

Issue brief: Independent nursing practice

Where do advance practice nurses (APRNs) practice independently?

There are 15 states¹ where APRNs have the statutory authority to practice without a written practice agreement with a supervising physician. The Center to Champion Nursing calls these the “independent practice” states, but it is not clear whether any APRNs are actually practicing independently.

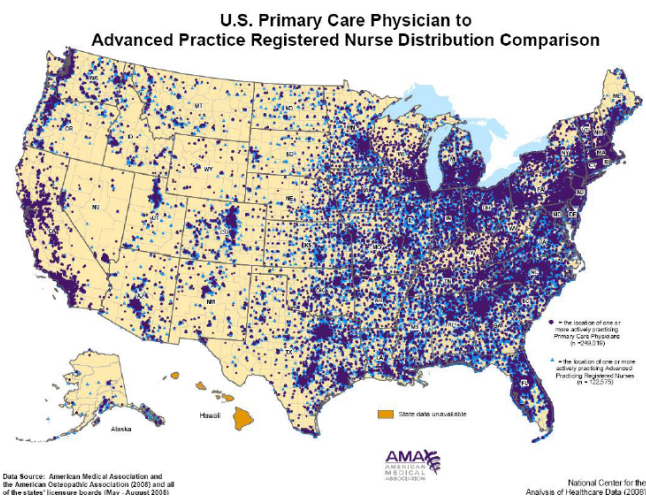
In fact, the answer to this “independent nursing practice” question depends on whether the issue is one of statutory authority versus actual practice. In conversations with nearly 40 state nursing boards, it was not clear whether there are any records of APRNs who practice as solo practitioners.²

The American Medical Association (AMA) is not surprised because physicians and APRNs have a long history of working closely together in a physician-led, team-based setting to ensure that patients receive the optimal level of care. The AMA believes that with a shortage of both physicians and nurses³ in the United States, patients benefit most with physician-led, team-based care and its ability to help ensure high-quality, cost-effective care.

Where do APRNs practice?

In reviewing the actual practice locations of U.S. primary care physicians compared to APRNs, it is clear that physicians and APRNs practice in the same, large urban areas.⁴

Furthermore, AMA research has found that the majority of states that allow independent APRN practice do not keep records showing which APRNs actually are practicing independently of physician



¹ Alaska, Arizona, Colorado, Hawaii, Idaho, Iowa, Maine, Montana, New Hampshire, New Mexico, North Dakota, Oregon, Rhode Island, Vermont and Washington

² AMA staff contacted the nursing boards of 36 states via telephone from June-August 2010. Of the 23 states that allow nurse practitioners to practice independently in some circumstances, AMA staff spoke with the nursing boards of 17. Only four of those states reported that they collect information regarding the capacity in which nurse practitioners are practicing: North Dakota, New Hampshire, Oklahoma, and West Virginia.

³ There is a projected shortage of 260,000 nurses by 2025. See American Association of Colleges of Nursing <http://www.aacn.nche.edu/media/factsheets/nursingshortage.htm> (last visited Sept. 10, 2010); and 124,000–159,000 physicians by 2025. See Association of American Medical Colleges, <http://www.aamc.org/newsroom/presskits/physicianshortagefs.pdf> (last visited Sept. 10, 2010).

⁴ The map comparing the practice locations of U.S. primary care physicians to advanced practice nurses also is available on an individual state-by-state basis to medical society representatives at www.ama-assn.org/go/geomaps

supervision or collaboration.⁵ Only a handful of states even require APRNs to submit information regarding their places of employment.⁶ Those that reported collecting information regarding an APRN's place of employment do not keep a running count of the number of independently practicing APRNs.⁷

APRN prescriptive authority varies by state

While all jurisdictions allow APRNs to prescribe legend drugs,⁸ there is wide variation among the states with respect to authority to prescribe controlled substances.⁹

- Four jurisdictions do not allow APRNs to prescribe controlled substances;¹⁰
- Seven jurisdictions allow APRNs to prescribe only schedule III-V controlled substances;¹¹ and
- Forty allow APRNs to prescribe schedules II-V, with several placing restrictions on the authority to prescribe schedule II controlled substances.¹²

APRN pharmacological educational requirements vary by state

Another area in which state regulation shows inconsistency is the pharmacological education APRNs must complete in order to receive prescriptive authority. Generally:

- Seven states have no pharmacological education requirements;¹³

⁵ AMA staff were able to contact the nursing boards of 36 states via telephone from June-August 2010. Of the 23 states that allow nurse practitioners to practice independently in some circumstances, AMA staff spoke with the nursing boards of 17. Only four of those states reported that they collect information regarding the capacity in which nurse practitioners are practicing: North Dakota, New Hampshire, Oklahoma, and West Virginia.

⁶ Five states—North Dakota, New Hampshire, Oklahoma, Oregon, and West Virginia—reported that they collect information regarding where nurse practitioners practice. Of these, only four are able to discern whether nurse practitioners are practicing independently: Oregon collects information regarding only the *place* of employment, but not the capacity in which nurse practitioners practice.

⁷ Of the four states that reported collecting information regarding the capacity in which nurse practitioners practice, none kept a running count of nurse practitioners practicing independently.

⁸ “Legend drugs” are those that may be dispensed only on prescription, but that are not regulated under the federal Controlled Substances Act, i.e., those that are not listed in schedules I-V.

⁹ “Controlled substances” are those that are regulated under the federal Controlled Substances Act because of their potential for abuse. Controlled substances are placed into one of five schedules based on the substance's medical use, potential for abuse, and safety or dependence liability. Schedule I means a high potential for abuse with no accepted medical use, and contains illicit drugs like heroin and LSD. Schedule II means a high potential for abuse, but with a currently accepted medical use, e.g., morphine. Schedule III has less potential for abuse, and includes drugs like anabolic steroids and codeine. Schedule IV has a low potential for abuse and includes drugs like Valium and Xanax. Schedule V has an even lower potential for abuse than Schedule IV, and includes cough medicines with codeine. DEA website, Drugs of Abuse publication, Chapter 1, <http://www.justice.gov/dea/pubs/abuse/1-csa.htm>.

¹⁰ The four states are Alabama, Florida, Hawaii, and Missouri.

¹¹ Nurse practitioners may prescribe schedule III-V, but not schedule II controlled substances in the following states: Arkansas, Georgia, Illinois, Oklahoma, South Carolina, Texas, and West Virginia.

¹² Several states severely restrict nurse practitioners' ability to prescribe controlled substances. For example, in Ohio, nurse practitioners may prescribe Schedule II drugs only for a patient with a terminal condition, only if the nurse's collaborating physician initially prescribed the substance for the patient, and only in an amount that does not exceed the amount necessary for the patient's use in a single, twenty-four-hour period. O.R.C. 4723.481 (C).

- Fourteen states require APRNs to complete pharmacology-related courses as part of an ARNP program prior to licensure;¹⁴
- Twenty-nine states require some form of additional pharmacology instruction for prescriptive authority;¹⁵
- Four states require additional education relating to controlled substances for controlled substance prescriptive authority;¹⁶ and
- Five states require a mentorship or preceptorship period to be eligible for prescriptive authority.¹⁷

Education, training and teamwork matter

The key difference between medical and nursing education and training is the fact that medical students spend four years focusing on the entire human body and all of its systems—organ, endocrine, biomedical, and more—before undertaking three-to-seven years of residency training to further develop and refine their ability to safely evaluate, diagnose, treat and manage a patient’s full range of medical conditions and needs. In sum, a physician undertakes more than 10,000 hours of clinical education and training by the time he or she is finished with a residency program.

To become an ARNP, there is an additional 2-3 years of training after nursing school. Unlike a physician’s educational track, which covers “all organ systems, and include the important aspects of preventive, acute, chronic, continuing, rehabilitative, and end-of-life care,”¹⁸ “[t]he educational requirements for advanced practice [nurses] vary for each specialty, across States and over time.”¹⁹ According to the Institute of Medicine Future of Nursing report, APRNs have 500-720 total patient care hours required through their training.²⁰

¹³ The following six jurisdictions have neither specific pharmacological educational requirements for APN licensure, nor specific educational requirements for prescriptive authority: D.C., Florida, Iowa, Kentucky, Michigan, Minnesota, and South Dakota.

