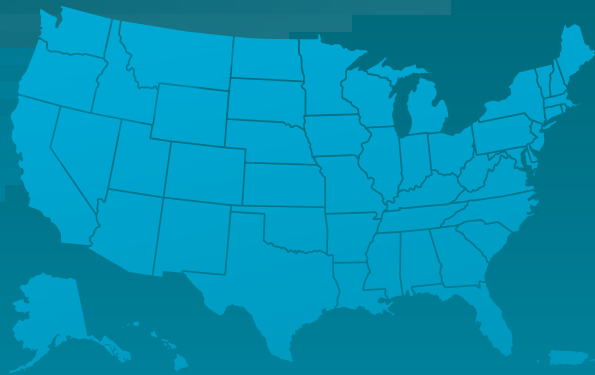




Tomorrow's Doctors, Tomorrow's Cures®



2019

State Physician Workforce Data Report

November 2019

Association of
American Medical Colleges

2019

State Physician Workforce Data Report

Acknowledgments

We would like to express our appreciation to our AAMC colleagues for their collaborative efforts. The publication was produced under the direction of Michael Dill, Karen Jones, and Natalie Felida. We are grateful to the AAMC Data and Operations and Data Warehouse teams, without whose help the data analysis would not have been possible, and to the AAMC Editorial Services, Creative Services, and Communications teams.

We also owe special thanks to the American Medical Association for making the Physician Masterfile available to the AAMC for research purposes and the American Association of Colleges of Osteopathic Medicine for providing data on students in DO-granting schools.

The AAMC welcomes your comments and suggestions for future editions of this report.

Please send comments, suggestions, and questions to:

Michael Dill, Director
AAMC Workforce Studies
workforce@aamc.org

This is a publication of the Association of American Medical Colleges. The AAMC serves and leads the academic medicine community to improve the health of all. aamc.org

Suggested citation:

AAMC. *2019 State Physician Workforce Data Report*. Washington, DC: AAMC; 2019.

© 2019 Association of American Medical Colleges. May be reproduced and distributed with attribution for educational and noncommercial purposes only.

Contents

Executive Summary	1
State Snapshots	2
Key Definitions	2
Commonly Used Acronyms	3
Section 1: Physician Supply	5
1. Active Physicians per 100,000 Population by Degree Type, 2018	6
Map 1.1	6
Figure 1.1	7
Table 1.1	8
2. Active Patient Care Physicians per 100,000 Population by Degree Type, 2018	9
Figure 1.2	9
Table 1.2	10
3. Active Primary Care Physicians per 100,000 Population by Degree Type, 2018	11
Map 1.3	11
Figure 1.3	12
Table 1.3	13
4. Active Patient Care Primary Care Physicians per 100,000 Population by Degree Type, 2018	14
Figure 1.4	14
Table 1.4	15
5. Active General Surgeons per 100,000 Population by Degree Type, 2018	16
Map 1.5	16
Figure 1.5	17
Table 1.5	18
6. Active Patient Care General Surgeons per 100,000 Population by Degree Type, 2018	19
Figure 1.6	19
Table 1.6	20
7. Active Female Physicians, 2018	21
Figure 1.7	21
Table 1.7	22

8. Active Physicians by School Type, 2018	23
Map 1.8	23
Figure 1.8	24
Table 1.8	25
9. Active Physicians by Selected Age Groups, 2018	26
Figure 1.9	26
Table 1.9	27

Section 2: Undergraduate Medical Education (UME) 29

1. Student Enrollment per 100,000 Population by School Type, Academic Year 2018-2019	30
Map 2.1	30
Figure 2.1	31
Table 2.1	32
2. Student Enrollment in Public Schools per 100,000 Population by School Type, Academic Year 2018-2019	33
Map 2.2	33
Figure 2.2	34
Table 2.2	35
3. Percentage Change in Student Enrollment by School Type, 2008-2018	36
Figure 2.3	36
Table 2.3	37
4. Percentage of Students Matriculating in State, Academic Year 2018-2019	38
Figure 2.4	38
Table 2.4	39

Section 3: Graduate Medical Education (GME) 41

1. Residents and Fellows on Duty as of Dec. 31, 2018, in ACGME-Accredited Programs per 100,000 Population by Degree Type	42
Map 3.1	42
Figure 3.1	43
Table 3.1	44
2. Residents and Fellows on Duty as of Dec. 31, 2018, in ACGME-Accredited Primary Care Programs per 100,000 Population by Degree Type	45
Map 3.2	45
Figure 3.2	46
Table 3.2	47

3. Residents and Fellows on Duty as of Dec. 31, 2018, in ACGME-Accredited Programs by School Type	48
Figure 3.3	48
Table 3.3	49
4. Ratio of Graduate Medical Education (GME) to Undergraduate Medical Education (UME), Academic Year 2017-2018	50
Map 3.4	50
Figure 3.4	51
Table 3.4	52
5. Change in Residents and Fellows in ACGME-Accredited Programs, 2008-2018	53
Map 3.5.1	53
Map 3.5.2	53
Figure 3.5	54
Table 3.5	55

Section 4: Retention **57**

1. Physicians Retained From Undergraduate Medical Education (UME), 2018	58
Map 4.1	58
Figure 4.1	59
Table 4.1	60
2. Physicians Retained From Public Undergraduate Medical Education (UME), 2018	61
Figure 4.2	61
Table 4.2	62
3. Physicians Retained From Graduate Medical Education (GME), 2018	63
Map 4.3	63
Figure 4.3	64
Table 4.3	65
4. Physicians Retained From Undergraduate Medical Education (UME) and Graduate Medical Education (GME) Combined, 2018	66
Figure 4.4	66
Table 4.4	67

Summary **69**

Summary Table. State Medians for Physician Supply, Undergraduate Medical Education (UME), Graduate Medical Education (GME), and In-State Retention, 2008, 2010, 2012, 2014, 2016, and 2018	69
--	----

Executive Summary

The *2019 State Physician Workforce Data Report*, which is an update of the *2017 State Physician Workforce Data Report*, examines current physician supply, undergraduate medical education (UME) students, and graduate medical education (GME) residents and fellows in the United States. The report provides the most current data available for each state, the District of Columbia (D.C.), and Puerto Rico in a series of maps, figures, and tables, including the U.S. average (excluding Puerto Rico), state median (excluding D.C. and Puerto Rico),¹ and state rank. Additionally, this edition includes a summary table that compares the state median for each physician workforce measure in 2008, 2010, 2012, 2014, 2016, and 2018.

The *Data Report* is divided into four sections:

Section 1: Physician Supply includes data on active physicians in each state, including physician-to-population ratios, percentage who are female, age distribution, and school type. Data by race and ethnicity were not available.

Section 2: Undergraduate Medical Education provides information on enrollment at both MD-granting and DO-granting schools, as well as data on in-state matriculation. Alaska, Delaware, Idaho, Montana, and Wyoming do not have MD-granting schools, but four of those states (Alaska, Idaho, Montana, and Wyoming) have an agreement with the University of Washington School of Medicine to reserve UME slots for residents of those states. For this report, all students at the University of Washington Medical School are counted in the Washington enrollment and not in other states.

Section 3: Graduate Medical Education presents data on physicians in residency and fellowship positions in each state, including physician-to-population ratios and medical school type. This section includes data on MDs and DOs training in programs accredited by the Accreditation Council for Graduate Medical Education (ACGME). Where possible, data for physicians training in programs accredited by the American Osteopathic Association (AOA) are also included.

Section 4: Retention presents data on states' retention of the physicians they educate in medical schools and GME programs.

The primary data sources for this report are:

- American Medical Association (AMA) Physician Masterfile (Dec. 31, 2018)
- 2018 population estimates from the U.S. Census Bureau
- AAMC FACTS tables
- American Association of Colleges of Osteopathic Medicine
- American Osteopathic Association
- National GME Census, which is conducted jointly by the AAMC and the AMA

1. The U.S. average differs from the state median. The U.S. average is calculated by summing the values for all 50 states and D.C., and dividing the sum by 51. The state median, however, excludes D.C. and Puerto Rico and is the value directly in the middle of the 50 states so that 25 states are above the state median and 25 states are below the state median.

State Snapshots

Individual state data summarized across all tables and figures in this data report, as well as physician counts for the top specialties and interstate migration of physicians in GME and active practice, can be downloaded as a PDF at aamc.org/state-physician.

Key Definitions

Active patient care physicians: This group is a subset of active physicians. It comprises only those physicians whose self-reported type of practice is direct patient care.

Active physicians: Physicians (federal and nonfederal) who are licensed by a state are considered active, provided they are working at least 20 hours per week. Physicians who are retired, semiretired, temporarily not in practice, not active for other reasons or who have not completed their graduate medical education are excluded. Active physicians include those working in direct patient care, administration, medical teaching, research, or other nonpatient care activities. Active physicians include those with a doctor of medicine (MD) or a doctor of osteopathic medicine (DO) degree. The total number of active physicians may differ between tables in this report as a result of missing information in the data file. For example, to determine the percentage of active physicians who are female, the total number of active physicians excludes people whose sex was not reported in the data file.

Unless stated otherwise, we report on physicians who are active in the 50 states of the United States, D.C., and Puerto Rico — regardless of where they attended medical school. Physicians active in other U.S. territories are excluded. However, the U.S. totals include only physicians active in the 50 states and the District of Columbia. The location of the physician's office was used to determine whether an active physician is in the United States. In cases where the physician's office location was missing, the state from the preferred mailing address was used. This substitution occurred for about 11% of cases among all active physicians.

Fellows: Physicians who have completed a residency and are pursuing further training in a subspecialty through a fellowship program accredited by the ACGME.

International medical graduate (IMG): An individual who graduated from a medical school outside the United States, Puerto Rico, or Canada is considered an IMG. This includes U.S. citizens who completed their medical education outside the United States, Puerto Rico, or Canada.

To be eligible for licensure and practice in the United States, all IMGs must be certified by the Educational Commission for Foreign Medical Graduates (ECFMG) and complete a residency training program in the United States. Graduates of Canadian schools are not considered IMGs because they do not have to be certified by the ECFMG to enter a residency training program in the United States. Although graduates of Canadian schools who are practicing in the United States are not considered IMGs or U.S. MDs, they are included in the total for active physicians.

Primary care physicians: Physicians are counted as primary care physicians if their self-designated primary specialty is one of the following: adolescent medicine (pediatrics), family medicine, general practice, geriatric medicine (family practice), geriatric medicine (internal medicine), internal medicine, internal medicine/pediatrics, or pediatrics. Residents and fellows are counted as primary care residents and fellows if they are in one of the following programs: adolescent medicine (pediatrics), family medicine, family practice, geriatric medicine (family practice), geriatric medicine (internal medicine), geriatric medicine/family practice, geriatric medicine/internal medicine, internal medicine, internal medicine/family practice, internal medicine/pediatrics, or pediatrics.

Residents: Physicians who have completed undergraduate medical education and are in a core ACGME- or AOA-accredited training program.

U.S. DO: Physicians who received their DO degree from a U.S. osteopathic school that is accredited by the American Osteopathic Association Commission on Osteopathic College Accreditation (COCA).

U.S. MD: Physicians who received their MD degree from a medical school in the United States or Puerto Rico that is accredited by the Liaison Committee on Medical Education (LCME®). Graduates of Canadian schools are not counted as U.S. MDs.

