (pages 7-10) profile the anesthesia workforce based on the three datasets used in this report: NPI, Physician Compare, and AMA. Key observations are provided below.

- There is high variation by state².
 - Four states have a ratio of physicians to nurses that is less than 1.
 - Three states have a ratio of physicians to nurses that is more than 2.
 - Based on AMA data, the ratio of physicians to population ranges from 8.97 (DE) to 27.54 (DC).
 - Based on NPI data, the ratio of nurses to population ranges from 6.62 (NJ) to 28.04 (WV).
- **Virginia** and the **District of Columbia** had the highest percentage increases in nurse anesthetists between December 2012 and January 2015.
- **West Virginia** has the lowest ratio of physicians to nurses (based on both NPI and Physician Compare).
- According to NPI data, the **District of Columbia** has the highest ratio of total anesthesia workforce to population in the U.S.

²Assessment by ASA Health Policy Research Department based on comparison of standard errors between caucuses.

FIGURE 5

NUMBER OF PHYSICIANS, POPULATION AND WORKFORCE RATIOS IN MID-ATLANTIC CAUCUS BY STATE, JANUARY 2015



*Represents ratio of physicians per 100,000 population.

†Slope of line represents overall Mid-Atlantic Caucus ratio of physicians per 100,000 population (16.44).

Sources: Workforce data from Medicare National Plan & Provider Enumeration System (NPPES). Population data from U.S. Census Bureau (estimates for July 2013). Calculations by ASA Health Policy Research Department.

FIGURE 5 compares physician anesthesiologist workforces across all 8 states in the Mid-Atlantic Caucus, including ratios of physician anesthesiologists to population and to nurse anesthetists.

TABLE 1
ANESTHESIA WORKFORCE BASED ON NATIONAL PROVIDER IDENTIFIER (NPI) DATASET, JANUARY 2015

State	Number of Professionals		25-month Change (%)†		Ratio of Physicians to Nurses	Number per 100,000 Population		
	Physicians	Nurses	Physicians	Nurses		Physicians	Nurses	Total*
Delaware	139	255	9.4	2.0	0.55	15.01	27.55	43.10
District of Columbia	270	83	5.9	15.3	3.25	41.77	12.84	59.25
Maryland	1,038	594	2.0	9.0	1.75	17.51	10.02	27.64
New Jersey	1,317	589	5.4	12.0	2.24	14.80	6.62	21.46
New York	3,690	1,376	5.2	13.2	2.68	18.78	7.00	25.82
Pennsylvania	2,073	3,477	4.7	9.5	0.60	16.23	27.22	43.50
Virginia	975	1,323	7.9	15.4	0.74	11.80	16.02	27.86
West Virginia	187	520	2.7	8.6	0.36	10.08	28.04	38.18
Mid-Atlantic Caucus	9,689	8,217	5.1	10.9	1.18	16.44	13.94	30.49
Other Caucuses	35,946	38,335	6.0	12.4	0.94	13.98	14.91	29.54
Total U.S.	45,635	46,552	5.8	12.1	0.98	14.44	14.73	29.72

*Total includes physician anesthesiologists, nurse anesthetists and anesthesiologist assistants.

†Based on data for December 2012 and January 2015.

Sources: Workforce data from Medicare National Plan & Provider Enumeration System (NPPES). Population data from U.S. Census Bureau (estimates for July 2013). Calculations by ASA Health Policy Research Department.

TABLE 2
ANESTHESIA WORKFORCE BASED ON PHYSICIAN COMPARE, 2014

State	Number of Professionals		Ratio of Physicians to Nurses	Number per 100,000 Population		
	Physicians	Nurses		Physicians	Nurses	Total*
Delaware	68	152	0.45	7.31	16.40	23.71
District of Columbia	182	79	2.32	28.20	12.14	43.90
Maryland	803	438	1.83	13.54	7.39	20.95
New Jersey	1,239	520	2.38	13.92	5.84	19.77
New York	2,905	1,161	2.50	14.78	5.91	20.71
Pennsylvania	1,560	2,605	0.60	12.21	20.39	32.60
Virginia	780	1,070	0.73	9.44	12.96	22.42
West Virginia	177	476	0.37	9.55	25.69	35.23
Mid-Atlantic Caucus	7,712	6,501	1.19	13.09	11.03	24.17
Other Caucuses	27,738	29,352	0.95	10.78	11.41	22.72
Total U.S.	35,450	35,853	0.99	11.21	11.34	22.99

*Total includes physician anesthesiologists, nurse anesthetists and anesthesiologist assistants.