¹⁴ Pharmacological education requirements for APN licensure range from an unspecified amount of pharmacology instruction (e.g., Alabama, Ala. Admin. Code 610-X-3-.02 (9)(e)(iii); Georgia, Ga. Admin. Code 410-12-.03 (3)(b); and Kansas, K.S.A. § 60-11-103 (f)) on the low end, to 45 contact hours of pharmacological instruction (Maine, CMR 02-380-008 § 2 (D); New Jersey, N.J.A.C. § 13:37-7.2 (c)&(d)) on the high end.

¹⁵ The amount of pharmacological education required specifically for prescriptive authority ranges from an unspecified amount of instruction as part of an advanced nursing program (e.g., Texas, T.A.C. § 222.2 (a)(2)(A)), to 90 contact hours of advanced education (Louisiana, 46 LAC XLVII § 4513 (D)(1)(d)).

¹⁶ The four states are California (for schedule II controlled substances only), Louisiana, Mississippi, and South Carolina.

¹⁷ For example, Colorado requires an 1,800 hour preceptorship followed by an 1,800 hour mentorship. Colo. Rev. Stat. 12-38-111.6 (4.5)(a)&(b). Other states requiring a preceptorship: California, Louisiana, New Mexico and Ohio.

¹⁸ Liaison Committee on Medical Education. Functions and Structure of a Medical School. Standards for Accreditation of Medical Education Programs Leading to the M.D. Degree. June 2010. Available at <http://www.lcme.org/functions2010jun.pdf>

¹⁹ The Registered Nurse Population. Initial Findings from the 2008 National Sample Survey of Registered Nurses <http://bhpr.hrsa.gov/healthworkforce/rnsurvey/initialfindings2008.pdf> at 18.

²⁰ Nurse practitioners and clinical nurse specialists may qualify for certification after completing a master’s degree, post-master’s coursework, or doctoral degree through an accredited nursing program ... [with] at least 500 hours of faculty-supervised clinical training within a program of study. <http://www.iom.edu/Reports/2010/The-Future-of-Nursing-Leading-Change-Advancing-Health.aspx>

The AMA highly values the contributions that APRNs – and all nurses – make to the U.S. health care system. While APRN advocacy organizations advocate for the elimination of team-based protocols between physicians and APRNs, however, the AMA believes that policymakers serve patients best by supporting team-based care that makes the most of the respective education and training of physicians and APRNs. To that end, the stands ready to assist policymakers in their efforts to preserve the highest quality of care and protect the safety of patients.



Number and Distribution of Anesthesiologists and CRNAs, 2010
Based on Data from the Area Resource File

Thomas R. Miller
Director of Health Policy Research

November 9, 2012

This report is confidential and intended for selected members of the leadership of the American Society of Anesthesiologists. If you received a copy of this report in error, please properly dispose of the e-mail and any hard copies. The ASA makes no warranties regarding the accuracy or correctness of, nor should anyone rely upon, the information in this document.

Introduction

This brief report provides data on the number and distribution of anesthesiologists and nurse anesthetists (CRNAs) in 2010 based on data from the Area Resource File (ARF). ARF is provided by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Health Professions website (<http://arf.hrsa.gov/>). ARF is a national county-level health resource information database and is used often in health services research studies, despite some reported limitations in the accuracy of the data.

The anesthesiologists supply data provided in this report are based on anesthesiologists classified as being in **patient care** activities. That is, the data exclude those anesthesiologists dedicated to administration, teaching, research, etc. The total number of patient care related anesthesiologists reported in ARF for 2010 is approximately five percent less than the number in patient care activities currently reported by the AMA.

Although the most recent ARF data reflect 2010 supply numbers, the data are readily available and thus useful for preliminary analyses. Still, ARF is just one source of these supply data. In the future, we will use ASA data, AMA data, and the NPI database, along with Medicare claims data, to supplement and enhance the integrity of our supply data on anesthesiologists and CRNAs.

The tables that follow summarize data at the state level, alphabetically by state and then ranked by total number of anesthesiologists and CRNAs, supply rates per population, ratio of anesthesiologists to CRNAs, and ratio of CRNAs to anesthesiologists. These data are also available at the county level (not shown in this report).

Table 1
Number and Distribution of Anesthesiologists and CRNAs by State
2010, as Reported in the Area Resource File
States Listed Alphabetically

State	AN¹	NA²	Total	Per 100k³	AN/NA⁴	NA/AN⁵
Alabama	482	1,180	1,662	34.77	0.408	2.448
Alaska	74	41	115	16.19	1.805	0.554
Arizona	917	233	1,150	17.99	3.936	0.254
Arkansas	269	346	615	21.09	0.777	1.286
California	5,121	1,125	6,246	16.77	4.552	0.220
Colorado	737	329	1,066	21.20	2.240	0.446
Connecticut	563	430	993	27.78	1.309	0.764
Delaware	84	234	318	35.41	0.359	2.786
D. C.	172	65	237	39.39	2.646	0.378
Florida	2,569	2,848	5,417	28.81	0.902	1.109
Georgia	963	1,053	2,016	20.81	0.915	1.093
Hawaii	151	98	249	18.30	1.541	0.649
Idaho	106	196	302	19.27	0.541	1.849
Illinois	1,837	1,029	2,866	22.34	1.785	0.560
Indiana	973	269	1,242	19.16	3.617	0.276
Iowa	296	310	606	19.89	0.955	1.047
Kansas	332	469	801	28.07	0.708	1.413
Kentucky	535	706	1,241	28.60	0.758	1.320
Louisiana	529	1,067	1,596	35.21	0.496	2.017
Maine	173	253	426	32.07	0.684	1.462
Maryland	1,009	418	1,427	24.72	2.414	0.414
Massachusetts	1,387	640	2,027	30.96	2.167	0.461
Michigan	1,014	1,848	2,862	28.96	0.549	1.822
Minnesota	589	1,505	2,094	39.48	0.391	2.555
Mississippi	243	507	750	25.28	0.479	2.086
Missouri	703	1,084	1,787	29.84	0.649	1.542
Montana	124	69	193	19.51	1.797	0.556
Nebraska	230	289	519	28.42	0.796	1.257
Nevada	361	81	442	16.37	4.457	0.224
New Hampshire	190	161	351	26.66	1.180	0.847
New Jersey	1,480	462	1,942	22.09	3.203	0.312
New Mexico	216	152	368	17.87	1.421	0.704
New York	3,553	1,027	4,580	23.63	3.460	0.289
North Carolina	971	2,016	2,987	31.33	0.482	2.076

continued...

State	AN ¹	NA ²	Total	Per 100k ³	AN/NA ⁴	NA/AN ⁵
<i>continued from page 3</i>						
North Dakota	59	224	283	42.08	0.263	3.797
Ohio	1,503	1,656	3,159	27.38	0.908	1.102
Oklahoma	363	319	682	18.18	1.138	0.879
Oregon	572	225	797	20.80	2.542	0.393
Pennsylvania	1,747	2,703	4,450	35.03	0.646	1.547
Rhode Island	111	137	248	23.56	0.810	1.234
South Carolina	483	927	1,410	30.48	0.521	1.919
South Dakota	66	287	353	43.36	0.230	4.348
Tennessee	758	1,504	2,262	35.64	0.504	1.984
Texas	3,195	2,551	5,746	22.85	1.252	0.798
Utah	358	153	511	18.49	2.340	0.427
Vermont	102	24	126	20.14	4.250	0.235
Virginia	940	905	1,845	23.06	1.039	0.963
Washington	1,006	394	1,400	20.82	2.553	0.392
West Virginia	152	420	572	30.87	0.362	2.763
Wisconsin	816	564	1,380	24.27	1.447	0.691
Wyoming	<u>52</u>	<u>37</u>	<u>89</u>	15.79	1.405	0.712
TOTAL U.S.	41,236	35,570	76,806	24.88	1.159	0.863

¹Reported number of Anesthesiologists in patient care activities. A total of 42,230 anesthesiologists were reported in ARF for 2010. The patient care related number excludes those classified as being full-time in research, teaching, administration, and other.

²Reported number of CRNAs “with NPIs” in ARF for 2010. The ARF reported 33,389 CRNAs in 2009, with no “with NPI” qualification.

³Total number of anesthesiologists and CRNAs divided by population in 100,000s. Population data in ARF reported as 2010 census data.

⁴Ratio of anesthesiologists to CRNAs.