Commonly Used Acronyms

AACOM	American Association of Colleges of Osteopathic Medicine
AAMC	Association of American Medical Colleges
ACGME	Accreditation Council for Graduate Medical Education
AMA	American Medical Association
AOA	American Osteopathic Association
DO	Doctor of Osteopathic Medicine
GME	Graduate Medical Education
IMG	International Medical Graduate
MD	Doctor of Medicine
OGME	Osteopathic Graduate Medical Education
UME	Undergraduate Medical Education

SECTION 1

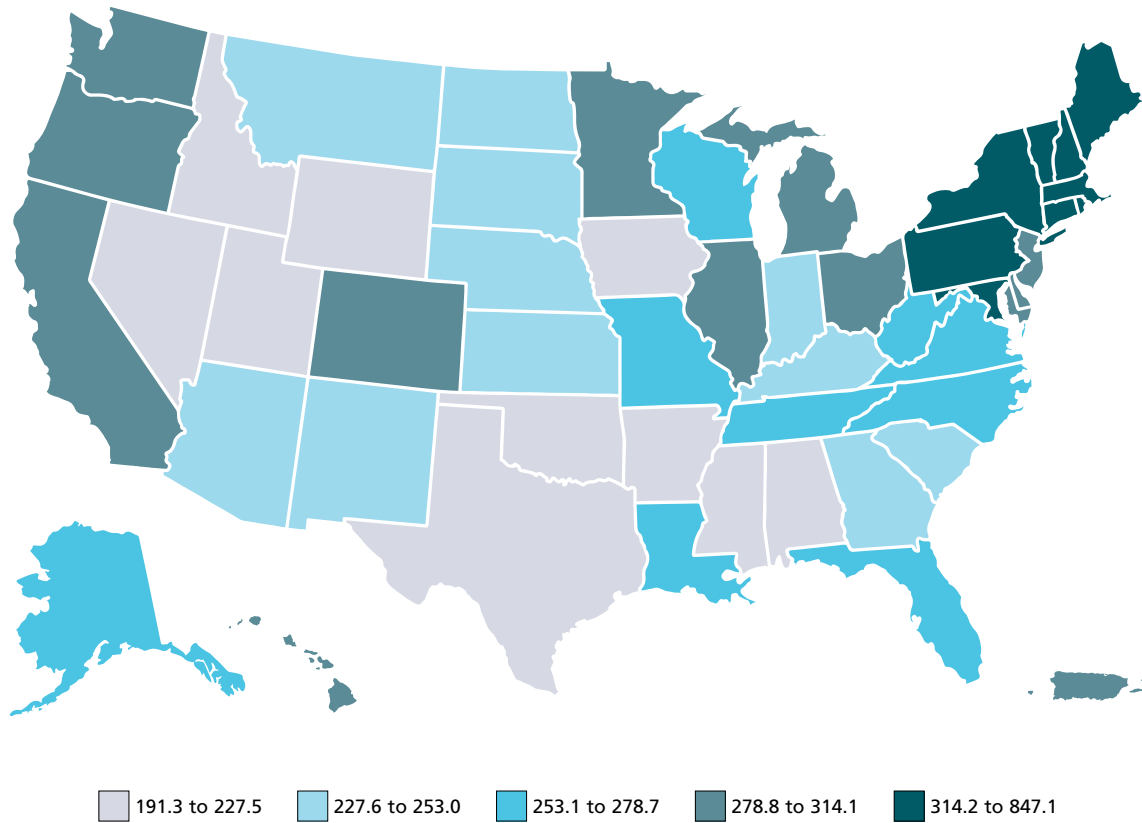
Physician Supply

Key Findings

- In 2018, there were 277.8 active physicians per 100,000 population in the United States, ranging from a high of 449.5 in Massachusetts to a low of 191.3 in Mississippi. The states with the highest number of physicians per 100,000 population are concentrated in the Northeast (see Map 1.1, Figure 1.1, and Table 1.1).
- There were 92.5 active primary care physicians per 100,000 population in the United States in 2018 (see Map 1.3, Figure 1.3, and Table 1.3). Once again, Massachusetts was at the top, with a value of 134.3. Utah had the lowest number of primary care physicians per 100,000 population (65.3).
- Nationally, there were 7.7 active general surgeons per 100,000 population in 2018 (see Map 1.5, Figure 1.5, and Table 1.5). Vermont and Maine had the highest number of general surgeons per 100,000 population (11.7 and 12.1, respectively), while Nevada and Utah had the lowest number of general surgeons per 100,000 population (5.6 and 5.8, respectively).
- In 2018, 35.8% of active physicians in the United States were female (see Figure 1.7 and Table 1.7). More than a third of active physicians in 28 states, Puerto Rico, and the District of Columbia were female. Utah had the lowest percentage of female physicians (24.6%).
- Nationally, 24.6% of active physicians were international medical graduates (IMGs) (see Map 1.8, Figure 1.8, and Table 1.8). States varied widely in the percentage of their physician workforce that graduated from an international medical school.¹ New Jersey and New York had the highest percentages (38.2% and 37.0%, respectively), while Idaho and Montana had the lowest (5.5% and 5.8%, respectively).
- Nationally, almost one-third (32.1%) of active physicians were age 60 or older in 2018. There was some variation among the states in the percentage of physicians who were age 60 or older. New Mexico had the highest percentage (38.5%), while Utah had the lowest percentage (26.5%) of physicians 60 or older (see Figure 1.9 and Table 1.9).

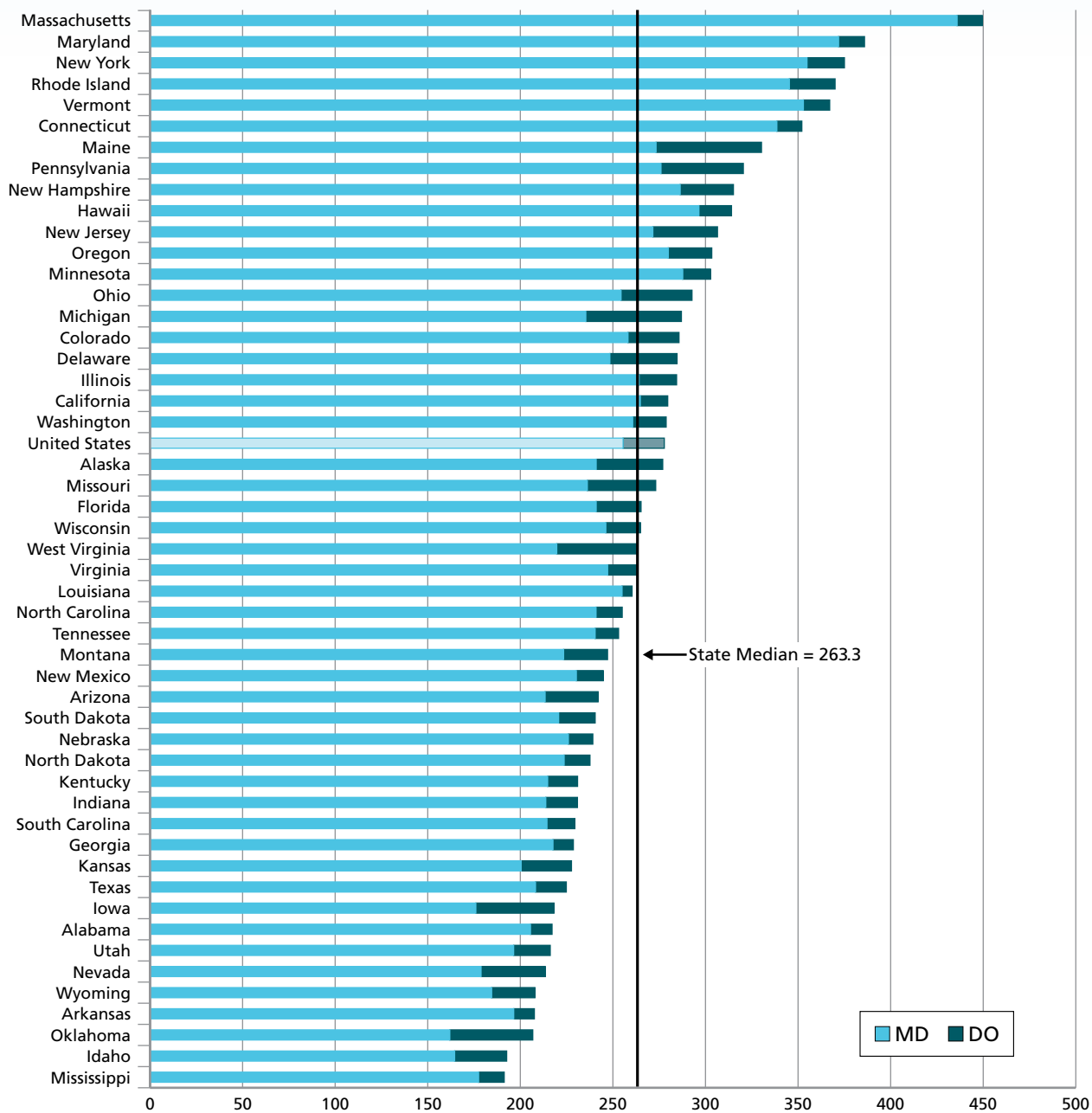
1. Graduates from Canadian schools are not considered IMGs. See **Key Definitions** for more information.

1. Active Physicians per 100,000 Population by Degree Type, 2018



Sources: July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018). Physician data include MDs and DOs and are from the 2019 AMA Physician Masterfile (Dec. 31, 2018) and include MDs and DOs.

Map 1.1. Active physicians per 100,000 population, 2018.



Sources: July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018). Physician data are from the 2019 AMA Physician Masterfile (Dec. 31, 2018).
Note: Physicians whose degree type was unavailable (n = 50) are excluded.

Figure 1.1. Active physicians per 100,000 population by degree type, 2018.