Sources: Workforce data from Medicare Physician Compare. Population data from U.S. Census Bureau (estimates for July 2013).
Calculations by ASA Health Policy Research Department.

TABLE 3
ANESTHESIA WORKFORCE BASED ON AMERICAN MEDICAL ASSOCIATION (AMA) DATA, 2013

State	Number of Physicians		Five-Year Change in Physicians (%)†		Physicians per 100,000 Population	
	Total	Patient Care	Total	Patient Care	Total	Patient Care
Delaware	83	79	-13.5	-14.1	8.97	8.53
District of Columbia	178	166	12.0	12.2	27.54	25.68
Maryland	1,163	1,115	9.1	8.3	19.62	18.81
New Jersey	1,618	1,586	5.5	5.8	18.18	17.82
New York	3,978	3,851	14.5	14.1	20.24	19.60
Pennsylvania	1,885	1,828	7.1	7.5	14.76	14.31
Virginia	1,059	1,035	7.3	7.5	12.82	12.53
West Virginia	<u>171</u>	<u>168</u>	14.0	12.8	9.22	9.06
Mid-Atlantic Caucus	10,135	9,828	9.8	9.7	17.20	16.67
Other Caucuses	<u>35,799</u>	<u>34,907</u>	9.2	9.1	13.92	13.57
Total U.S.	45,934	44,735	9.4	9.2	14.53	14.15

†Based on AMA data for 2008 and 2013.

Sources: Workforce data from American Medical Association's *Physician Characteristics and Distribution in the US (2015 edition)*. "Patient Care" numbers include physicians who self-reported as being involved in patient care activity. Population data from U.S. Census Bureau (estimates for July 2013). Calculations by ASA Health Policy Research Department.

ANESTHESIOLOGY AND SURGICAL³ WORKFORCES IN THE MID-ATLANTIC CAUCUS

TABLE 4 profiles the anesthesia and surgical workforces based on AMA and NPI data. Key observations are provided below.

- The Mid-Atlantic Caucus has a lower ratio of physician anesthesiologists to GI physicians (gastroenterologist) than the rest of the U.S.
 - They have similar ratios of physician anesthesiologists to OB/GYN physicians, Other Surgeons and Total Surgeons compared to the rest of the U.S.
- The ratios of physician anesthesiologists to OB/GYN physicians vary substantially between states.
- In **Delaware**, the large difference in the ratios of physician anesthesiologists to GI physicians is a result of the differences in the number of physician anesthesiologists reported between datasets (see page 6). The reported number of GI physicians in Delaware is identical between the two datasets (see TABLE B2 in APPENDIX B).
- **West Virginia** has the lowest ratio of physician anesthesiologists to Total Surgeons in both datasets.

Overall, there is 1 anesthesiologist
for every 4 “surgical”³ physicians.

³For purposes of this report, “surgical” also includes OB/GYN physicians and gastroenterologists.