⁵Ratio of CRNAs to anesthesiologists.

Table 2
Number and Distribution of Anesthesiologists and CRNAs by State
2010, as Reported in the Area Resource File
States Listed in Descending Order by Total Number of Anesthesiologists and CRNAs

State	AN¹	NA²	Total	Per 100k³	AN/NA⁴	NA/AN⁵
California	5,121	1,125	6,246	16.77	4.552	0.220
Texas	3,195	2,551	5,746	22.85	1.252	0.798
Florida	2,569	2,848	5,417	28.81	0.902	1.109
New York	3,553	1,027	4,580	23.63	3.460	0.289
Pennsylvania	1,747	2,703	4,450	35.03	0.646	1.547
Ohio	1,503	1,656	3,159	27.38	0.908	1.102
North Carolina	971	2,016	2,987	31.33	0.482	2.076
Illinois	1,837	1,029	2,866	22.34	1.785	0.560
Michigan	1,014	1,848	2,862	28.96	0.549	1.822
Tennessee	758	1,504	2,262	35.64	0.504	1.984
Minnesota	589	1,505	2,094	39.48	0.391	2.555
Massachusetts	1,387	640	2,027	30.96	2.167	0.461
Georgia	963	1,053	2,016	20.81	0.915	1.093
New Jersey	1,480	462	1,942	22.09	3.203	0.312
Virginia	940	905	1,845	23.06	1.039	0.963
Missouri	703	1,084	1,787	29.84	0.649	1.542
Alabama	482	1,180	1,662	34.77	0.408	2.448
Louisiana	529	1,067	1,596	35.21	0.496	2.017
Maryland	1,009	418	1,427	24.72	2.414	0.414
South Carolina	483	927	1,410	30.48	0.521	1.919
Washington	1,006	394	1,400	20.82	2.553	0.392
Wisconsin	816	564	1,380	24.27	1.447	0.691
Indiana	973	269	1,242	19.16	3.617	0.276
Kentucky	535	706	1,241	28.60	0.758	1.320
Arizona	917	233	1,150	17.99	3.936	0.254
Colorado	737	329	1,066	21.20	2.240	0.446
Connecticut	563	430	993	27.78	1.309	0.764
Kansas	332	469	801	28.07	0.708	1.413
Oregon	572	225	797	20.80	2.542	0.393
Mississippi	243	507	750	25.28	0.479	2.086
Oklahoma	363	319	682	18.18	1.138	0.879
Arkansas	269	346	615	21.09	0.777	1.286
Iowa	296	310	606	19.89	0.955	1.047
West Virginia	152	420	572	30.87	0.362	2.763

continued...

State	AN ¹	NA ²	Total	Per 100k ³	AN/NA ⁴	NA/AN ⁵
<i>continued from page 5</i>						
Nebraska	230	289	519	28.42	0.796	1.257
Utah	358	153	511	18.49	2.340	0.427
Nevada	361	81	442	16.37	4.457	0.224
Maine	173	253	426	32.07	0.684	1.462
New Mexico	216	152	368	17.87	1.421	0.704
South Dakota	66	287	353	43.36	0.230	4.348
New Hampshire	190	161	351	26.66	1.180	0.847
Delaware	84	234	318	35.41	0.359	2.786
Idaho	106	196	302	19.27	0.541	1.849
North Dakota	59	224	283	42.08	0.263	3.797
Hawaii	151	98	249	18.30	1.541	0.649
Rhode Island	111	137	248	23.56	0.810	1.234
D. C.	172	65	237	39.39	2.646	0.378
Montana	124	69	193	19.51	1.797	0.556
Vermont	102	24	126	20.14	4.250	0.235
Alaska	74	41	115	16.19	1.805	0.554
Wyoming	<u>52</u>	<u>37</u>	<u>89</u>	15.79	1.405	0.712
TOTAL U.S.	41,236	35,570	76,806	24.88	1.159	0.863

¹Reported number of Anesthesiologists in patient care activities. A total of 42,230 anesthesiologists were reported in ARF for 2010. The patient care related number excludes those classified as being full-time in research, teaching, administration, and other.

²Reported number of CRNAs “with NPIs” in ARF for 2010. The ARF reported 33,389 CRNAs in 2009, with no “with NPI” qualification.

³Total number of anesthesiologists and CRNAs divided by population in 100,000s. Population data in ARF reported as 2010 census data.

⁴Ratio of anesthesiologists to CRNAs.

⁵Ratio of CRNAs to anesthesiologists.

Table 3**Number and Distribution of Anesthesiologists and CRNAs by State
2010, as Reported in the Area Resource File**

States Listed in Descending Order by Total Number of Anesthesiologists and CRNAs per 100,000 Population

State	AN¹	NA²	Total	Per 100k³	AN/NA⁴	NA/AN⁵
Rhode Island	111	137	248	23.56	0.810	1.234
Virginia	940	905	1,845	23.06	1.039	0.963
Illinois	1,837	1,029	2,866	22.34	1.785	0.560
New Jersey	1,480	462	1,942	22.09	3.203	0.312
Colorado	737	329	1,066	21.20	2.240	0.446
Arkansas	269	346	615	21.09	0.777	1.286
Vermont	102	24	126	20.14	4.250	0.235
Montana	124	69	193	19.51	1.797	0.556
Idaho	106	196	302	19.27	0.541	1.849
Indiana	973	269	1,242	19.16	3.617	0.276
Utah	358	153	511	18.49	2.340	0.427
Hawaii	151	98	249	18.30	1.541	0.649
Oklahoma	363	319	682	18.18	1.138	0.879
Nevada	361	81	442	16.37	4.457	0.224
Alaska	74	41	115	16.19	1.805	0.554
Kansas	332	469	801	28.07	0.708	1.413
North Dakota	59	224	283	42.08	0.263	3.797
Pennsylvania	1,747	2,703	4,450	35.03	0.646	1.547
Maine	173	253	426	32.07	0.684	1.462
Alabama	482	1,180	1,662	34.77	0.408	2.448
Arizona	917	233	1,150	17.99	3.936	0.254
California	5,121	1,125	6,246	16.77	4.552	0.220
Connecticut	563	430	993	27.78	1.309	0.764
Delaware	84	234	318	35.41	0.359	2.786
D. C.	172	65	237	39.39	2.646	0.378
Florida	2,569	2,848	5,417	28.81	0.902	1.109
Georgia	963	1,053	2,016	20.81	0.915	1.093
Iowa	296	310	606	19.89	0.955	1.047
Kentucky	535	706	1,241	28.60	0.758	1.320
Louisiana	529	1,067	1,596	35.21	0.496	2.017
Maryland	1,009	418	1,427	24.72	2.414	0.414
Massachusetts	1,387	640	2,027	30.96	2.167	0.461
Michigan	1,014	1,848	2,862	28.96	0.549	1.822
Minnesota	589	1,505	2,094	39.48	0.391	2.555

continued...

State	AN ¹	NA ²	Total	Per 100k ³	AN/NA ⁴	NA/AN ⁵
<i>continued from page 7</i>						
Mississippi	243	507	750	25.28	0.479	2.086
Missouri	703	1,084	1,787	29.84	0.649	1.542
Nebraska	230	289	519	28.42	0.796	1.257
New Hampshire	190	161	351	26.66	1.180	0.847
New Mexico	216	152	368	17.87	1.421	0.704
New York	3,553	1,027	4,580	23.63	3.460	0.289
North Carolina	971	2,016	2,987	31.33	0.482	2.076
Ohio	1,503	1,656	3,159	27.38	0.908	1.102
Oregon	572	225	797	20.80	2.542	0.393
South Carolina	483	927	1,410	30.48	0.521	1.919
South Dakota	66	287	353	43.36	0.230	4.348
Tennessee	758	1,504	2,262	35.64	0.504	1.984
Texas	3,195	2,551	5,746	22.85	1.252	0.798
Washington	1,006	394	1,400	20.82	2.553	0.392
West Virginia	152	420	572	30.87	0.362	2.763
Wisconsin	816	564	1,380	24.27	1.447	0.691
Wyoming	52	37	89	15.79	1.405	0.712
TOTAL U.S.	41,236	35,570	76,806	24.88	1.159	0.863

¹Reported number of Anesthesiologists in patient care activities. A total of 42,230 anesthesiologists were reported in ARF for 2010. The patient care related number excludes those classified as being full-time in research, teaching, administration, and other.