Table 1.1 Active Physicians per 100,000 Population by Degree Type, 2018

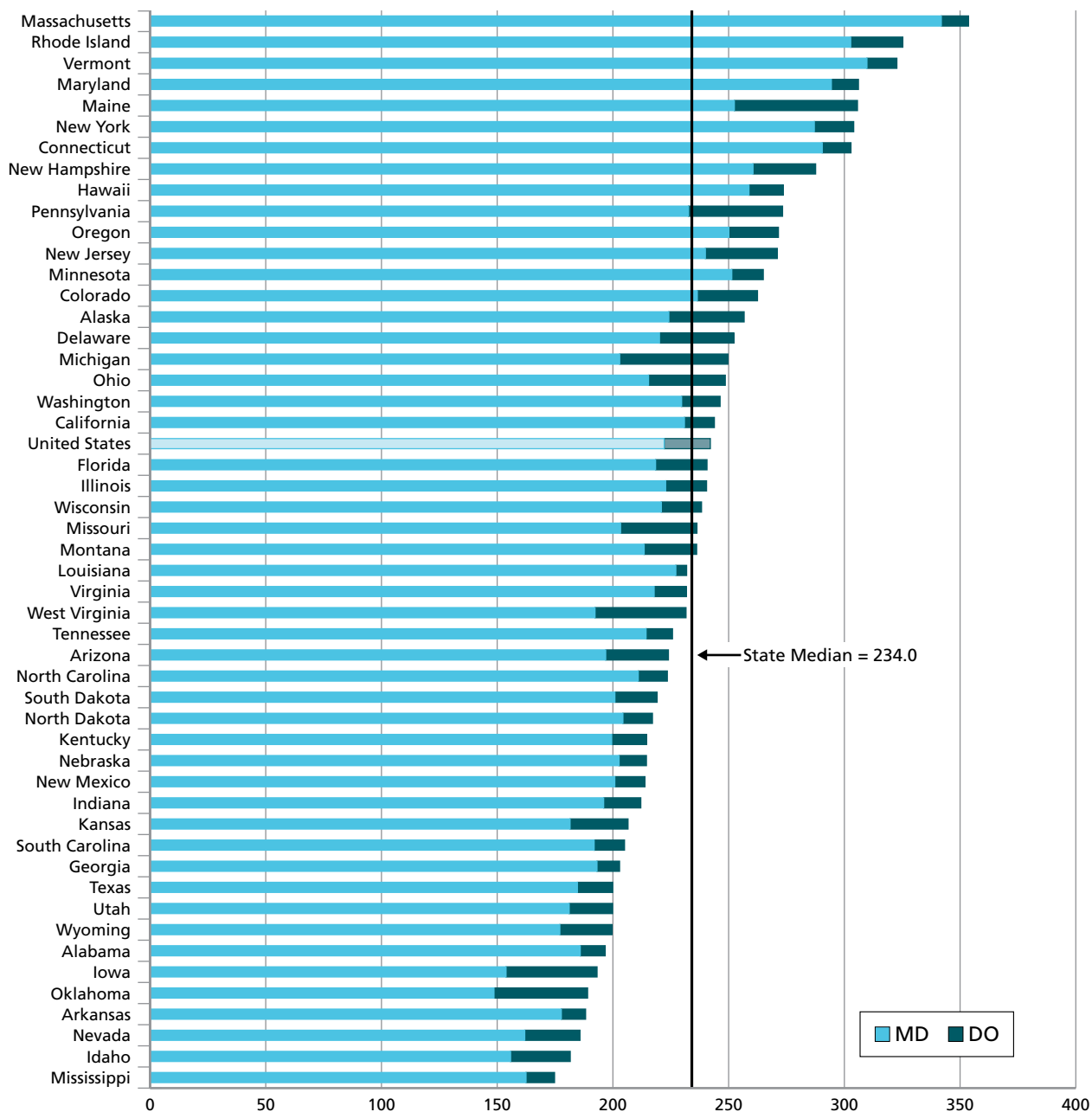
	Total Population	Total Active Physicians*			Active MDs		Active DOs	
		Number	Rate per 100,000	Rank	Number	Rate per 100,000	Number	Rate per 100,000
United States	327,167,434	908,760	277.8	N.R.	835,898	255.5	72,812	22.3
Alabama	4,887,871	10,614	217.1	43	10,044	205.5	569	11.6
Alaska	737,438	2,042	276.9	21	1,777	241.0	265	35.9
Arizona	7,171,646	17,356	242.0	32	15,303	213.4	2,052	28.6
Arkansas	3,013,825	6,256	207.6	47	5,920	196.4	336	11.1
California	39,557,045	110,603	279.6	19	104,745	264.8	5,857	14.8
Colorado	5,695,564	16,272	285.7	16	14,703	258.1	1,569	27.5
Connecticut	3,572,665	12,579	352.1	6	12,095	338.5	482	13.5
Delaware	967,171	2,753	284.6	17	2,402	248.4	351	36.3
District of Columbia	702,455	5,950	847.0	N.R.	5,816	828.0	134	19.1
Florida	21,299,325	56,484	265.2	23	51,324	241.0	5,160	24.2
Georgia	10,519,475	24,054	228.7	39	22,894	217.6	1,157	11.0
Hawaii	1,420,491	4,462	314.1	10	4,211	296.4	250	17.6
Idaho	1,754,208	3,379	192.6	49	2,886	164.5	493	28.1
Illinois	12,741,080	36,240	284.4	18	33,655	264.1	2,580	20.2
Indiana	6,691,878	15,448	230.8	37	14,303	213.7	1,145	17.1
Iowa	3,156,145	6,886	218.2	42	5,554	176.0	1,332	42.2
Kansas	2,911,505	6,627	227.6	40	5,836	200.4	791	27.2
Kentucky	4,468,402	10,319	230.9	36	9,596	214.8	722	16.2
Louisiana	4,659,978	12,132	260.3	27	11,880	254.9	252	5.4
Maine	1,338,404	4,420	330.2	7	3,658	273.3	762	56.9
Maryland	6,042,718	23,323	386.0	2	22,472	371.9	846	14.0
Massachusetts	6,902,149	31,025	449.5	1	30,086	435.9	936	13.6
Michigan	9,995,915	28,692	287.0	15	23,527	235.4	5,160	51.6
Minnesota	5,611,179	16,984	302.7	13	16,144	287.7	840	15.0
Mississippi	2,986,530	5,714	191.3	50	5,300	177.5	413	13.8
Missouri	6,126,452	16,732	273.1	22	14,470	236.2	2,262	36.9
Montana	1,062,305	2,625	247.1	30	2,373	223.4	252	23.7
Nebraska	1,929,268	4,614	239.2	34	4,359	225.9	255	13.2
Nevada	3,034,392	6,478	213.5	45	5,425	178.8	1,053	34.7
New Hampshire	1,356,458	4,274	315.1	9	3,884	286.3	390	28.8
New Jersey	8,908,520	27,305	306.5	11	24,193	271.6	3,110	34.9
New Mexico	2,095,428	5,129	244.8	31	4,825	230.3	304	14.5
New York	19,542,209	73,299	375.1	3	69,341	354.8	3,949	20.2
North Carolina	10,383,620	26,481	255.0	28	25,013	240.9	1,468	14.1
North Dakota	760,077	1,806	237.6	35	1,700	223.7	106	13.9
Ohio	11,689,442	34,217	292.7	14	29,738	254.4	4,478	38.3
Oklahoma	3,943,079	8,151	206.7	48	6,384	161.9	1,767	44.8
Oregon	4,190,713	12,714	303.4	12	11,730	279.9	984	23.5
Pennsylvania	12,807,060	41,041	320.5	8	35,343	276.0	5,696	44.5
Puerto Rico	3,195,153	9,787	306.3	N.R.	9,784	306.2	2	0.1
Rhode Island	1,057,315	3,912	370.0	4	3,651	345.3	261	24.7
South Carolina	5,084,127	11,666	229.5	38	10,900	214.4	766	15.1
South Dakota	882,235	2,121	240.4	33	1,947	220.7	174	19.7
Tennessee	6,770,010	17,133	253.1	29	16,275	240.4	857	12.7
Texas	28,701,845	64,533	224.8	41	59,757	208.2	4,773	16.6
Utah	3,161,105	6,833	216.2	44	6,208	196.4	625	19.8
Vermont	626,299	2,299	367.1	5	2,210	352.9	89	14.2
Virginia	8,517,685	22,419	263.2	26	21,052	247.2	1,365	16.0
Washington	7,535,591	21,007	278.8	20	19,644	260.7	1,362	18.1
West Virginia	1,805,832	4,757	263.4	25	3,967	219.7	790	43.7
Wisconsin	5,813,568	15,399	264.9	24	14,312	246.2	1,087	18.7
Wyoming	577,737	1,201	207.9	46	1,066	184.5	135	23.4

Sources: July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018). Physician data are from the 2019 AMA Physician Masterfile (Dec. 31, 2018). N.R. = not ranked.

Note: Applicants who did not report sex were excluded. The Multiple Race and Ethnicity category includes those who selected more than one race/ethnicity response.

*Physicians whose degree type was unavailable (n = 50) are included in the total.

2. Active Patient Care Physicians per 100,000 Population by Degree Type, 2018



Sources: July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018). Physician data are from the 2019 AMA Physician Masterfile (Dec. 31, 2018).
Note: Physicians whose degree type was unavailable (n = 27) are excluded.

Figure 1.2. Active patient care physicians per 100,000 population by degree type, 2018.

Table 1.2. Active Patient Care Physicians per 100,000 Population by Degree Type, 2018

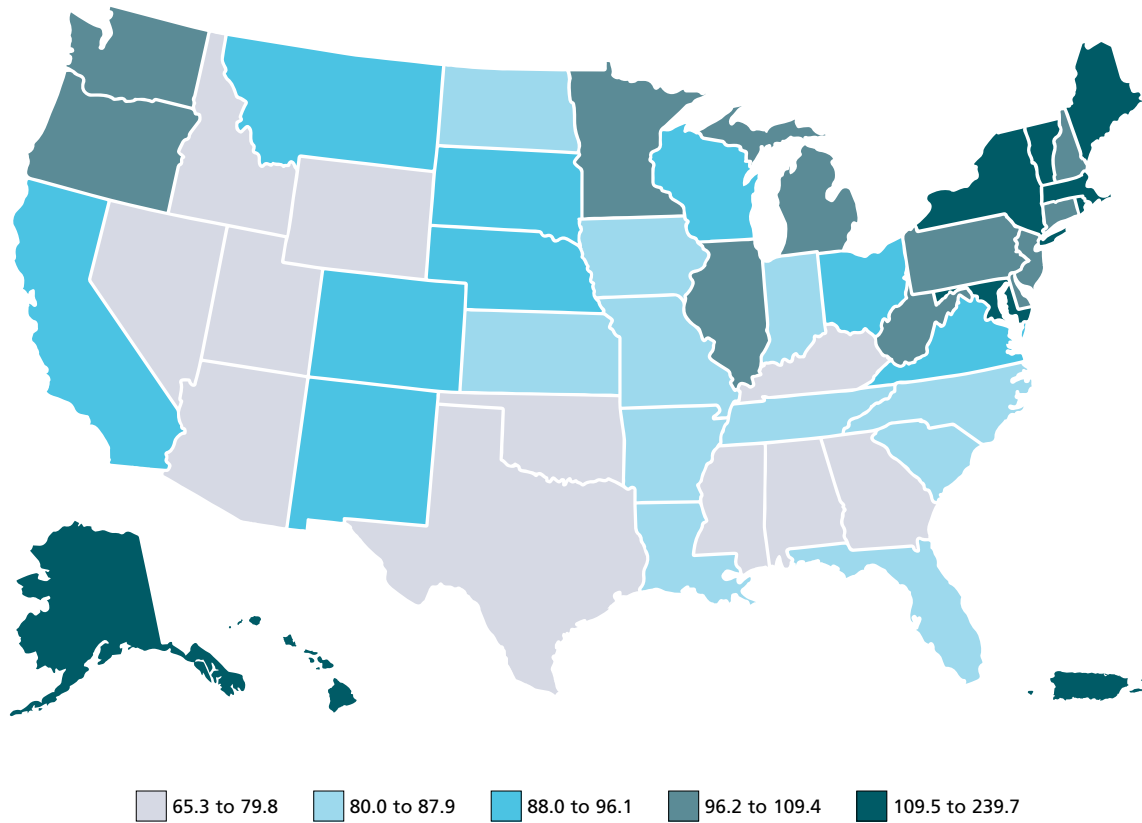
	Total Population	Total Active Patient Care Physicians*			Active Patient Care MDs		Active Patient Care DOs	
		Number	Rate per 100,000	Rank	Number	Rate per 100,000	Number	Rate per 100,000
United States	327,167,434	792,066	242.1	N.R.	726,801	222.1	65,239	19.9
Alabama	4,887,871	9,614	196.7	44	9,086	185.9	527	10.8
Alaska	737,438	1,893	256.7	15	1,653	224.2	240	32.5
Arizona	7,171,646	16,063	224.0	30	14,120	196.9	1,943	27.1
Arkansas	3,013,825	5,672	188.2	47	5,356	177.7	316	10.5
California	39,557,045	96,457	243.8	20	91,337	230.9	5,119	12.9
Colorado	5,695,564	14,949	262.5	14	13,468	236.5	1,481	26.0
Connecticut	3,572,665	10,821	302.9	7	10,377	290.5	443	12.4
Delaware	967,171	2,440	252.3	16	2,129	220.1	311	32.2
District of Columbia	702,455	4,348	619.0	N.R.	4,248	604.7	100	14.2
Florida	21,299,325	51,258	240.7	21	46,524	218.4	4,734	22.2
Georgia	10,519,475	21,345	202.9	40	20,315	193.1	1,027	9.8
Hawaii	1,420,491	3,888	273.7	9	3,676	258.8	211	14.9
Idaho	1,754,208	3,185	181.6	49	2,733	155.8	452	25.8
Illinois	12,741,080	30,638	240.5	22	28,385	222.8	2,252	17.7
Indiana	6,691,878	14,190	212.0	37	13,116	196.0	1,074	16.0
Iowa	3,156,145	6,096	193.1	45	4,855	153.8	1,241	39.3
Kansas	2,911,505	6,013	206.5	38	5,284	181.5	729	25.0
Kentucky	4,468,402	9,589	214.6	34	8,913	199.5	675	15.1
Louisiana	4,659,978	10,804	231.8	26	10,587	227.2	217	4.7
Maine	1,338,404	4,091	305.7	5	3,379	252.5	712	53.2
Maryland	6,042,718	18,499	306.1	4	17,789	294.4	707	11.7
Massachusetts	6,902,149	24,410	353.7	1	23,598	341.9	812	11.8
Michigan	9,995,915	24,963	249.7	17	20,285	202.9	4,676	46.8
Minnesota	5,611,179	14,868	265.0	13	14,104	251.4	764	13.6
Mississippi	2,986,530	5,221	174.8	50	4,852	162.5	368	12.3
Missouri	6,126,452	14,477	236.3	24	12,456	203.3	2,021	33.0
Montana	1,062,305	2,509	236.2	25	2,268	213.5	241	22.7
Nebraska	1,929,268	4,138	214.5	35	3,910	202.7	228	11.8
Nevada	3,034,392	5,637	185.8	48	4,913	161.9	724	23.9
New Hampshire	1,356,458	3,901	287.6	8	3,534	260.5	367	27.1
New Jersey	8,908,520	24,146	271.0	12	21,376	240.0	2,769	31.1
New Mexico	2,095,428	4,481	213.8	36	4,208	200.8	273	13.0
New York	19,542,209	59,420	304.1	6	56,091	287.0	3,325	17.0
North Carolina	10,383,620	23,209	223.5	31	21,905	211.0	1,304	12.6
North Dakota	760,077	1,650	217.1	33	1,553	204.3	97	12.8
Ohio	11,689,442	29,056	248.6	18	25,178	215.4	3,877	33.2
Oklahoma	3,943,079	7,455	189.1	46	5,860	148.6	1,595	40.5
Oregon	4,190,713	11,378	271.5	11	10,481	250.1	897	21.4
Pennsylvania	12,807,060	35,002	273.3	10	29,794	232.6	5,208	40.7
Puerto Rico	3,195,153	8,031	251.3	N.R.	8,028	251.3	2	0.1
Rhode Island	1,057,315	3,439	325.3	2	3,201	302.7	238	22.5
South Carolina	5,084,127	10,423	205.0	39	9,756	191.9	667	13.1
South Dakota	882,235	1,933	219.1	32	1,772	200.9	161	18.2
Tennessee	6,770,010	15,284	225.8	29	14,510	214.3	773	11.4
Texas	28,701,845	57,384	199.9	41	53,001	184.7	4,380	15.3
Utah	3,161,105	6,318	199.9	42	5,725	181.1	593	18.8
Vermont	626,299	2,021	322.7	3	1,940	309.8	81	12.9
Virginia	8,517,685	19,741	231.8	27	18,553	217.8	1,187	13.9
Washington	7,535,591	18,561	246.3	19	17,308	229.7	1,253	16.6
West Virginia	1,805,832	4,182	231.6	28	3,472	192.3	710	39.3
Wisconsin	5,813,568	13,853	238.3	23	12,844	220.9	1,009	17.4
Wyoming	577,737	1,153	199.6	43	1,023	177.1	130	22.5