TABLE 4
ANESTHESIOLOGY AND SURGICAL WORKFORCE RATIOS BASED ON NPI AND AMA DATASETS

State	Ratios of Anesthesiologists to Surgeons Based on NPI Data, 2015				Ratios of Anesthesiologists to Surgeons Based on AMA Data*, 2013			
	GI§	OB/GYN	Other Surgeons†	TOTAL	GI§	OB/GYN	Other Surgeons†	TOTAL
Delaware	3.86	1.07	0.38	0.26	2.19	0.85	0.25	0.18
District of Columbia	2.65	1.24	0.45	0.29	2.37	0.81	0.25	0.18
Maryland	2.78	1.05	0.38	0.25	3.23	0.97	0.36	0.24
New Jersey	2.43	1.02	0.38	0.25	2.97	1.08	0.43	0.28
New York	2.58	1.13	0.41	0.27	2.86	1.08	0.38	0.26
Pennsylvania	2.61	1.05	0.30	0.22	2.72	1.07	0.31	0.22
Virginia	2.83	0.94	0.35	0.23	2.88	0.85	0.33	0.22
West Virginia	2.79	0.92	0.27	0.19	2.95	0.88	0.23	0.17
Mid-Atlantic Caucus	2.63	1.07	0.37	0.25	2.87	1.02	0.36	0.24
Other Caucuses	3.08	1.10	0.37	0.25	3.43	1.07	0.36	0.25
Total U.S.	2.97	1.09	0.37	0.25	3.29	1.06	0.36	0.25

*Includes physicians who self-reported as being involved in patient care activity.

§Gastroenterology

†Other Surgeons include the following surgical specialties: Colon and Rectal Surgery, General Surgery, Neurological Surgery, Ophthalmology, Orthopedic Surgery, Otolaryngology, Plastic Surgery, Thoracic Surgery and Urology, and Transplant Surgery.

Sources: Medicare National Plan & Provider Enumeration System (NPPES) and American Medical Association's *Physician Characteristics and Distribution in the US (2015 edition)*. Calculations by ASA Health Policy Research Department.

MID-ATLANTIC CAUCUS PAIN MEDICINE* WORKFORCE PROFILE

TABLE 5 profiles the pain medicine workforce based on NPI data. Key observations are provided below.

- Anesthesia pain physicians and pain medicine physicians in the Mid-Atlantic Caucus states account for 21.7 and 18.2 percent of their respective total workforces in the U.S.
- The Mid-Atlantic caucus has a higher ratio of anesthesia pain physicians to population than the rest of the U.S.
 - They have similar ratios of pain medicine to population as the rest of the U.S.
- The Mid-Atlantic caucus has a higher ratio of anesthesia pain physicians to pain medicine physicians than the rest of the U.S.
- There is relatively high variation between states in the major pain medicine workforce ratios.
 - Ratios of anesthesia pain physicians to pain medicine physicians range from 0.92 (WV) to 2.83 (VA).
 - Ratios of anesthesia pain physicians to population range from 0.65 (WV) to 1.35 (NJ).
- **Delaware** was the only state with a decrease in either pain subspecialty between December 2012 and January 2015.
- **Maryland** had an exceptionally high percentage increase in anesthesia pain physicians between December 2012 and January 2015.

*NOTE: For purposes of this report, the Pain Medicine workforce is based on the following primary NPI taxonomies: **Pain Medicine** (likely not an anesthesiologist: 208VP0014X, Interventional Pain Medicine; and 208VP0000X, Pain Medicine) and **Anesthesia Pain** (207LP2900X, Anesthesiology-Pain).

TABLE 5
PAIN MEDICINE* WORKFORCE BASED ON NPI DATASET, 2013

State	Number of Professionals		25-month Change (%)†		Ratio of Anesthesia Pain to Pain Medicine	Number per 100,000 Population		
	Anesthesia Pain	Pain Medicine	Anesthesia Pain	Pain Medicine		Anesthesia Pain	Pain Medicine	TOTAL [§]
Delaware	11	6	-8.33	0.00	1.83	1.19	0.65	1.84
District of Columbia	6	3	0.00	0.00	2.00	0.93	0.46	1.39
Maryland	71	54	65.12	17.39	1.31	1.20	0.91	2.11
New Jersey	120	79	11.11	21.54	1.52	1.35	0.89	2.24
New York	191	134	21.66	9.84	1.43	0.97	0.68	1.65
Pennsylvania	135	73	8.00	15.87	1.85	1.06	0.57	1.63
Virginia	99	35	11.24	16.67	2.83	1.20	0.42	1.62
West Virginia	<u>12</u>	<u>13</u>	9.09	0.00	0.92	0.65	0.70	1.35
Mid-Atlantic Caucus	645	397	0.17	0.14	1.62	1.09	0.67	1.77
Other Caucuses	<u>2,334</u>	<u>1,781</u>	0.10	0.21	1.31	0.91	0.69	1.60
Total U.S.	2,979	2,178	0.12	0.19	1.37	0.94	0.69	1.63

*For purposes of this report, the Pain Medicine workforce is based on the following primary NPI taxonomies: **Pain Medicine** (likely not an anesthesiologist: 208VP0014X, Interventional Pain Medicine; and 208VP0000X, Pain Medicine) and **Anesthesia Pain** (207LP2900X, Anesthesiology-Pain).