²Reported number of CRNAs “with NPIs” in ARF for 2010. The ARF reported 33,389 CRNAs in 2009, with no “with NPI” qualification.

³Total number of anesthesiologists and CRNAs divided by population in 100,000s. Population data in ARF reported as 2010 census data.

⁴Ratio of anesthesiologists to CRNAs.

⁵Ratio of CRNAs to anesthesiologists.

Table 4
Number and Distribution of Anesthesiologists and CRNAs by State
2010, as Reported in the Area Resource File
States Listed in Descending Order by Ratio of Anesthesiologists to CRNAs

State	AN¹	NA²	Total	Per 100k³	AN/NA⁴	NA/AN⁵
California	5,121	1,125	6,246	16.77	4.552	0.220
Nevada	361	81	442	16.37	4.457	0.224
Vermont	102	24	126	20.14	4.250	0.235
Arizona	917	233	1,150	17.99	3.936	0.254
Indiana	973	269	1,242	19.16	3.617	0.276
New York	3,553	1,027	4,580	23.63	3.460	0.289
New Jersey	1,480	462	1,942	22.09	3.203	0.312
D. C.	172	65	237	39.39	2.646	0.378
Washington	1,006	394	1,400	20.82	2.553	0.392
Oregon	572	225	797	20.80	2.542	0.393
Maryland	1,009	418	1,427	24.72	2.414	0.414
Utah	358	153	511	18.49	2.340	0.427
Colorado	737	329	1,066	21.20	2.240	0.446
Massachusetts	1,387	640	2,027	30.96	2.167	0.461
Alaska	74	41	115	16.19	1.805	0.554
Montana	124	69	193	19.51	1.797	0.556
Illinois	1,837	1,029	2,866	22.34	1.785	0.560
Hawaii	151	98	249	18.30	1.541	0.649
Wisconsin	816	564	1,380	24.27	1.447	0.691
New Mexico	216	152	368	17.87	1.421	0.704
Wyoming	52	37	89	15.79	1.405	0.712
Connecticut	563	430	993	27.78	1.309	0.764
Texas	3,195	2,551	5,746	22.85	1.252	0.798
New Hampshire	190	161	351	26.66	1.180	0.847
Oklahoma	363	319	682	18.18	1.138	0.879
Virginia	940	905	1,845	23.06	1.039	0.963
Iowa	296	310	606	19.89	0.955	1.047
Georgia	963	1,053	2,016	20.81	0.915	1.093
Ohio	1,503	1,656	3,159	27.38	0.908	1.102
Florida	2,569	2,848	5,417	28.81	0.902	1.109
Rhode Island	111	137	248	23.56	0.810	1.234
Nebraska	230	289	519	28.42	0.796	1.257
Arkansas	269	346	615	21.09	0.777	1.286
Kentucky	535	706	1,241	28.60	0.758	1.320

continued...

State	AN ¹	NA ²	Total	Per 100k ³	AN/NA ⁴	NA/AN ⁵
<i>continued from page 9</i>						
Kansas	332	469	801	28.07	0.708	1.413
Maine	173	253	426	32.07	0.684	1.462
Missouri	703	1,084	1,787	29.84	0.649	1.542
Pennsylvania	1,747	2,703	4,450	35.03	0.646	1.547
Michigan	1,014	1,848	2,862	28.96	0.549	1.822
Idaho	106	196	302	19.27	0.541	1.849
South Carolina	483	927	1,410	30.48	0.521	1.919
Tennessee	758	1,504	2,262	35.64	0.504	1.984
Louisiana	529	1,067	1,596	35.21	0.496	2.017
North Carolina	971	2,016	2,987	31.33	0.482	2.076
Mississippi	243	507	750	25.28	0.479	2.086
Alabama	482	1,180	1,662	34.77	0.408	2.448
Minnesota	589	1,505	2,094	39.48	0.391	2.555
West Virginia	152	420	572	30.87	0.362	2.763
Delaware	84	234	318	35.41	0.359	2.786
North Dakota	59	224	283	42.08	0.263	3.797
South Dakota	<u>66</u>	<u>287</u>	<u>353</u>	43.36	0.230	4.348
TOTAL U.S.	41,236	35,570	76,806	24.88	1.159	0.863

¹Reported number of Anesthesiologists in patient care activities. A total of 42,230 anesthesiologists were reported in ARF for 2010. The patient care related number excludes those classified as being full-time in research, teaching, administration, and other.

²Reported number of CRNAs “with NPIs” in ARF for 2010. The ARF reported 33,389 CRNAs in 2009, with no “with NPI” qualification.

³Total number of anesthesiologists and CRNAs divided by population in 100,000s. Population data in ARF reported as 2010 census data.

⁴Ratio of anesthesiologists to CRNAs.

⁵Ratio of CRNAs to anesthesiologists.

Table 5
Number and Distribution of Anesthesiologists and CRNAs by State
2010, as Reported in the Area Resource File
States Listed in Descending Order by Ratio of CRNAs to Anesthesiologists

State	AN¹	NA²	Total	Per 100k³	AN/NA⁴	NA/AN⁵
South Dakota	66	287	353	43.36	0.230	4.348
North Dakota	59	224	283	42.08	0.263	3.797
Delaware	84	234	318	35.41	0.359	2.786
West Virginia	152	420	572	30.87	0.362	2.763
Minnesota	589	1,505	2,094	39.48	0.391	2.555
Alabama	482	1,180	1,662	34.77	0.408	2.448
Mississippi	243	507	750	25.28	0.479	2.086
North Carolina	971	2,016	2,987	31.33	0.482	2.076
Louisiana	529	1,067	1,596	35.21	0.496	2.017
Tennessee	758	1,504	2,262	35.64	0.504	1.984
South Carolina	483	927	1,410	30.48	0.521	1.919
Idaho	106	196	302	19.27	0.541	1.849
Michigan	1,014	1,848	2,862	28.96	0.549	1.822
Pennsylvania	1,747	2,703	4,450	35.03	0.646	1.547
Missouri	703	1,084	1,787	29.84	0.649	1.542
Maine	173	253	426	32.07	0.684	1.462
Kansas	332	469	801	28.07	0.708	1.413
Kentucky	535	706	1,241	28.60	0.758	1.320
Arkansas	269	346	615	21.09	0.777	1.286
Nebraska	230	289	519	28.42	0.796	1.257
Rhode Island	111	137	248	23.56	0.810	1.234
Florida	2,569	2,848	5,417	28.81	0.902	1.109
Ohio	1,503	1,656	3,159	27.38	0.908	1.102
Georgia	963	1,053	2,016	20.81	0.915	1.093
Iowa	296	310	606	19.89	0.955	1.047
Virginia	940	905	1,845	23.06	1.039	0.963
Oklahoma	363	319	682	18.18	1.138	0.879
New Hampshire	190	161	351	26.66	1.180	0.847
Texas	3,195	2,551	5,746	22.85	1.252	0.798
Connecticut	563	430	993	27.78	1.309	0.764
Wyoming	52	37	89	15.79	1.405	0.712
New Mexico	216	152	368	17.87	1.421	0.704
Wisconsin	816	564	1,380	24.27	1.447	0.691
Hawaii	151	98	249	18.30	1.541	0.649

continued...

State	AN ¹	NA ²	Total	Per 100k ³	AN/NA ⁴	NA/AN ⁵
<i>continued from page 11</i>						
Illinois	1,837	1,029	2,866	22.34	1.785	0.560
Montana	124	69	193	19.51	1.797	0.556
Alaska	74	41	115	16.19	1.805	0.554
Massachusetts	1,387	640	2,027	30.96	2.167	0.461
Colorado	737	329	1,066	21.20	2.240	0.446
Utah	358	153	511	18.49	2.340	0.427
Maryland	1,009	418	1,427	24.72	2.414	0.414
Oregon	572	225	797	20.80	2.542	0.393
Washington	1,006	394	1,400	20.82	2.553	0.392
D. C.	172	65	237	39.39	2.646	0.378
New Jersey	1,480	462	1,942	22.09	3.203	0.312
New York	3,553	1,027	4,580	23.63	3.460	0.289
Indiana	973	269	1,242	19.16	3.617	0.276
Arizona	917	233	1,150	17.99	3.936	0.254
Vermont	102	24	126	20.14	4.250	0.235
Nevada	361	81	442	16.37	4.457	0.224
California	<u>5,121</u>	<u>1,125</u>	<u>6,246</u>	16.77	4.552	0.220
TOTAL U.S.	41,236	35,570	76,806	24.88	1.159	0.863

¹Reported number of Anesthesiologists in patient care activities. A total of 42,230 anesthesiologists were reported in ARF for 2010. The patient care related number excludes those classified as being full-time in research, teaching, administration, and other.