Sources: July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018). Physician data are from the 2019 AMA Physician Masterfile (Dec. 31, 2018).

Note: N.R. = not ranked.

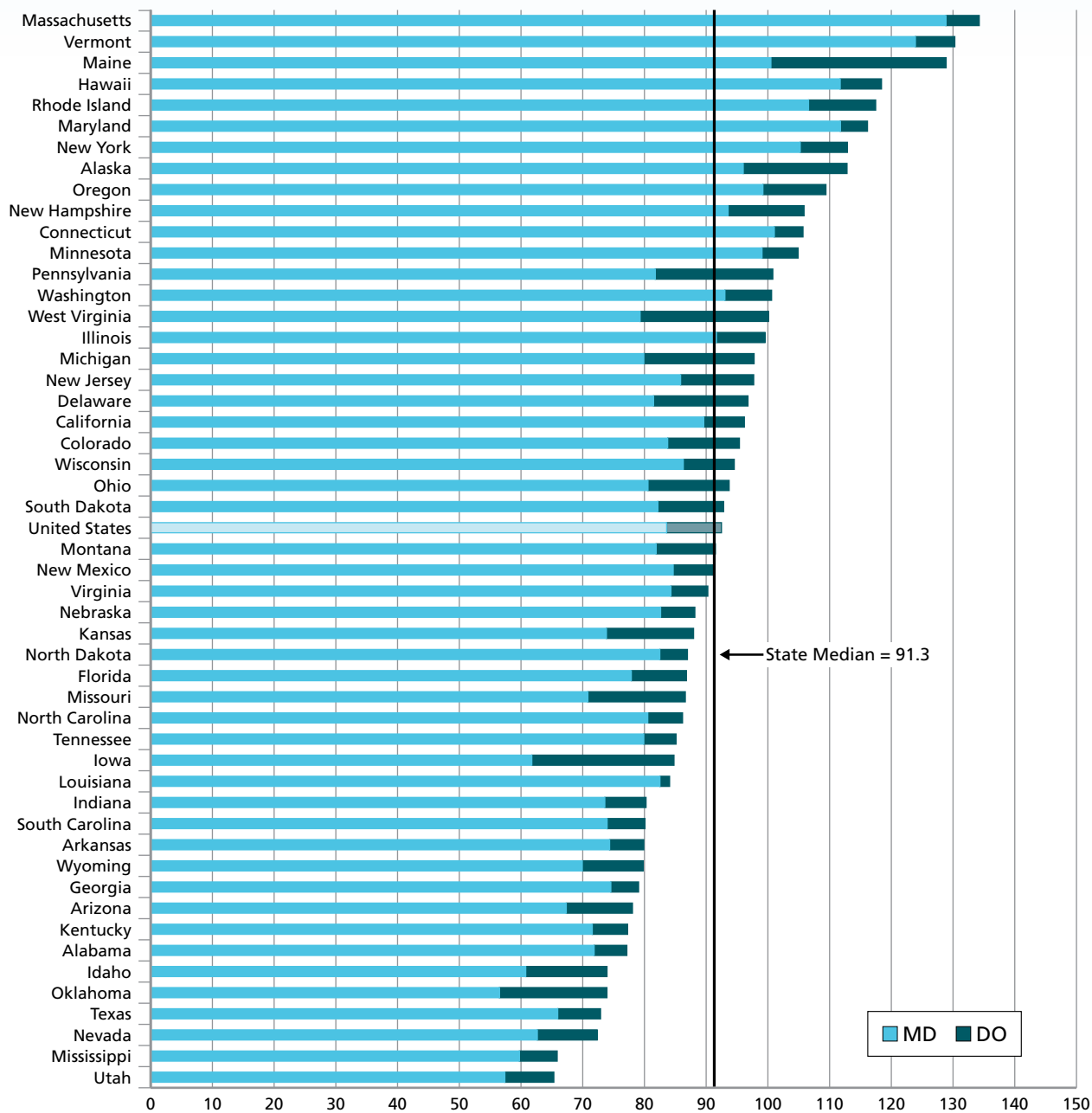
*Physicians whose degree type was unavailable (n = 27) are included in the total.

3. Active Primary Care Physicians per 100,000 Population by Degree Type, 2018



Sources: July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018). Physician data include MDs and DOs and are from the 2019 AMA Physician Masterfile (Dec. 31, 2018).

Map 1.3. Active primary care physicians per 100,000 population, 2018.



Sources: July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018). Physician data are from the 2019 AMA Physician Masterfile (Dec. 31, 2018).
 Note: Physicians whose degree type was unavailable (n = 28) are excluded.

Figure 1.3. Active primary care physicians per 100,000 population by degree type, 2018.

Table 1.3. Active Primary Care Physicians per 100,000 Population by Degree Type, 2018