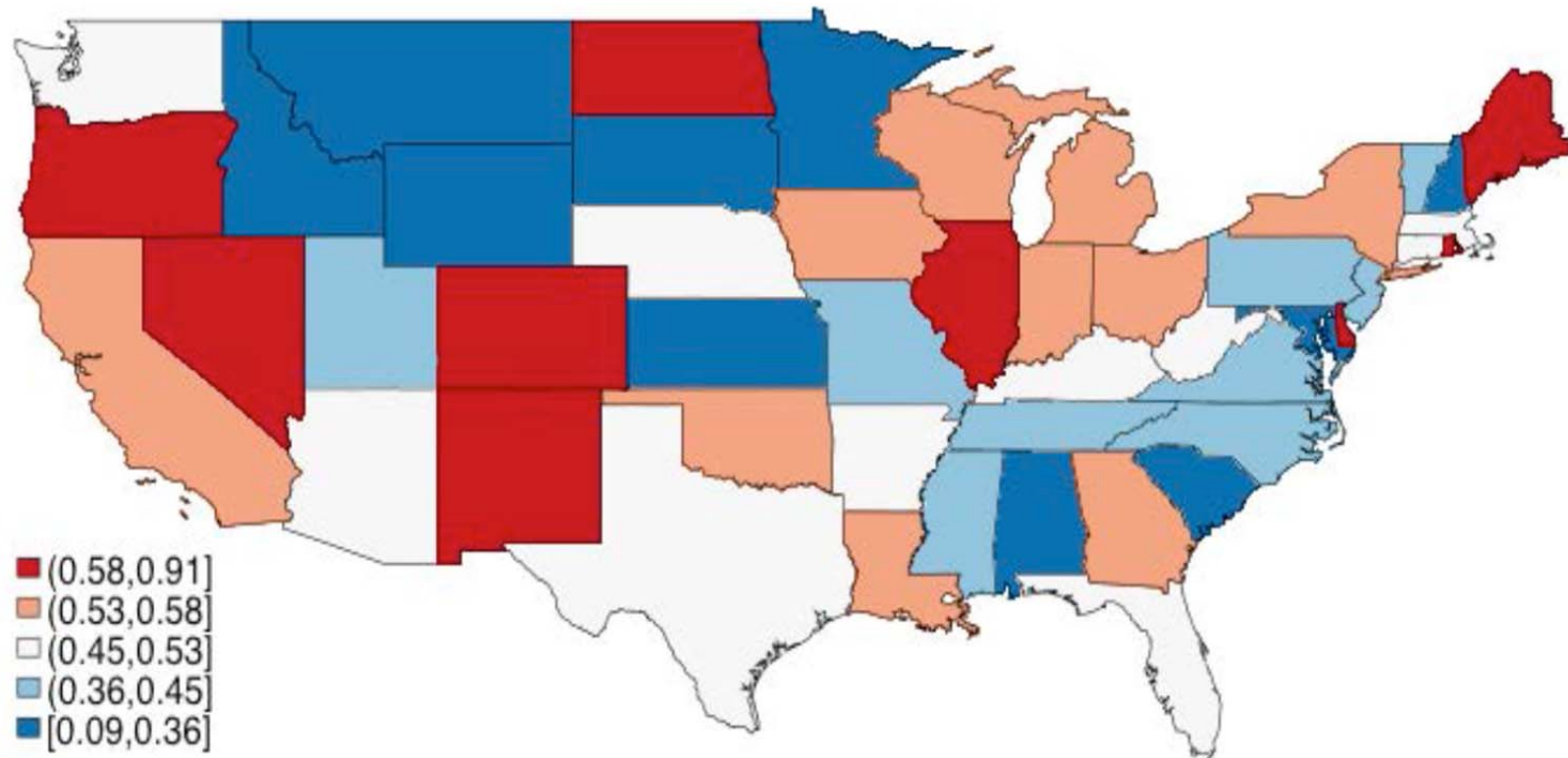
†Based on data for December 2012 and January 2015.