²Reported number of CRNAs “with NPIs” in ARF for 2010. The ARF reported 33,389 CRNAs in 2009, with no “with NPI” qualification.

³Total number of anesthesiologists and CRNAs divided by population in 100,000s. Population data in ARF reported as 2010 census data.

⁴Ratio of anesthesiologists to CRNAs.

⁵Ratio of CRNAs to anesthesiologists.

Issue Brief: IOM Report on the Future of Nursing

Introduction

The American Medical Association (AMA) appreciates the efforts by the Institute of Medicine (IOM) to research and put forward recommendations on how to help ensure America's patients receive the highest quality, most cost-effective health care.

While the AMA has serious concerns with several areas of the IOM report, the AMA agrees with the IOM that:

- Physicians, physician assistants, nurses and all other health care professionals must work together in a coordinated, efficient manner to ensure patients receive the highest quality health care.
- The health care team must be patient centered. To quote the IOM report directly, teams “need to include patients and their families, as well as a variety of health professionals, including nurses, physicians, pharmacists, physical and occupational therapists, medical assistants, and social workers, among others.”
- Post-enactment of the Patient Protection and Affordable Care Act, policymakers are more in need than ever for data and other efforts in support of high quality, cost-effective and coordinated care. The IOM report identifies numerous areas where additional data will help policymakers better understand how to most effectively use health care resources.

This issue brief provides policymakers with three key points for further consideration as they evaluate the role of nursing in our health care system.

1. America's patients need everyone in the U.S. health care system to work together; roles should be based on education and training;
2. More data needed to ensure effective use of resources; and
3. Thoughtful workforce planning would benefit entire U.S. health care system.

America's patients need everyone in the U.S. health care system to work together; roles should be based on education and training

The AMA believes that a physician is in the best position to serve as the leader of the health care team.

- Physicians undertake more than 10,000 hours of clinical education and training during their four years of medical school and three-to-seven years of residency training. In comparison, advanced practice nurses (APRN) have only between 500-720 hours of nursing education and training.
- A physician-led health care team is a proven model to provide high quality, cost-effective care. In fact, the models identified by the IOM report, including the Kaiser Permanente Medical Group, Geisinger Health System and the Department of Veterans Affairs all are physician-led models that rely on many types of non-physicians, including APRNs.
- The AMA supports supervision of nurse practitioners and other health care professionals because it leads to higher quality care. For example, a May 2010 study in the American Journal of Emergency Medicine of acute asthma care provided by nurse practitioners and physician assistants (PA) found that unsupervised APRNs and PAs “were less likely” to administer needed inhalants, prescribe needed corticosteroids, and more likely to prescribe inappropriate antibiotics at discharge.

At a time when patients need increased care coordination to ensure the highest levels of care, the AMA believes emphasis should be placed on models of care that have a proven track record of success.

More data needed to ensure effective use of resources

The IOM reports that by 2020-2025, the nation's nursing shortage will be between 260,000–one million. The shortage is particularly in acute care, bedside settings and primary care. The AMA agrees with the IOM that the number of practicing nurses falls far short of today's needs and future demands. This begins at the bedside and includes increasing the number of nursing faculty across the country.

The AMA is concerned, however, that the IOM recommendations do not address the real trade-offs that would occur by transforming nursing education without having adequate factual support to ensure effective use of existing resources. Specifically:

- The IOM concedes that it did not have the data to support its recommendations: “As the committee considered how best to inform health care workforce policy and development, it realized it could not answer several basic questions about the workforce numbers and composition that will be needed by 2025.”
- The AMA advocates that decisions on how and where to expand the physician and nursing workforce must be made using current, reliable, data-driven and evidence-based strategies.

Advocacy Resource Center © 2011 American Medical Association. All rights reserved.

With respect to the physician workforce, the AMA is engaged with policy leaders at the state, regional and national level to develop medical workforce policies that address unmet physician workforce needs across geographic regions and specialty groups. In this regard, the AMA continues to advocate for increased funding for graduate medical education as well as targeted incentives that will improve patients' access to health care.

- While the IOM recommends eliminating the 2-year nursing associate degree, it also says that many of the nation's "rural and medically underserved communities depend heavily on nurses with associate's degrees to staff their hospitals, clinics, and long-term care facilities." The AMA urges further study to ensure that rural and underserved communities are not adversely affected by the IOM recommendations.

The AMA appreciates that the IOM believes that the nation's nursing shortage must be confronted with creative and aggressive solutions. The AMA believes, however, that those solutions should incorporate the best available evidence, which is necessary to ensure that those solutions do not exacerbate existing nursing shortages.

Thoughtful workforce planning would benefit entire U.S. health care system

Patients' access to care in rural and underserved areas are a serious concern. The IOM suggests that patients' access to care would increase by changing laws to make APRNs independent practitioners. The IOM report, however, fails to acknowledge several facts:

- No data exists to show that by changing laws to authorize APRN independent practice, APRNs will go to rural areas. In fact, IOM and AMA research both show that physicians and nurses all tend to work in the same large urban areas.
- The IOM advocates for greater numbers of APRNs and doctoral-trained nurses. The AMA does not disagree with the emphasis on higher education, but based on the evidence presented by the IOM, it is not clear what level of nurse(s) are needed most, where they are needed most, and what would be the most beneficial use of resources for training more nurses.

At a time when patient safety and cost considerations demand increased attention, the AMA believes that it was a serious omission for the IOM to say that identifying costs were beyond the committee's scope. The American Academy of Family Physicians, American College of Physicians and Council on Medical Specialty Societies are similarly concerned by the omission of other data and evidence showing that by expanding APRN practice, patients would see expanded access to care.¹

¹ See American Academy of Family Physicians statement available at <http://www.aafp.org/online/en/home/publications/news/news-now/professional-issues/20101006iomnursingreport.html>; American College of Physicians statement, available at http://www.acponline.org/pressroom/future_nursing_release.pdf; and Council on Medical Specialty Societies statement, available at <http://www.cmss.org/DefaultTwoColumn.aspx?id=232>.

Conclusion

As the provision of health care in this country becomes more complex, a fully coordinated, quality-focused and patient-centered health care team will be the optimal means by which Americans will receive their health care. This includes ensuring that all members of the team practice within the parameters of their education, training and licensure.

The AMA strongly believes that patients are best served when decisions regarding the health care workforce are made based on the best available evidence. As policymakers continue to evaluate the role of nursing in America's health care system, the AMA stands ready to provide the data and resources necessary to help ensure America's patients receive the highest quality care.

Issue Brief: Pharmacology education of physicians

Introduction¹

The American Medical Association (AMA) has seen an increase in legislation supported by non-physician groups seeking the authority to prescribe legend drugs and controlled substances. The AMA is concerned that non-physicians may not have the comprehensive education and training required to safely prescribe. Modern pharmaceuticals are more powerful than ever and require substantial expertise to manage potential issues, including chemical dependency, contraindications, drug interactions, and over-prescribing.

The safe and effective prescribing and administration of pharmaceuticals cannot be taught in stand-alone course(s) divorced from comprehensive medical education and clinical training, with in-depth, supervised interactions with real patients. While some pharmacotherapies may be within the scope of certain non-physicians' education and training, prescriptive authority for non-physicians should be authorized by policymakers only after careful consideration of a non-physician's education, training, and clinical experience when entering the workforce. Patient safety demands this level of scrutiny for any proposed legislation that would expand non-physicians' prescriptive authority.

Pharmacology is an integrated component of medical education

Throughout a medical student's education and training, pharmacology is integrated into the comprehensive content of biomedical sciences. The Liaison Committee on Medical Education requires all accredited medical schools to include pharmacologic study as part of disciplines including anatomy, biochemistry, genetics, immunology, microbiology, pathology, physiology, and public health sciences.²

¹ Disclaimer: This issue brief is intended for informational purposes only, may not be used in credentialing decisions of individual practitioners, and does not constitute a limitation or expansion of the lawful scope of practice applicable to practitioners in any state. Information gathered from outside sources does not reflect the official policy of the AMA.