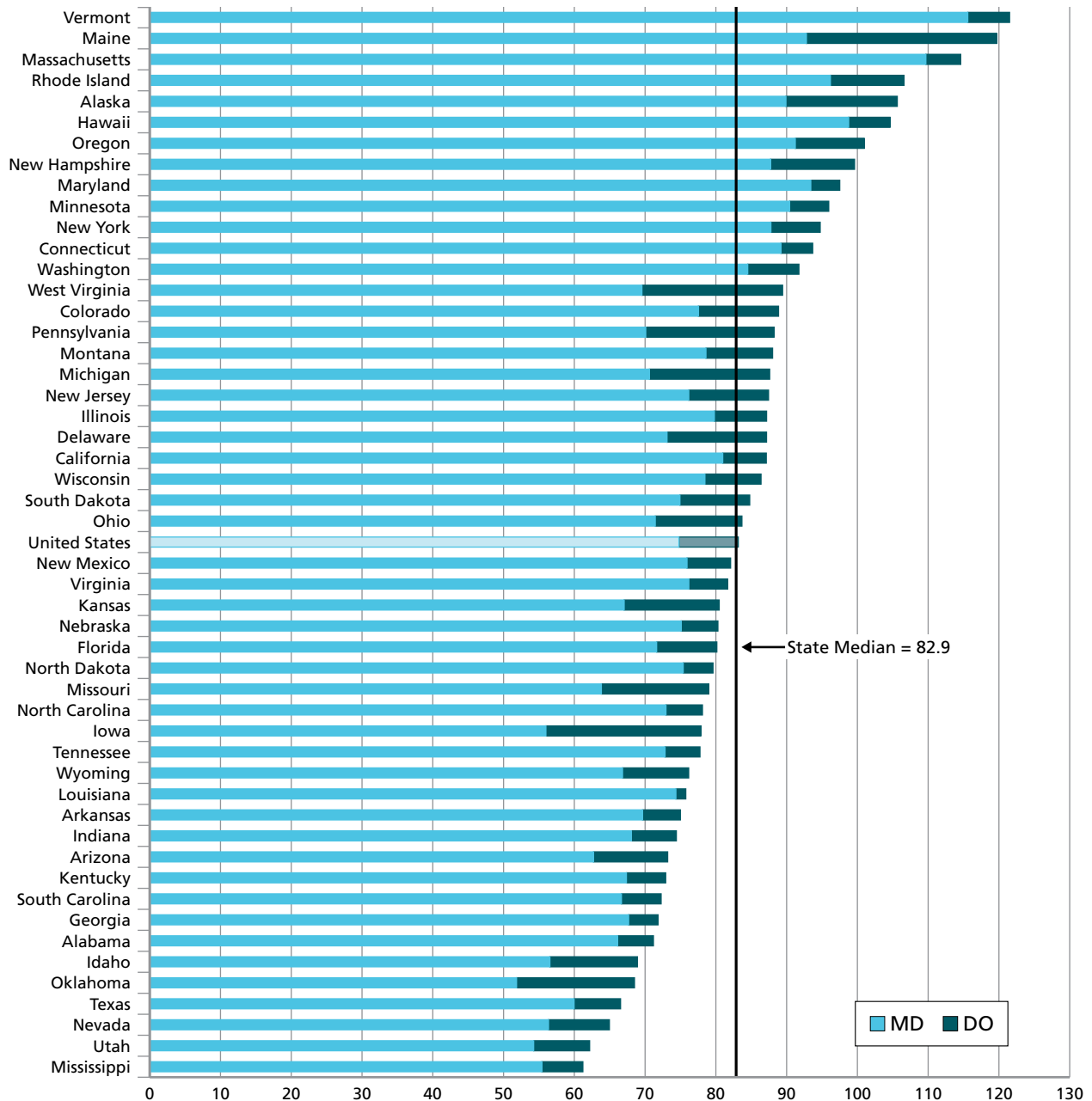
	Total Population	Total Active Primary Care Physicians*			Active Primary Care MDs		Active Primary Care DOs	
		Number	Rate per 100,000	Rank	Number	Rate per 100,000	Number	Rate per 100,000
United States	327,167,434	302,590	92.5	N.R.	273,505	83.6	29,058	8.9
Alabama	4,887,871	3,772	77.2	44	3,512	71.9	259	5.3
Alaska	737,438	832	112.8	8	708	96.0	124	16.8
Arizona	7,171,646	5,598	78.1	42	4,829	67.3	769	10.7
Arkansas	3,013,825	2,408	79.9	39	2,241	74.4	167	5.5
California	39,557,045	38,052	96.2	20	35,447	89.6	2,604	6.6
Colorado	5,695,564	5,433	95.4	21	4,771	83.8	662	11.6
Connecticut	3,572,665	3,777	105.7	11	3,610	101.0	166	4.6
Delaware	967,171	936	96.8	19	788	81.5	148	15.3
District of Columbia	702,455	1,684	239.7	N.R.	1,641	233.6	43	6.1
Florida	21,299,325	18,489	86.8	31	16,587	77.9	1,902	8.9
Georgia	10,519,475	8,319	79.1	41	7,843	74.6	473	4.5
Hawaii	1,420,491	1,683	118.5	4	1,587	111.7	95	6.7
Idaho	1,754,208	1,297	73.9	45	1,066	60.8	231	13.2
Illinois	12,741,080	12,685	99.6	16	11,679	91.7	1,003	7.9
Indiana	6,691,878	5,371	80.3	37	4,924	73.6	447	6.7
Iowa	3,156,145	2,676	84.8	35	1,949	61.8	727	23.0
Kansas	2,911,505	2,561	88.0	29	2,150	73.8	411	14.1
Kentucky	4,468,402	3,453	77.3	43	3,197	71.5	256	5.7
Louisiana	4,659,978	3,918	84.1	36	3,845	82.5	73	1.6
Maine	1,338,404	1,725	128.9	3	1,345	100.5	380	28.4
Maryland	6,042,718	7,022	116.2	6	6,752	111.7	266	4.4
Massachusetts	6,902,149	9,267	134.3	1	8,893	128.8	373	5.4
Michigan	9,995,915	9,774	97.8	17	7,987	79.9	1,786	17.9
Minnesota	5,611,179	5,886	104.9	12	5,558	99.1	328	5.8
Mississippi	2,986,530	1,968	65.9	49	1,784	59.7	183	6.1
Missouri	6,126,452	5,307	86.6	32	4,340	70.8	967	15.8
Montana	1,062,305	972	91.5	25	870	81.9	102	9.6
Nebraska	1,929,268	1,701	88.2	28	1,594	82.6	107	5.5
Nevada	3,034,392	2,195	72.3	48	1,901	62.6	294	9.7
New Hampshire	1,356,458	1,436	105.9	10	1,269	93.6	167	12.3
New Jersey	8,908,520	8,705	97.7	18	7,649	85.9	1,055	11.8
New Mexico	2,095,428	1,909	91.1	26	1,774	84.7	135	6.4
New York	19,542,209	22,064	112.9	7	20,567	105.2	1,494	7.6
North Carolina	10,383,620	8,948	86.2	33	8,363	80.5	585	5.6
North Dakota	760,077	661	87.0	30	627	82.5	34	4.5
Ohio	11,689,442	10,957	93.7	23	9,419	80.6	1,537	13.1
Oklahoma	3,943,079	2,915	73.9	46	2,228	56.5	687	17.4
Oregon	4,190,713	4,585	109.4	9	4,157	99.2	428	10.2
Pennsylvania	12,807,060	12,910	100.8	13	10,470	81.8	2,440	19.1
Puerto Rico	3,195,153	3,857	120.7	N.R.	3,854	120.6	2	0.1
Rhode Island	1,057,315	1,242	117.5	5	1,127	106.6	115	10.9
South Carolina	5,084,127	4,072	80.1	38	3,760	74.0	312	6.1
South Dakota	882,235	819	92.8	24	725	82.2	94	10.7
Tennessee	6,770,010	5,764	85.1	34	5,409	79.9	354	5.2
Texas	28,701,845	20,922	72.9	47	18,929	66.0	1,992	6.9
Utah	3,161,105	2,065	65.3	50	1,814	57.4	251	7.9
Vermont	626,299	816	130.3	2	776	123.9	40	6.4
Virginia	8,517,685	7,691	90.3	27	7,180	84.3	509	6.0
Washington	7,535,591	7,582	100.6	14	7,011	93.0	570	7.6
West Virginia	1,805,832	1,808	100.1	15	1,432	79.3	376	20.8
Wisconsin	5,813,568	5,497	94.6	22	5,017	86.3	480	8.3
Wyoming	577,737	461	79.8	40	404	69.9	57	9.9

Sources: July 1, 2018 population estimates are from the U.S. Census Bureau (released December 2018). Physician data are from the 2019 AMA Physician Masterfile (Dec. 31, 2018).

Note: N.R. = not ranked.

*Physicians whose degree type was unavailable (n = 28) are included in the total.

4. Active Patient Care Primary Care Physicians per 100,000 Population by Degree Type, 2018



Sources: July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018). Physician data are from the 2019 AMA Physician Masterfile (Dec. 31, 2018).
Note: Physicians whose degree type was unavailable (n = 21) are excluded.

Figure 1.4. Active patient care primary care physicians per 100,000 population by degree type, 2018.

Table 1.4. Active Patient Care Primary Care Physicians per 100,000 Population by Degree Type, 2018

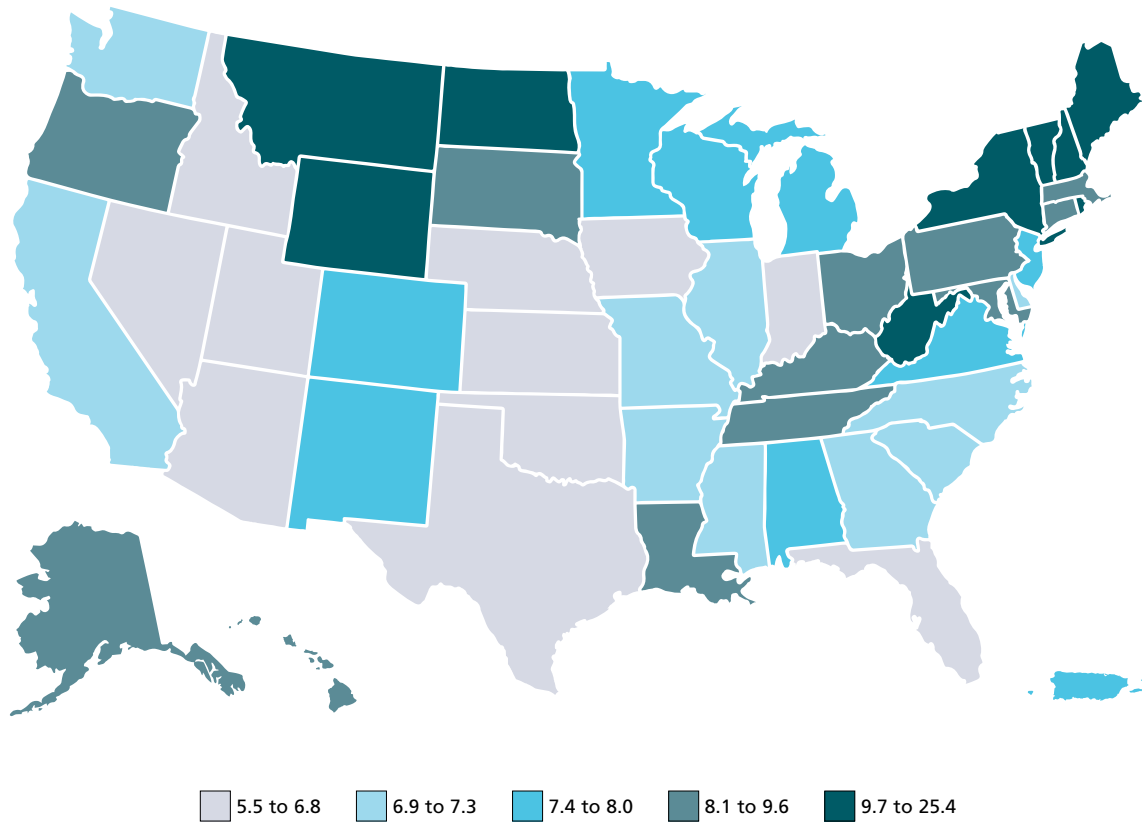
	Total Population	Total Active Patient Care Primary Care Physicians*			Active Patient Care Primary Care MDs		Active Patient Care Primary Care DOs	
		Number	Rate per 100,000	Rank	Number	Rate per 100,000	Number	Rate per 100,000
United States	327,167,434	272,111	83.2	N.R.	244,658	74.8	27,433	8.4
Alabama	4,887,871	3,480	71.2	44	3,232	66.1	247	5.1
Alaska	737,438	779	105.6	5	663	89.9	116	15.7
Arizona	7,171,646	5,249	73.2	40	4,498	62.7	751	10.5
Arkansas	3,013,825	2,260	75.0	38	2,099	69.6	161	5.3
California	39,557,045	34,466	87.1	22	32,030	81.0	2,435	6.2
Colorado	5,695,564	5,061	88.9	15	4,416	77.5	645	11.3
Connecticut	3,572,665	3,348	93.7	12	3,187	89.2	160	4.5
Delaware	967,171	843	87.2	21	707	73.1	136	14.1
District of Columbia	702,455	1,260	179.4	N.R.	1,222	174.0	38	5.4
Florida	21,299,325	17,069	80.1	30	15,257	71.6	1,812	8.5
Georgia	10,519,475	7,559	71.9	43	7,119	67.7	437	4.2
Hawaii	1,420,491	1,487	104.7	6	1,403	98.8	83	5.8
Idaho	1,754,208	1,209	68.9	45	992	56.5	217	12.4
Illinois	12,741,080	11,106	87.2	20	10,166	79.8	940	7.4
Indiana	6,691,878	4,980	74.4	39	4,554	68.1	426	6.4
Iowa	3,156,145	2,458	77.9	34	1,767	56.0	691	21.9
Kansas	2,911,505	2,343	80.5	28	1,952	67.0	391	13.4
Kentucky	4,468,402	3,258	72.9	41	3,010	67.4	248	5.6
Louisiana	4,659,978	3,530	75.8	37	3,465	74.4	65	1.4
Maine	1,338,404	1,602	119.7	2	1,242	92.8	360	26.9
Maryland	6,042,718	5,895	97.6	9	5,645	93.4	247	4.1
Massachusetts	6,902,149	7,910	114.6	3	7,570	109.7	340	4.9
Michigan	9,995,915	8,758	87.6	18	7,058	70.6	1,699	17.0
Minnesota	5,611,179	5,384	96.0	10	5,074	90.4	310	5.5
Mississippi	2,986,530	1,829	61.2	50	1,655	55.4	173	5.8
Missouri	6,126,452	4,840	79.0	32	3,910	63.8	930	15.2
Montana	1,062,305	935	88.0	17	835	78.6	100	9.4
Nebraska	1,929,268	1,549	80.3	29	1,449	75.1	100	5.2
Nevada	3,034,392	1,971	65.0	48	1,710	56.4	261	8.6
New Hampshire	1,356,458	1,351	99.6	8	1,190	87.7	161	11.9
New Jersey	8,908,520	7,791	87.5	19	6,786	76.2	1,004	11.3
New Mexico	2,095,428	1,720	82.1	26	1,591	75.9	129	6.2
New York	19,542,209	18,518	94.8	11	17,154	87.8	1,361	7.0
North Carolina	10,383,620	8,110	78.1	33	7,575	73.0	535	5.2
North Dakota	760,077	605	79.6	31	573	75.4	32	4.2
Ohio	11,689,442	9,783	83.7	25	8,351	71.4	1,431	12.2
Oklahoma	3,943,079	2,701	68.5	46	2,044	51.8	657	16.7
Oregon	4,190,713	4,231	101.0	7	3,823	91.2	408	9.7
Pennsylvania	12,807,060	11,299	88.2	16	8,977	70.1	2,322	18.1
Puerto Rico	3,195,153	3,406	106.6	N.R.	3,403	106.5	2	0.1
Rhode Island	1,057,315	1,127	106.6	4	1,017	96.2	110	10.4
South Carolina	5,084,127	3,674	72.3	42	3,389	66.7	285	5.6
South Dakota	882,235	748	84.8	24	661	74.9	87	9.9
Tennessee	6,770,010	5,265	77.8	35	4,930	72.8	334	4.9
Texas	28,701,845	19,097	66.5	47	17,211	60.0	1,885	6.6
Utah	3,161,105	1,965	62.2	49	1,715	54.3	250	7.9
Vermont	626,299	761	121.5	1	724	115.6	37	5.9
Virginia	8,517,685	6,957	81.7	27	6,489	76.2	467	5.5
Washington	7,535,591	6,913	91.7	13	6,368	84.5	545	7.2
West Virginia	1,805,832	1,615	89.4	14	1,256	69.6	359	19.9
Wisconsin	5,813,568	5,022	86.4	23	4,561	78.5	461	7.9
Wyoming	577,737	440	76.2	36	386	66.8	54	9.3