§Total may not foot due to rounding.

Sources: Workforce data from Medicare National Plan & Provider Enumeration System (NPPES). Population data from U.S. Census Bureau (estimates for July 2013). Calculations by ASA Health Policy Research Department.

FIGURE 6

PROPORTION OF ANESTHESIOLOGISTS REPORTING A NEED FOR MORE ANESTHESIOLOGISTS* BY STATE
From 2014 RAND Research Report: *The Anesthesiologist Workforce in 2013*

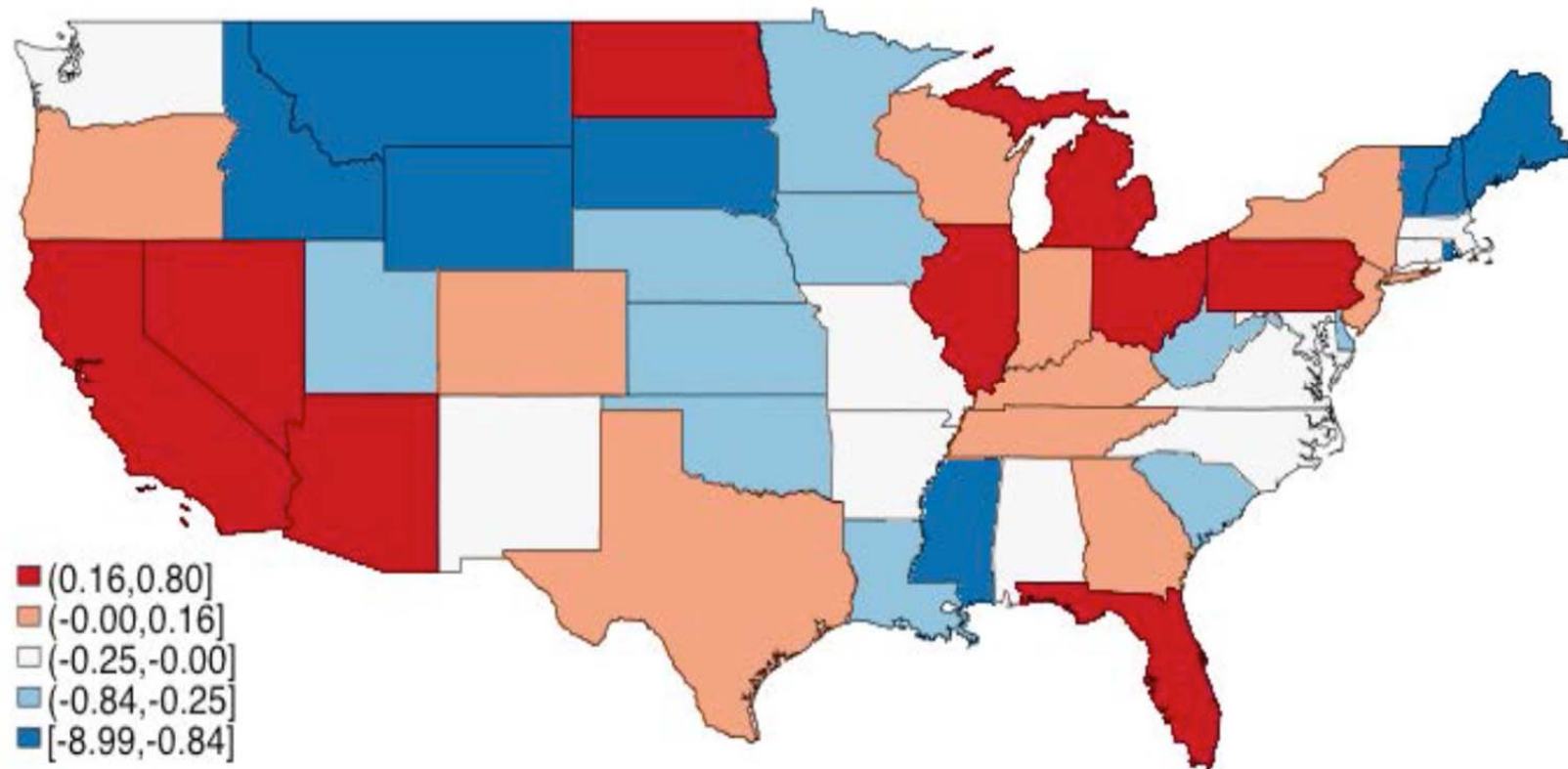


In the legend above, square brackets indicate that the endpoint number is included in the range; parentheses indicate that the endpoint is not included in the range.

*Defined as respondents who reported “My facility would prefer more anesthesiologists to cover current demand.”

Source: The RAND Corporation: *The Anesthesiologist Workforce in 2013*. RAND Research Report 2014.
[http://www.rand.org/pubs/research_reports/RR650.html]

FIGURE 7
SHORTAGE OF ANESTHESIOLOGISTS BY STATE
 From 2014 RAND Research Report: *The Anesthesiologist Workforce in 2013*



NOTES: Based on results from a survey conducted by RAND in April and May of 2013. The numbers in the bracket represent the shortage of anesthesiologists divided by the total number of anesthesiologists in the state (full time equivalents). RAND aggregated a series of shortage indicators from their survey (e.g. facility prefers more anesthesiologists, number of open anesthesiologist positions, elasticity of labor supply, change in wages) into a single shortage variable which they used to estimate the probability that a state is in shortage. Dark red states have a shortage, while darker blue states have a greater surplus. In the legend, square brackets indicate that the endpoint number is included in the range; parentheses indicate that the endpoint is not included in the range.

Source: The RAND Corporation: *The Anesthesiologist Workforce in 2013*. RAND Research Report 2014.
[\[http://www.rand.org/pubs/research_reports/RR650.html\]](http://www.rand.org/pubs/research_reports/RR650.html)

Health Policy Research Department and Supplemental Information

The ASA Health Policy Research Department (HPRD) will provide regular updates to the caucus workforce summaries. If you have any questions or feedback regarding this inaugural report or the data upon which it is based, please email an HPRD staff member listed below or send your comments, suggestions and questions to ask.HPR@asahq.org. Additional anesthesia workforce data may be available through state medical boards and societies. HPRD encourages ASA members to reach out to these organizations to identify available resources.

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**Additional references for selected
supplemental workforce
information are provided
on the following page.**

For information about other ongoing HPR projects, visit:

<http://www.asahq.org/resources/quality-improvement/health-policy-research/hpr-projects>

To view HPR Policy Briefs, NEWSLETTER Articles, Reports and other documents, visit:

<http://www.asahq.org/resources/quality-improvement/health-policy-research/hpr-resources>