² Liaison Committee on Medical Education, [Functions and Structure of a Medical School](#), Standards for Accreditation of Medical Education Programs Leading to the M.D. Degree, June 2010, (last accessed August 26, 2010).

Medical students must demonstrate mastery of pharmacology throughout their medical education and training

To become licensed physicians, all medical students must take and pass the three-step United States Medical Licensing Exam (USMLE) during and after their medical education. Step 1 of the USMLE³ tests:

- Pharmacodynamic and pharmacokinetic processes, including general principles such as absorption, distribution, metabolism, excretion, dosage intervals, concentration- and dose-effect relationships (e.g., efficacy, potency)
- Drug side effects, overdosage, toxicology
- General principles of autonomic pharmacology
- General properties of antimicrobials, including mechanisms of action and resistance
- General properties of antineoplastic agents and immunosuppressants, including drug effects on rapidly dividing mammalian cells

Step 2 of the USMLE⁴ further emphasizes a medical student's growing pharmacologic knowledge by requiring mastery of the application of pharmacology content across numerous fields of medicine, including:

- Immunologic, cardiovascular, mental, endocrine, metabolic, nutritional and digestive disorders
- Diseases of the blood and blood-forming organs
- Diseases of the nervous system and special senses
- Gynecologic disorders and disorders of pregnancy and childbirth
- Renal, urinary and male reproductive systems
- Disorders of the skin and subcutaneous tissues
- Diseases of the musculoskeletal system and connective tissue

Step 3 of the USMLE⁵, a two-day, 16-hour exam that all physicians must take and pass to be licensed and practice independently, requires medical school graduates to demonstrate comprehensive knowledge of pharmacotherapy, including safety issues, as related to:

- Clinical findings or diagnostic studies to identify the underlying factors of a particular disease or condition
- Factors that may alter the drug requirements for a patient, including modifying treatment within the context of continuing care, including ongoing diagnostic and clinical tests
- Formulating a diagnosis, including correctly interpreting the patient's history and knowing pertinent risk factors

³ United States Medical Licensing Exam, [Step 1 Content Information and General Description](#), (last accessed August 26, 2010).

⁴ United States Medical Licensing Exam, [Step 2 Content Information and General Description](#), (last accessed August 26, 2010).

⁵ United States Medical Licensing Exam, [Step 3 Content Information and General Description](#), (last accessed August 26, 2010).

- The importance of educating patients about effects of drugs and drug-drug interactions as well as how to assess patient adherence with treatment regimen and techniques to increase adherence
- Proper management of the patient's continuing care, including knowing incidence within patient groups at risk, knowing preliminary steps to measure and ensure effectiveness of intended therapy, and selecting appropriate preventive therapeutic agents or techniques.

Pharmacologic education continues throughout a physician's residency years

All residency programs continue to emphasize how pharmacology and pharmacotherapy may play a role in the evaluation, diagnosis and treatment of patients. The Accreditation Council for Graduate Medical Education⁶ requires internal medicine residents, for example, to demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social and behavioral sciences, as well as the application of this knowledge to patient care.

Physician residents must demonstrate competence in how pharmacotherapy interrelates with patients with undiagnosed and undifferentiated presentations; appropriately use and perform diagnostic and therapeutic procedures; and recognize and provide initial management of emergency medical problems, the interpretation of basic clinical tests and images, and more.

Most importantly, resident physicians must demonstrate the ability to apply their knowledge of pharmacology in the care of actual patients, under the supervision of senior physicians, as they gain increasing independence in patient management.

Conclusion

The AMA strongly encourages legislators to compare the education and training in pharmacology of non-physician practitioners with that received by physicians.

- During their four years of medical school, medical students learn how pharmacotherapy integrates into all branches of medicine, and they are tested on this knowledge as part of the medical licensure process.
- After graduation, physicians expand their knowledge and skills with pharmacotherapy through many direct patient care experiences.
- Under supervision by experienced senior physicians, resident physicians learn the complexities related to appropriate prescribing in multiple clinical situations and settings – gaining in-depth knowledge essential to their chosen specialty.

The bottom line is that physicians receive comprehensive education and training in pharmacology and pharmacotherapy that far exceeds that of non-physicians. In today's increasingly complex

⁶ Accreditation Council for Graduate Medical Education, [ACGME Program Requirements for Graduate Medical Education in Internal Medicine](#), (last accessed August 26, 2010).

health care system, patient safety demands extreme caution before expanding non-physicians' scope of practice to include prescriptive authority.

Best Messages: Physician-Led Teams

Supporters, Leaners, and Skeptics

Supporters - Want Physician Led Care

1. Patient safety associated with the proper diagnosis from a physician is more important than the cost savings that a nurse can provide.
2. A physician's years of medical education and training are vital to the health care team and optimal patient care, especially in the event of a complication or medical emergency.
3. Physicians have a greater level of exposure to complex medical situations than nurses.
4. Doctors and nurses need to work in a coordinated manner to ensure patients get the care they need.
5. Physicians have more experience than nurses, which helps to provide the proper diagnosis, saving patients time and money.
6. Physicians, not nurses should be the ones to diagnose medical conditions.
7. Physician led teams are critical to providing quality care to patients suffering from chronic pain.
8. Because a nurse has less training, a nurse won't always know when a patient's life is on the line. But a physician has the training to look for and diagnosis both common and complex conditions.
9. Nurses should not be able to perform complex procedures, like injections for interventional chronic pain management and the administration of anesthesia, without physician involvement.
10. Patients prefer to be treated by a physician, even if it will cost more.

Leaners - Want Physician Led Care Most Of The Time

1. A physician has more than ten thousand hours of medical education and training while a nurse has less than one thousand hours of nursing education and training, which means a physician has ten times the amount of training and education as a nurse. That difference in education and training matters.
2. Only licensed medical doctors should be able to use the title of physician.
3. Physician led teams are critical to providing quality care to patients suffering from chronic pain.
4. Nurses handling more diagnosis and taking the lead on patient health care teams will lead to more medical malpractice cases against nurses. This will result in higher insurance premium costs that will get passed on to consumers.

5. While nurses are helpful to the health care team, they should assist the physician who should have the lead role in determining the type and level of care to be administered.
6. Physicians have a greater level of exposure to complex medical situations than nurses.
7. A physician's years of medical education and training are vital to the health care team and optimal patient care, especially in the event of a complication or medical emergency.
8. Patient safety associated with the proper diagnosis from a physician is more important than the cost savings that a nurse can provide.
9. Physicians, not nurses should be the ones to diagnose medical conditions.
10. Patients prefer to be treated by a physician, even if it will cost more.

Skeptics - Want Physician Led Care Only Sometimes

1. Physicians have more experience than nurses, which helps to provide the proper diagnosis, saving patients time and money.
2. While nurses are helpful to the health care team, they should assist the physician who should have the lead role in determining the type and level of care to be administered.
3. A physician's years of medical education and training are vital to the health care team and optimal patient care, especially in the event of a complication or medical emergency.
4. Patients benefit when a physician leads the health care team.
5. Because a nurse has less training, a nurse won't always know when a patient's life is on the line. But a physician has the training to look for and diagnosis both common and complex conditions.
6. A physician has more than ten thousand hours of medical education and training while a nurse has less than one thousand hours of nursing education and training, which means a physician has ten times the amount of training and education as a nurse. That difference in education and training matters.
7. Physicians have a greater level of exposure to complex medical situations than nurses.
8. Nurses handling more diagnosis and taking the lead on patient health care teams will lead to more medical malpractice cases against nurses. This will result in higher insurance premium costs that will get passed on to consumers.
9. Only licensed medical doctors should be able to use the title of physician.
10. Nurses should not be able to practice independently of physicians, without physician supervision, collaboration, or oversight. Nurses should not be allowed to run their own medical practices without physician involvement.