Sources: July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018). Physician data are from the 2019 AMA Physician Masterfile (Dec. 31, 2018).

Note: N.R. = not ranked.

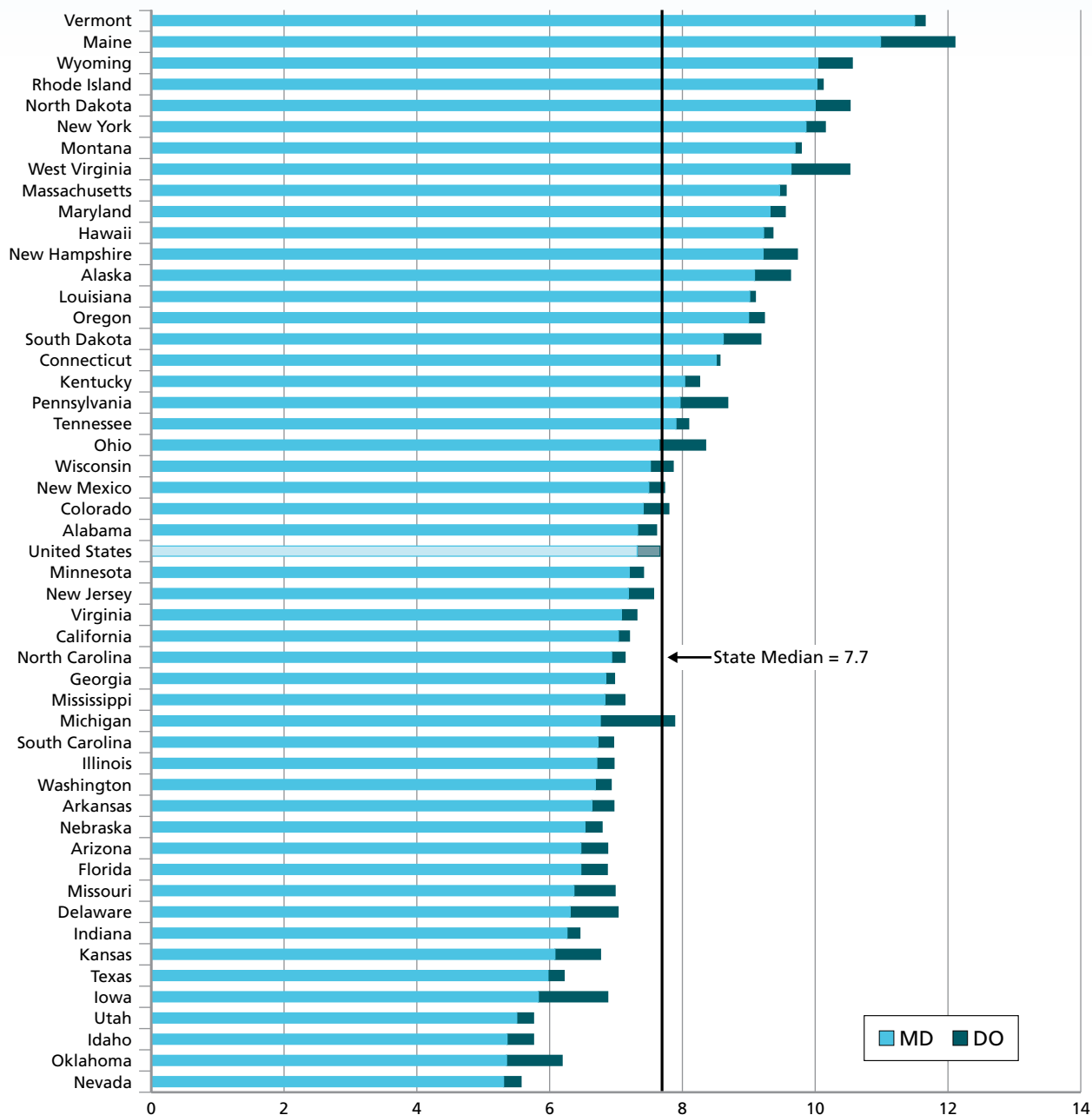
*Physicians whose degree type was unavailable (n = 21) are included in the total.

5. Active General Surgeons per 100,000 Population by Degree Type, 2018



Sources: July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018). Physician data include MDs and DOs and are from the 2019 AMA Physician Masterfile (Dec. 31, 2018).

Map 1.5. Active general surgeons per 100,000 population, 2018.



Sources: July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018). Physician data are from the 2019 AMA Physician Masterfile (Dec. 31, 2018).
 Note: Physicians whose degree type was unavailable (n = 3) are excluded.

Figure 1.5. Active general surgeons per 100,000 population by degree type, 2018.

Table 1.5. Active General Surgeons per 100,000 Population by Degree Type, 2018

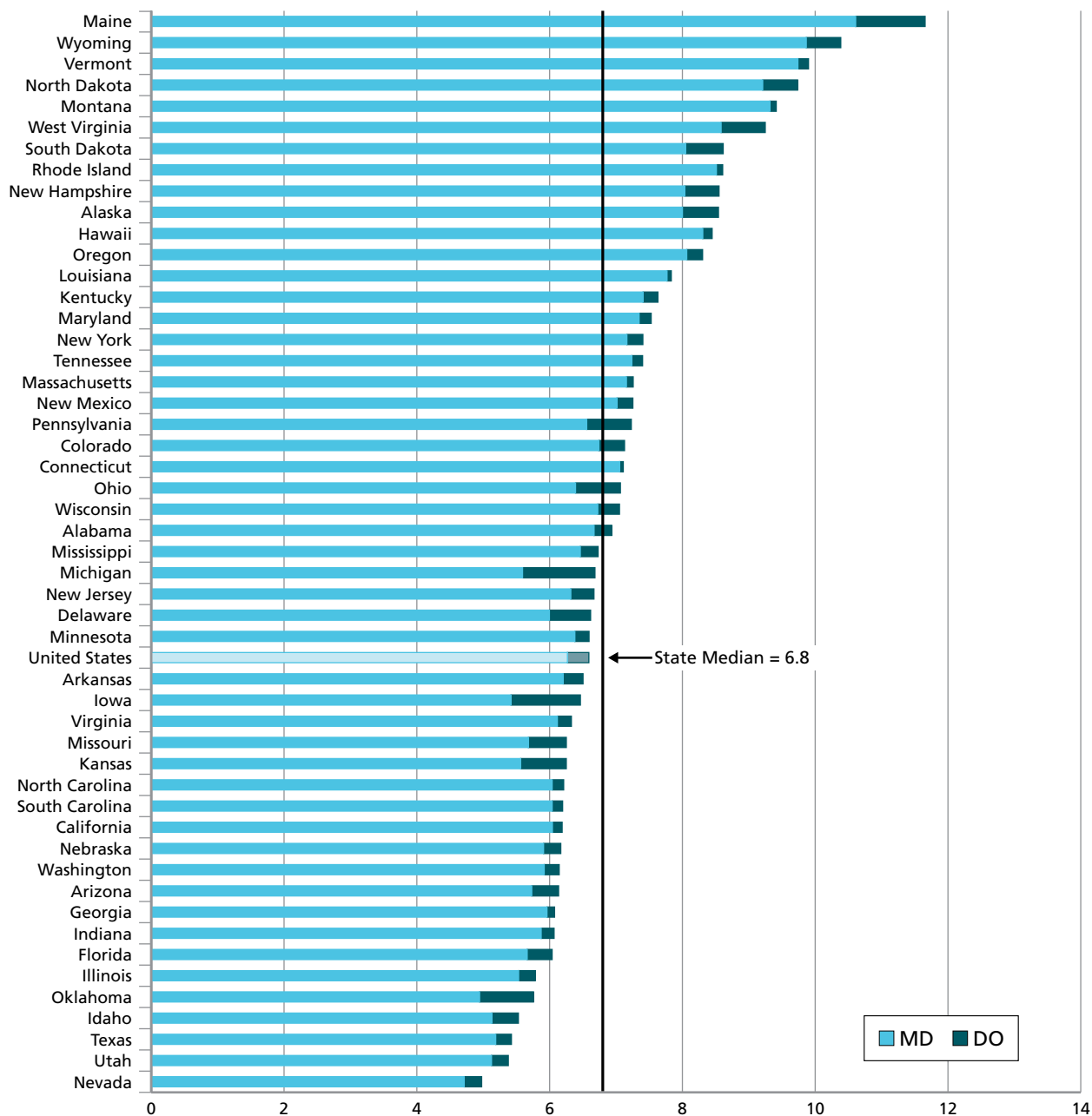
	Total Population	Total Active General Surgeons*			Active General Surgeon MDs		Active General Surgeon DOs	
		Number	Rate per 100,000	Rank	Number	Rate per 100,000	Number	Rate per 100,000
United States	327,167,434	25,075	7.7	N.R.	23,944	7.3	1,128	0.3
Alabama	4,887,871	372	7.6	26	358	7.3	14	0.3
Alaska	737,438	71	9.6	10	67	9.1	4	0.5
Arizona	7,171,646	494	6.9	40	464	6.5	29	0.4
Arkansas	3,013,825	210	7.0	37	200	6.6	10	0.3
California	39,557,045	2,849	7.2	30	2,783	7.0	66	0.2
Colorado	5,695,564	444	7.8	24	422	7.4	22	0.4
Connecticut	3,572,665	306	8.6	18	304	8.5	2	0.1
Delaware	967,171	68	7.0	33	61	6.3	7	0.7
District of Columbia	702,455	178	25.3	N.R.	178	25.3	---	---
Florida	21,299,325	1,463	6.9	42	1,378	6.5	85	0.4
Georgia	10,519,475	734	7.0	35	720	6.8	14	0.1
Hawaii	1,420,491	133	9.4	13	131	9.2	2	0.1
Idaho	1,754,208	101	5.8	48	94	5.4	7	0.4
Illinois	12,741,080	888	7.0	36	855	6.7	33	0.3
Indiana	6,691,878	432	6.5	45	419	6.3	13	0.2
Iowa	3,156,145	217	6.9	41	184	5.8	33	1.0
Kansas	2,911,505	197	6.8	44	177	6.1	20	0.7
Kentucky	4,468,402	369	8.3	20	359	8.0	10	0.2
Louisiana	4,659,978	424	9.1	16	420	9.0	4	0.1
Maine	1,338,404	162	12.1	1	147	11.0	15	1.1
Maryland	6,042,718	578	9.6	11	563	9.3	14	0.2
Massachusetts	6,902,149	660	9.6	12	653	9.5	7	0.1
Michigan	9,995,915	788	7.9	22	676	6.8	112	1.1
Minnesota	5,611,179	416	7.4	28	404	7.2	12	0.2
Mississippi	2,986,530	213	7.1	32	204	6.8	9	0.3
Missouri	6,126,452	428	7.0	34	390	6.4	38	0.6
Montana	1,062,305	104	9.8	8	103	9.7	1	0.1
Nebraska	1,929,268	131	6.8	43	126	6.5	5	0.3
Nevada	3,034,392	169	5.6	50	161	5.3	8	0.3
New Hampshire	1,356,458	132	9.7	9	125	9.2	7	0.5
New Jersey	8,908,520	674	7.6	27	640	7.2	34	0.4
New Mexico	2,095,428	162	7.7	25	157	7.5	5	0.2
New York	19,542,209	1,985	10.2	6	1,927	9.9	57	0.3
North Carolina	10,383,620	741	7.1	31	720	6.9	21	0.2
North Dakota	760,077	80	10.5	4	76	10.0	4	0.5
Ohio	11,689,442	976	8.3	19	894	7.6	82	0.7
Oklahoma	3,943,079	244	6.2	47	211	5.4	33	0.8
Oregon	4,190,713	387	9.2	14	377	9.0	10	0.2
Pennsylvania	12,807,060	1,112	8.7	17	1,020	8.0	92	0.7
Puerto Rico	3,195,153	253	7.9	N.R.	253	7.9	---	---
Rhode Island	1,057,315	107	10.1	7	106	10.0	1	0.1
South Carolina	5,084,127	354	7.0	38	342	6.7	12	0.2
South Dakota	882,235	81	9.2	15	76	8.6	5	0.6
Tennessee	6,770,010	548	8.1	21	535	7.9	13	0.2
Texas	28,701,845	1,785	6.2	46	1,715	6.0	70	0.2
Utah	3,161,105	182	5.8	49	174	5.5	8	0.3
Vermont	626,299	73	11.7	2	72	11.5	1	0.2
Virginia	8,517,685	623	7.3	29	603	7.1	20	0.2
Washington	7,535,591	522	6.9	39	504	6.7	18	0.2
West Virginia	1,805,832	190	10.5	5	174	9.6	16	0.9
Wisconsin	5,813,568	457	7.9	23	437	7.5	20	0.3
Wyoming	577,737	61	10.6	3	58	10.0	3	0.5