Selected Additional Workforce References

Brief Description	Reference
ACGME Resource Book	Accreditation Council for Graduate Medical Education: ACGME Data Resource Book, Academic Year 2013-2014. 2014: Chicago, IL.
AAMC: Two reports	Association of American Medical Colleges (www.aamc.org/data/workforce) (1) 2013 State Physician Workforce Data Book. 2013: Washington, DC. (2) Recent Studies and Reports on Physician Shortages in the US. 2012: Washington, DC.
Example of state analysis: CA	California HealthCare Foundation (www.chcf.org/publications/2014/03/california-physicians) California Physicians: Surplus or Scarcity? 2014: Oakland, CA.
JAMA article	Cooper RA: Unraveling the physician supply dilemma. JAMA 2013;310(18):1931-2.
Anesthesia job postings	GasWork.com (www.gaswork.com/section/Anesthesiologist)
Example of state analysis: MA	Massachusetts Medical Society. (www.massmed.org/workforce2013) 2013 MMS Physician Workforce Study.
Article by ASA member	Schubert A, Eckhout GV, Ngo AL, Tremper KK, Peterson MD: Status of the anesthesia workforce in 2011: Evolution during the last decade and future outlook. Anesthesia and Analgesia 2012; 115(2):407-27.
Resource and example of state analysis: NY	State University of New York at Albany Center for Health Workforce Studies (http://chws.albany.edu) New York Physician Supply and Demand through 2030. 2009: Albany, NY.
Resource: BLS	United States Bureau of Labor Statistics (www.bls.gov).
HRSA report on methodology in workforce studies	United States Department of Health and Human Services, Health Resources and Services Administration, Council on Graduate Medical Education Resource Paper: Evaluation of Specialty Physician Workforce Methodologies. 2000: Washington, DC.
HRSA report noting shortages	United States Department of Health and Human Services, Health Resources and Services Administration: Physician Supply and Demand: Projections to 2020. 2006: Washington, DC.
Resource	University of North Carolina Cecil G. Sheps Center for Health Services Research (www.healthworkforce.unc.edu).
Example of state analysis: UT	Utah Medical Education Council (www.utahmec.org) Utah's Physician Workforce, 2012: A Study on the Supply and Distribution of Physicians in Utah. 2012.
State medical boards data	Young A, Chaudhry HJ, Rhyne J, Dugan M: A census of actively licensed physicians in the United States, 2010. Journal of Medical Regulation 2011; 96(4):10-20.

APPENDIX A
DESCRIPTIONS OF DATA SOURCES

 DESCRIPTIONS OF DATA SOURCES

NPPES Downloadable File

(<https://nppes.cms.hhs.gov>)

NOTE: ASA HPRD has monthly data beginning December 2012

Established as a standard in 2004, the National Provider Identifier (NPI) is a 10-digit unique identification number assigned to health care providers created to improve electronic transmission of health information. NPI identifiers are assigned, maintained and updated using the National Plan & Provider Enumeration System (NPPES) which disseminates the NPPES Downloadable File. Downloadable files are available as full replacement monthly files or weekly incremental files.

NPI Taxonomies used for this report: (The professional's primary taxonomy was used to assign the specialty.)

Anesthesiologist Assistant (367H00000X), **Anesthesiology Pain** (207LP2900X), **Nurse Anesthetist** (367500000X), **Pain Medicine** (208VP0014X, 208VP0000X), **Physician Anesthesiologist** (207L00000X, 207LA0401X, 207LC0200X, 207LH0002X, 207LP30000X), **Surgeon** (208C00000X, 207T00000X, 207W00000X, 204E00000X, 207X00000X, 207XS0114X, 207XX0004X, 207XS0106X, 207XS0117X, 207XX0801X, 207XP3100X, 207Y00000X, 207YS0123X, 207YX0602X, 207YX0905X, 207YX0901X, 207YP0228X, 207YX0007X, 207YS0012X, 208200000X, 2082S0099X, 2082S0105X, 208600000X, 2086S0120X, 2086S0122X, 2086S0105X, 2086S0102X, 2086X0206X, 2086S0127X, 2086S0129X, 208G00000X, 204F00000X, 208800000X, 2088F0040X, 2088P0231X), **Gastroenterology** (207RG0100X, 2080P0206X), and **OB/GYN** (207V00000X, 207VB0002X, 207VF0040X, 207VX0201X, 207VG0400X, 207VM0101X, 207VX0000X).

Physician Compare National Downloadable File

(www.medicare.gov/physiciancompare)

NOTE: Only 2013 dataset is available as of Feb 2015.

The Physician Compare National Downloadable file contains data about physicians and other health care professionals currently enrolled in Medicare. This file is an extension of the Physician Compare website established by the Centers for Medicare & Medicaid Services (CMS) as required by the Section 10331 of the Patient Protection and Affordable Care Act (ACA) of 2010. This information is being made available to help consumers make informed decisions and to improve physician performance. The Physician Compare data was first made available to the public in March 2014 and is updated quarterly.