Private or Public Insurance

Privately Insured

1. A physician has more than ten thousand hours of medical education and training while a nurse has less than one thousand hours of nursing education and training, which means a physician has ten times the amount of training and education as a nurse. That difference in education and training matters.
2. A physician's additional years of medical education and training are vital to the health care team and optimal patient care, especially in the event of a complication or medical emergency.
3. Physicians have more experience than nurses, which helps to provide the proper diagnosis saving patients time and money.
4. Nurses handling more diagnosis and taking the lead on patient health care teams will lead to more medical malpractice cases against nurses. This will result in higher insurance premium costs that will get passed on to consumers.
5. Physician led teams are critical to providing quality care to patients suffering from chronic pain.
6. Doctors and nurses need to work in a coordinated manner to ensure patients get the care they need.
7. Patients prefer to be treated by a physician, even if it will cost more.
8. Because a nurse has less training, a nurse won't always know when a patient's life is on the line. But a physician has the training to look for and diagnosis both common and complex conditions.
9. Patients benefit when a physician leads the health care team.
10. Only licensed medical doctors should be able to use the title of physician.

Publicly Insured

1. Physicians have more experience than nurses which helps to provide the proper diagnosis, saving patients time and money.
2. Patients prefer to be treated by a physician, even if it will cost more.
3. Physicians, not nurses should be the ones to diagnose medical conditions.
4. A physician has more than ten thousand hours of medical education and training while a nurse has less than one thousand hours of nursing education and training, which means a physician has ten times the amount of training and education as a nurse. That difference in education and training matters.
5. Doctors and nurses need to work in a coordinated manner to ensure patients get the care they need.
6. Because a nurse has less training, a nurse won't always know when a patient's life is on the line. But a physician has the training to look for and diagnosis both common and complex conditions.

7. Physician led teams are critical to providing quality care to patients suffering from chronic pain.
8. While nurses are helpful to the health care team, they should assist the physician who should have the lead role in determining the type and level of care to be administered.
9. Only licensed medical doctors should be able to use the title of physician.
10. Patients prefer to be treated by a physician, even if it takes longer to get an appointment.

Age and Gender

Females 55 & Over

1. A physician has more than ten thousand hours of medical education and training while a nurse has less than one thousand hours of nursing education and training, which means a physician has ten times the amount of training and education as a nurse. That difference in education and training matters. [Key Switcher]
2. Only licensed medical doctors should be able to use the title of physician.
3. Physicians have more experience than nurses which helps to provide the proper diagnosis, saving patients time and money. [Key Switcher]
4. Patients prefer to be treated by a physician, even if it will cost more.
5. Physician led teams are critical to providing quality care to patients suffering from chronic pain.
6. Physicians, not nurses should be the ones to diagnose medical conditions.
7. Patient safety associated with the proper diagnosis from a physician is more important than the cost savings that a nurse can provide.
8. While nurses are helpful to the health care team, they should assist the physician who should have the lead role in determining the type and level of care to be administered.
9. Nurses should not be able to practice independently of physicians, without physician supervision, collaboration, or oversight. Nurses should not be allowed to run their own medical practices without physician involvement.
10. A physician's additional years of medical education and training are vital to the health care team and optimal patient care, especially in the event of a complication or medical emergency.

Females 55 & Under

1. A physician has more than ten thousand hours of medical education and training while a nurse has less than one thousand hours of nursing education and training, which means a physician has ten times the amount of training and education as a nurse. That difference in education and training matters. [Key Switcher]
2. Physicians have more experience than nurses which helps to provide the proper diagnosis, saving patients time and money. [Key Switcher]
3. Nurses handling more diagnosis and taking the lead on patient health care teams will lead to more medical malpractice cases against nurses. This will result in higher insurance premium costs that will get passed on to consumers.
4. Only licensed medical doctors should be able to use the title of physician.
5. Doctors and nurses need to work in a coordinated manner to ensure patients get the care they need.

6. Physician led teams are critical to providing quality care to patients suffering from chronic pain.
7. While nurses are helpful to the health care team, they should assist the physician who should have the lead role in determining the type and level of care to be administered.
8. A physician's additional years of medical education and training are vital to the health care team and optimal patient care, especially in the event of a complication or medical emergency.
9. Physicians have a greater level of exposure to complex medical situations than nurses.
10. Patients prefer to be treated by a physician, even if it will cost more.

Males 55 & Over

1. A physician's additional years of medical education and training are vital to the health care team and optimal patient care, especially in the event of a complication or medical emergency.
2. Doctors and nurses need to work in a coordinated manner to ensure patients get the care they need. [Key Switcher]
3. Patients prefer to be treated by a physician, even if it will cost more.
4. Physicians have a greater level of exposure to complex medical situations than nurses.
5. Physicians have more experience than nurses which helps to provide the proper diagnosis, saving patients time and money.
6. Nurses handling more diagnosis and taking the lead on patient health care teams will lead to more medical malpractice cases against nurses. This will result in higher insurance premium costs that will get passed on to consumers.
7. Because a nurse has less training, a nurse won't always know when a patient's life is on the line. But a physician has the training to look for and diagnosis both common and complex conditions.
8. A physician has more than ten thousand hours of medical education and training while a nurse has less than one thousand hours of nursing education and training, which means a physician has ten times the amount of training and education as a nurse. That difference in education and training matters.
9. Patients prefer to be treated by a physician, even if it takes longer to get an appointment.
10. Only licensed medical doctors should be able to use the title of physician.

Males 55 & Under

1. While nurses are helpful to the health care team, they should assist the physician who should have the lead role in determining the type and level of care to be administered.
2. Physician led teams are critical to providing quality care to patients suffering from chronic pain.

3. Doctors and nurses need to work in a coordinated manner to ensure patients get the care they need. [Key Switcher]
4. Physicians have a greater level of exposure to complex medical situations than nurses.
5. Patients prefer to be treated by a physician, even if it will cost more.
6. Physicians, not nurses should be the ones to diagnose medical conditions.
7. Because a nurse has less training, a nurse won't always know when a patient's life is on the line. But a physician has the training to look for and diagnosis both common and complex conditions.
8. Physicians have more experience than nurses, which helps to provide the proper diagnosis saving patients time and money.
9. Only licensed medical doctors should be able to use the title of physician.
10. A physician has more than ten thousand hours of medical education and training while a nurse has less than one thousand hours of nursing education and training, which means a physician has ten times the amount of training and education as a nurse. That difference in education and training matters.

Household Income (2011)

Household Income – Under \$25K

1. Physicians have more experience than nurses which helps to provide the proper diagnosis saving patients time and money. [Key Switcher]
2. While nurses are helpful to the health care team, they should assist the physician who should have the lead role in determining the type and level of care to be administered.
3. Doctors and nurses need to work in a coordinated manner to ensure patients get the care they need.
4. Only licensed medical doctors should be able to use the title of physician.
5. Patient safety associated with the proper diagnosis from a physician is more important than the cost savings that a nurse can provide.
6. Because a nurse has less training, a nurse won't always know when a patient's life is on the line. But a physician has the training to look for and diagnosis both common and complex conditions.
7. Patients prefer to be treated by a physician, even if it will cost more.
8. A physician has more than ten thousand hours of medical education and training while a nurse has less than one thousand hours of nursing education and training, which means a physician has ten times the amount of training and education as a nurse. That difference in education and training matters.
9. Physician led teams are critical to providing quality care to patients suffering from chronic pain.
10. A physician's additional years of medical education and training are vital to the health care team and optimal patient care, especially in the event of a complication or medical emergency.

Household Income – \$25K - \$50K

1. Physicians have more experience than nurses which helps to provide the proper diagnosis saving patients time and money. [Key Switcher]
2. Because a nurse has less training, a nurse won't always know when a patient's life is on the line. But a physician has the training to look for and diagnosis both common and complex conditions.
3. Patients prefer to be treated by a physician, even if it takes longer to get an appointment.
4. Physicians have a greater level of exposure to complex medical situations than nurses.
5. Patients prefer to be treated by a physician, even if it will cost more.
6. A physician's additional years of medical education and training are vital to the health care team and optimal patient care, especially in the event of a complication or medical emergency.
7. Only licensed medical doctors should be able to use the title of physician.

8. Physician led teams are critical to providing quality care to patients suffering from chronic pain.
9. Doctors and nurses need to work in a coordinated manner to ensure patients get the care they need.
10. A physician has more than ten thousand hours of medical education and training while a nurse has less than one thousand hours of nursing education and training, which means a physician has ten times the amount of training and education as a nurse. That difference in education and training matters.