Sources: July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018). Physician data are from the 2019 AMA Physician Masterfile (Dec. 31, 2018).

Note: N.R. = not ranked. --- Indicates that category is not applicable because some states do not have an MD-granting or a DO-granting school.

*Physicians whose degree type was unavailable (n = 3) are included in the total.

6. Active Patient Care General Surgeons per 100,000 Population by Degree Type, 2018



Sources: July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018). Physician data are from the 2019 AMA Physician Masterfile (Dec. 31, 2018).

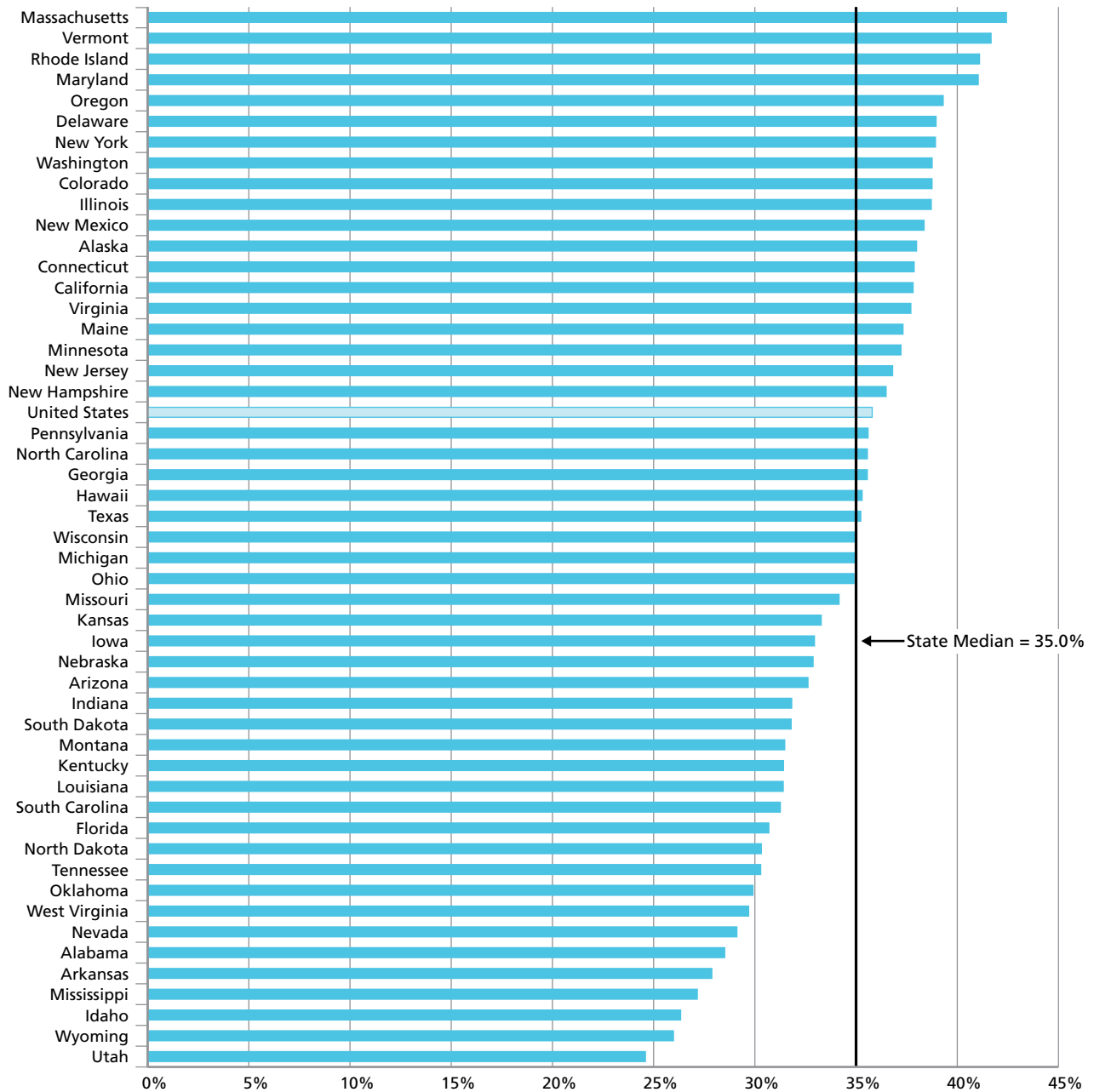
Figure 1.6. Active patient care general surgeons per 100,000 population by degree type, 2018.

Table 1.6. Active Patient Care General Surgeons per 100,000 Population by Degree Type, 2018

	Total Population	Total Active Patient Care General Surgeons			Active Patient Care General Surgeon MDs		Active Patient Care General Surgeon DOs	
		Number	Rate per 100,000	Rank	Number	Rate per 100,000	Number	Rate per 100,000
United States	327,167,434	21,564	6.6	N.R.	20,509	6.3	1,055	0.3
Alabama	4,887,871	339	6.9	25	326	6.7	13	0.3
Alaska	737,438	63	8.5	10	59	8.0	4	0.5
Arizona	7,171,646	440	6.1	41	411	5.7	29	0.4
Arkansas	3,013,825	196	6.5	31	187	6.2	9	0.3
California	39,557,045	2,448	6.2	38	2,390	6.0	58	0.1
Colorado	5,695,564	406	7.1	21	384	6.7	22	0.4
Connecticut	3,572,665	254	7.1	22	252	7.1	2	0.1
Delaware	967,171	64	6.6	29	58	6.0	6	0.6
District of Columbia	702,455	107	15.2	N.R.	107	15.2	0	0.0
Florida	21,299,325	1,286	6.0	44	1,206	5.7	80	0.4
Georgia	10,519,475	639	6.1	42	627	6.0	12	0.1
Hawaii	1,420,491	120	8.4	11	118	8.3	2	0.1
Idaho	1,754,208	97	5.5	47	90	5.1	7	0.4
Illinois	12,741,080	737	5.8	45	705	5.5	32	0.3
Indiana	6,691,878	406	6.1	43	393	5.9	13	0.2
Iowa	3,156,145	204	6.5	32	171	5.4	33	1.0
Kansas	2,911,505	182	6.3	35	162	5.6	20	0.7
Kentucky	4,468,402	341	7.6	14	331	7.4	10	0.2
Louisiana	4,659,978	365	7.8	13	362	7.8	3	0.1
Maine	1,338,404	156	11.7	1	142	10.6	14	1.0
Maryland	6,042,718	455	7.5	15	444	7.3	11	0.2
Massachusetts	6,902,149	501	7.3	18	494	7.2	7	0.1
Michigan	9,995,915	668	6.7	27	559	5.6	109	1.1
Minnesota	5,611,179	370	6.6	30	358	6.4	12	0.2
Mississippi	2,986,530	201	6.7	26	193	6.5	8	0.3
Missouri	6,126,452	383	6.3	34	348	5.7	35	0.6
Montana	1,062,305	100	9.4	5	99	9.3	1	0.1
Nebraska	1,929,268	119	6.2	39	114	5.9	5	0.3
Nevada	3,034,392	151	5.0	50	143	4.7	8	0.3
New Hampshire	1,356,458	116	8.6	9	109	8.0	7	0.5
New Jersey	8,908,520	594	6.7	28	563	6.3	31	0.3
New Mexico	2,095,428	152	7.3	19	147	7.0	5	0.2
New York	19,542,209	1,447	7.4	16	1,400	7.2	47	0.2
North Carolina	10,383,620	645	6.2	36	627	6.0	18	0.2
North Dakota	760,077	74	9.7	4	70	9.2	4	0.5
Ohio	11,689,442	826	7.1	23	747	6.4	79	0.7
Oklahoma	3,943,079	227	5.8	46	195	4.9	32	0.8
Oregon	4,190,713	348	8.3	12	338	8.1	10	0.2
Pennsylvania	12,807,060	926	7.2	20	840	6.6	86	0.7
Puerto Rico	3,195,153	216	6.8	N.R.	216	6.8	0	0.0
Rhode Island	1,057,315	91	8.6	8	90	8.5	1	0.1
South Carolina	5,084,127	315	6.2	37	307	6.0	8	0.2
South Dakota	882,235	76	8.6	7	71	8.0	5	0.6
Tennessee	6,770,010	501	7.4	17	490	7.2	11	0.2
Texas	28,701,845	1,557	5.4	48	1,489	5.2	68	0.2
Utah	3,161,105	170	5.4	49	162	5.1	8	0.3
Vermont	626,299	62	9.9	3	61	9.7	1	0.2
Virginia	8,517,685	539	6.3	33	521	6.1	18	0.2
Washington	7,535,591	463	6.1	40	446	5.9	17	0.2
West Virginia	1,805,832	167	9.2	6	155	8.6	12	0.7
Wisconsin	5,813,568	410	7.1	24	391	6.7	19	0.3
Wyoming	577,737	60	10.4	2	57	9.9	3	0.5

Sources: July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018). Physician data are from the 2019 AMA Physician Masterfile (Dec. 31, 2018).
Note: N.R. = not ranked.