Specialties used for this report:

Anesthesiology, Certified Registered Nurse Anesthetist, and Anesthesiologist Assistant

American Medical Association Physician Masterfile

(www.ama-assn.org/go/masterfile)

Established in 1906, the AMA Physician Masterfile includes current and historical data for over 1.4 million physicians, residents and medical students in the U.S. Physicians are presented with their Masterfile information and asked to submit updates through electronic or written methods. It is maintained by the AMA Division of Survey and Data Resources. The AMA aggregates data from the Physician Masterfile into *Physician Characteristics and Distribution in the U.S.*, an annual publication that includes a variety of data elements about national, international and state physician workforces.

Specialties used for this report:

Anesthesiology, Colon and Rectal Surgery, Gastroenterology, General Surgery, Neurological Surgery, Obstetrics & Gynecology, Ophthalmology, Orthopedic Surgery, Otolaryngology, Plastic Surgery, Thoracic Surgery, and Transplant Surgery.

APPENDIX B
SUPPLEMENTAL DATA: POPULATION AND SURGICAL WORKFORCE

TABLE B1
2013 POPULATION BY STATE AND CHANGE FROM 2008

State	2013 Population			Five-Year Change in Population (%)†	
	Total	65+	%65+	Total	65+
Delaware	925,749	147,484	15.9	6.0	21.2
District of Columbia	646,449	73,422	11.4	9.2	3.9
Maryland	5,928,814	794,981	13.4	5.2	17.0
New Jersey	8,899,339	1,283,468	14.4	2.5	11.5
New York	19,651,127	2,832,481	14.4	0.8	8.6
Pennsylvania	12,773,801	2,091,330	16.4	2.6	9.5
Virginia	8,260,405	1,105,381	13.4	6.3	17.5
West Virginia	<u>1,854,304</u>	<u>320,041</u>	17.3	2.2	12.3
Mid-Atlantic Caucus	58,939,988	8,648,588	14.7	2.9	11.4
Other Caucuses	<u>257,188,851</u>	<u>36,055,486</u>	14.0	4.2	15.9
Total U.S.	316,128,839	44,704,074	14.1	4.0	15.0

†Based on U.S. Census population estimates for July 2008 and July 2013.

Source: U.S. Census Bureau (estimates for July 2013 and July 2008). Calculations by ASA Health Policy Research Department.

TABLE B2
SURGICAL WORKFORCE BASED ON NPI AND AMA DATA

State	Number of Surgeons Based on NPI Data, 2015				Number of Surgeons Based on AMA Data*, 2013			
	GI [§]	OB/GYN	Other Surgeons [†]	TOTAL	GI [§]	OB/GYN	Other Surgeons [†]	TOTAL
Delaware	36	130	366	532	36	93	311	440
District of Columbia	102	217	601	920	70	206	669	945
Maryland	373	991	2,755	4,119	345	1,146	3,123	4,614
New Jersey	542	1,289	3,439	5,270	534	1,474	3,654	5,662
New York	1,430	3,257	8,906	13,593	1,346	3,573	10,166	15,085
Pennsylvania	794	1,972	6,797	9,563	673	1,709	5,911	8,293
Virginia	345	1,037	2,771	4,153	359	1,220	3,107	4,686
West Virginia	67	203	702	972	57	190	730	977
Mid-Atlantic Caucus	3,689	9,096	26,337	39,122	3,420	9,611	27,671	40,702
Other Caucuses	<u>11,655</u>	<u>32,663</u>	<u>98,215</u>	<u>142,533</u>	<u>10,176</u>	<u>32,764</u>	<u>96,187</u>	<u>139,127</u>
Total U.S.	15,344	41,759	124,552	181,655	13,596	42,375	123,858	179,829

*Includes physicians who self-reported as being involved in patient care activity.

[§]Gastroenterology

[†]Other Surgeons include the following surgical specialties: Colon and Rectal Surgery, General Surgery, Neurological Surgery, Ophthalmology, Orthopedic Surgery, Otolaryngology, Plastic Surgery, Thoracic Surgery and Urology, and Transplant Surgery.

Sources: Medicare National Plan & Provider Enumeration System (NPPES) and American Medical Association's *Physician Characteristics and Distribution in the US (2015 edition)*. Calculations by ASA Health Policy Research Department.