Household Income – \$50K - \$100K

1. Patients prefer to be treated by a physician, even if it will cost more.
2. While nurses are helpful to the health care team, they should assist the physician who should have the lead role in determining the type and level of care to be administered.
3. Doctors and nurses need to work in a coordinated manner to ensure patients get the care they need.
4. Because a nurse has less training, a nurse won't always know when a patient's life is on the line. But a physician has the training to look for and diagnosis both common and complex conditions.
5. Patients benefit when a physician leads the health care team.
6. A physician's additional years of medical education and training are vital to the health care team and optimal patient care, especially in the event of a complication or medical emergency.
7. A physician has more than ten thousand hours of medical education and training while a nurse has less than one thousand hours of nursing education and training, which means a physician has ten times the amount of training and education as a nurse. That difference in education and training matters.
8. Only licensed medical doctors should be able to use the title of physician.
9. Nurses handling more diagnosis and taking the lead on patient health care teams will lead to more medical malpractice cases against nurses. This will result in higher insurance premium costs that will get passed on to consumers.
10. Physicians have more experience than nurses which helps to provide the proper diagnosis, saving patients time and money.

Household Income – \$100K or More

1. A physician has more than ten thousand hours of medical education and training while a nurse has less than one thousand hours of nursing education and training, which means a physician has ten times the amount of training and education as a nurse. That difference in education and training matters.
2. Only licensed medical doctors should be able to use the title of physician.

3. Nurses handling more diagnosis and taking the lead on patient health care teams will lead to more medical malpractice cases against nurses. This will result in higher insurance premium costs that will get passed on to consumers.
4. Nurses should not be able to practice independently of physicians, without physician supervision, collaboration, or oversight. Nurses should not be allowed to run their own medical practices without physician involvement.
5. Patients prefer to be treated by a physician, even if it will cost more.
6. Physician led teams are critical to providing quality care to patients suffering from chronic pain.
7. Patients prefer to be treated by a physician, even if it takes longer to get an appointment.
8. A physician's additional years of medical education and training are vital to the health care team and optimal patient care, especially in the event of a complication or medical emergency.
9. While nurses are helpful to the health care team, they should assist the physician who should have the lead role in determining the type and level of care to be administered.
10. Physicians have a greater level of exposure to complex medical situations than nurses.

Political Party

Democrats

1. A physician's additional years of medical education and training are vital to the health care team and optimal patient care, especially in the event of a complication or medical emergency.
2. While nurses are helpful to the health care team, they should assist the physician who should have the lead role in determining the type and level of care to be administered.
3. Doctors and nurses need to work in a coordinated manner to ensure patients get the care they need.
4. Physicians have more experience than nurses which helps to provide the proper diagnosis, saving patients time and money.
5. Patients prefer to be treated by a physician, even if it will cost more.
6. Nurses handling more diagnosis and taking the lead on patient health care teams will lead to more medical malpractice cases against nurses. This will result in higher insurance premium costs that will get passed on to consumers.
7. Physicians have a greater level of exposure to complex medical situations than nurses.
8. Because a nurse has less training, a nurse won't always know when a patient's life is on the line. But a physician has the training to look for and diagnosis both common and complex conditions.
9. A physician has more than ten thousand hours of medical education and training while a nurse has less than one thousand hours of nursing education and training, which means a physician has ten times the amount of training and education as a nurse. That difference in education and training matters.
10. Patient safety associated with the proper diagnosis from a physician is more important than the cost savings that a nurse can provide.

Independent

1. A physician has more than ten thousand hours of medical education and training while a nurse has less than one thousand hours of nursing education and training, which means a physician has ten times the amount of training and education as a nurse. That difference in education and training matters.
2. Physicians have more experience than nurses which helps to provide the proper diagnosis, saving patients time and money.
3. A physician's additional years of medical education and training are vital to the health care team and optimal patient care, especially in the event of a complication or medical emergency.
4. Patients prefer to be treated by a physician, even if it will cost more.
5. Doctors and nurses need to work in a coordinated manner to ensure patients get the care they need.

6. Physicians have a greater level of exposure to complex medical situations than nurses.
7. Physicians, not nurses, should be the ones to diagnose medical conditions.
8. Only licensed medical doctors should be able to use the title of physician.
9. While nurses are helpful to the health care team, they should assist the physician who should have the lead role in determining the type and level of care to be administered.
10. Nurses handling more diagnosis and taking the lead on patient health care teams will lead to more medical malpractice cases against nurses. This will result in higher insurance premium costs that will get passed on to consumers.

Republican

1. A physician has more than ten thousand hours of medical education and training while a nurse has less than one thousand hours of nursing education and training, which means a physician has ten times the amount of training and education as a nurse. That difference in education and training matters.
2. Physicians have more experience than nurses which helps to provide the proper diagnosis, saving patients time and money.
3. Physician led teams are critical to providing quality care to patients suffering from chronic pain.
4. Doctors and nurses need to work in a coordinated manner to ensure patients get the care they need.
5. Because a nurse has less training, a nurse won't always know when a patient's life is on the line. But a physician has the training to look for and diagnosis both common and complex conditions.
6. Physicians have a greater level of exposure to complex medical situations than nurses.
7. While nurses are helpful to the health care team, they should assist the physician who should have the lead role in determining the type and level of care to be administered.
8. A physician's additional years of medical education and training are vital to the health care team and optimal patient care, especially in the event of a complication or medical emergency.
9. Patients prefer to be treated by a physician, even if it will cost more.
10. Physicians, not nurses, should be the ones to diagnose medical conditions.

Patient support for physician-led health care teams

New health care delivery system reforms hinge on a team-based approach to care. With their seven years or more of postgraduate education and more than 10,000 hours of clinical experience through acquired training, physicians are uniquely qualified to lead the health care team. Physicians, physician assistants, nurses and other health care professionals have long worked together to meet patient needs for a reason: the physician-led team approach to care works. Patients win when each member of the health care team plays the role they are educated and trained to perform.

A 2012 survey found that patients overwhelmingly want a coordinated approach to health care, with a physician leading the health care team.¹ Key findings include:

- ▶ **Ninety-one percent** of respondents said that a physician's years of education and training are vital to optimal patient care, especially in the event of a complication or medical emergency.
- ▶ **Eighty-six percent** of respondents said that patients with one or more chronic conditions benefit when a physician leads the primary health care team.
- ▶ **Four out of five** patients prefer a physician to have primary responsibility for leading and coordinating their health care.

▶ **THREE
OUT OF FOUR**

patients prefer to be treated by a physician ...

- Even if it takes longer to get an appointment
- Even if it costs more

Do you agree with the following statement?	Yes (%)	No (%)	Not sure (%)	Don't know (%)
Physicians and nurses need to work in a coordinated manner to ensure that patients get the care they need	98	2	0	0
While nurse practitioners are essential to the health care team, they should assist the physician, who should take the lead role in determining the type and level of care to be administered	88	9	2	1
Only physicians have the education and training to look for and diagnose both common and complex medical conditions	83	10	5	2
Nurse practitioners should not be allowed to run their own medical practices without physician involvement	78	19	1	1
Nurse practitioners should not be able to practice independently of physicians, without physician supervision, collaboration or oversight	79	17	3	0
Physicians, rather than nurse practitioners, should diagnose medical conditions	78	16	5	0
Patients benefit when a physician leads the health care team	75	19	3	3

Should only a medical doctor be allowed to perform the following procedures or should other health care professionals be allowed to perform this specific activity?	Only a medical doctor (%)	Other health care professional (%)	Both equally/ either one (%)	Don't know (%)
Amputations of the foot?	92	5	2	2
Diagnose and treat heart conditions?	92	4	3	1
Surgical procedures on the eye that require the use of a scalpel?	90	5	2	3
Treat emergency or traumatic medical conditions, which may be life threatening?	90	4	5	1
Facial surgery such as nose shaping and face lifts?	87	7	3	6
Write prescriptions for complex drugs, including those that carry risk of abuse or dependence?	83	10	5	2
Administer and monitor anesthesia levels and patient condition before and during surgery?	78	15	6	1
Diagnose and treat chronic diseases like diabetes	78	15	6	1
Write prescriptions for medication to treat mental health conditions such as schizophrenia and bi-polar disorder?	77	11	6	4

1. Baseline & Associates conducted a telephone survey on behalf of the AMA Scope of Practice Partnership between March 8–12, 2012. Baseline & Associates surveyed 801 adults nationwide. The overall margin of error is +/- 3.5 percent at the 95 percent level.