7. Active Female Physicians, 2018



Source: 2019 AMA Physician Masterfile (Dec. 31, 2018).

Note: Physicians whose sex was missing (n = 1,435) are excluded.

Figure 1.7. Percentage of active physicians who are female, 2018.

Table 1.7. Active Female Physicians, 2018

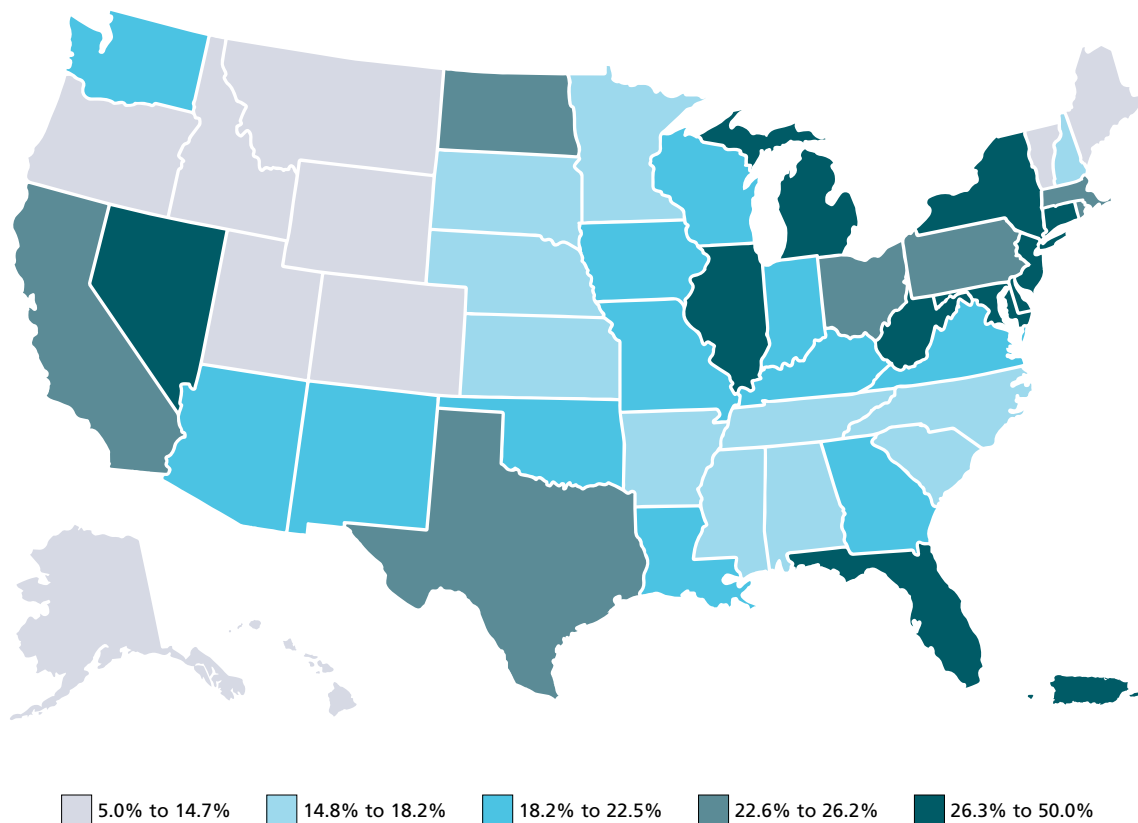
	Total Active Physicians*	Active Female Physicians		
		Number	Percentage	Rank
United States	907,353	324,805	35.8%	N.R.
Alabama	10,610	3,025	28.5%	45
Alaska	2,040	775	38.0%	12
Arizona	17,324	5,652	32.6%	32
Arkansas	6,253	1,743	27.9%	46
California	110,327	41,724	37.8%	14
Colorado	16,251	6,298	38.8%	9
Connecticut	12,569	4,760	37.9%	13
Delaware	2,752	1,072	39.0%	6
District of Columbia	5,947	2,807	47.2%	N.R.
Florida	56,399	17,310	30.7%	39
Georgia	24,036	8,546	35.6%	22
Hawaii	4,456	1,573	35.3%	23
Idaho	3,372	888	26.3%	48
Illinois	36,187	14,010	38.7%	10
Indiana	15,433	4,911	31.8%	33
Iowa	6,872	2,264	32.9%	30
Kansas	6,623	2,204	33.3%	29
Kentucky	10,313	3,240	31.4%	36
Louisiana	12,126	3,808	31.4%	37
Maine	4,416	1,648	37.3%	16
Maryland	23,296	9,560	41.0%	4
Massachusetts	30,992	13,150	42.4%	1
Michigan	28,645	10,013	35.0%	26
Minnesota	16,967	6,315	37.2%	17
Mississippi	5,711	1,551	27.2%	47
Missouri	16,721	5,712	34.2%	28
Montana	2,621	825	31.5%	35
Nebraska	4,611	1,516	32.9%	31
Nevada	6,303	1,835	29.1%	44
New Hampshire	4,273	1,559	36.5%	19
New Jersey	27,239	10,026	36.8%	18
New Mexico	5,125	1,966	38.4%	11
New York	73,190	28,489	38.9%	7
North Carolina	26,463	9,410	35.6%	21
North Dakota	1,804	547	30.3%	40
Ohio	34,181	11,928	34.9%	27
Oklahoma	8,136	2,433	29.9%	42
Oregon	12,693	4,989	39.3%	5
Pennsylvania	40,993	14,591	35.6%	20
Puerto Rico	9,759	3,658	37.5%	N.R.
Rhode Island	3,910	1,607	41.1%	3
South Carolina	11,654	3,643	31.3%	38
South Dakota	2,120	674	31.8%	34
Tennessee	17,128	5,188	30.3%	41
Texas	64,440	22,705	35.2%	24
Utah	6,815	1,676	24.6%	50
Vermont	2,299	958	41.7%	2
Virginia	22,396	8,445	37.7%	15
Washington	20,978	8,131	38.8%	8
West Virginia	4,752	1,411	29.7%	43
Wisconsin	15,390	5,382	35.0%	25
Wyoming	1,201	312	26.0%	49

Source: 2019 AMA Physician Masterfile (Dec. 31, 2018).

Note: N.R. = not ranked.

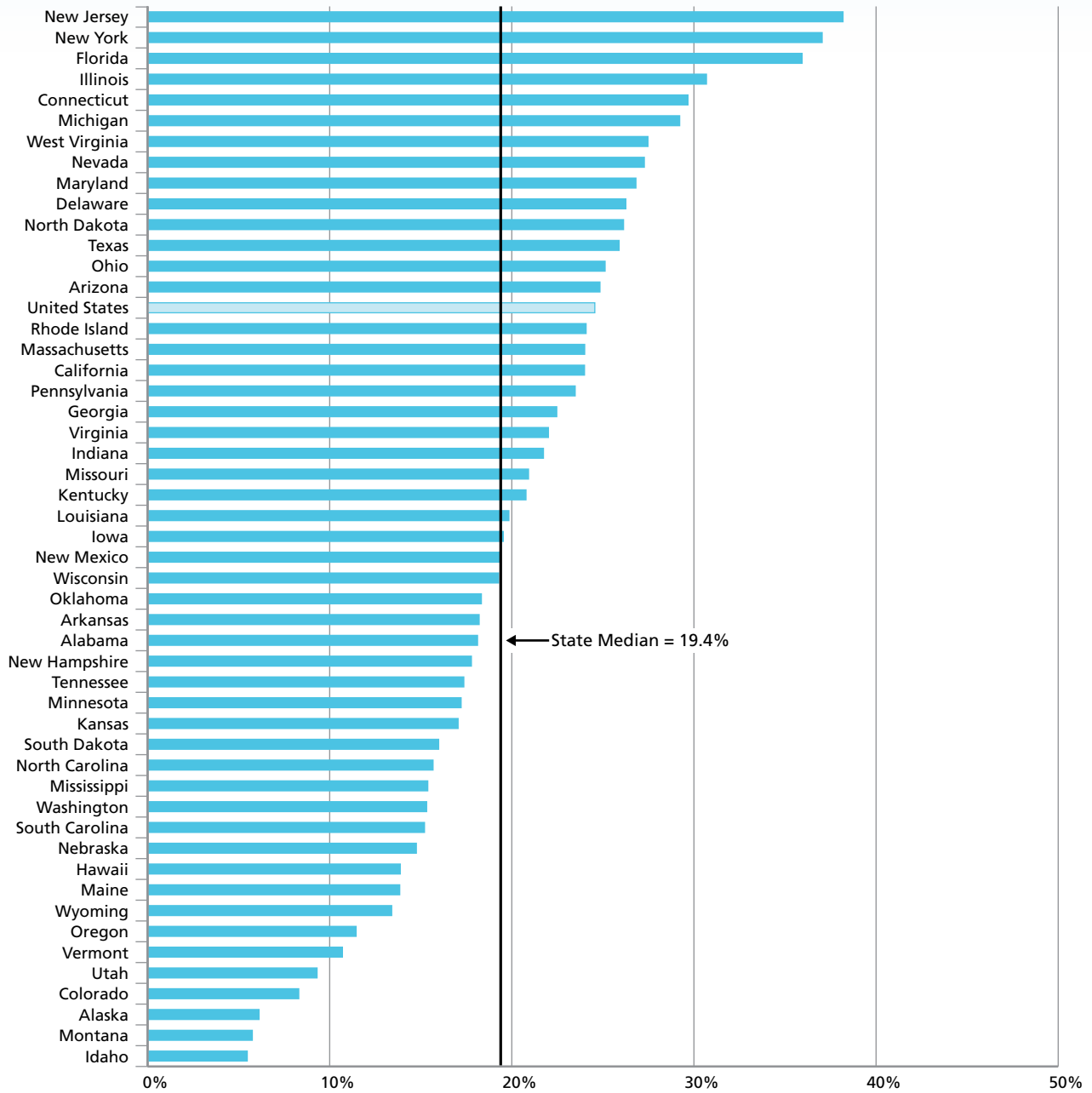
*Physicians whose sex was missing (n = 1,435) are excluded.

8. Active Physicians by School Type, 2018



Source: 2019 AMA Physician Masterfile (Dec. 31, 2018).

Map 1.8. Percentage of active physicians who are international medical graduates (IMGs), 2018.



Source: 2019 AMA Physician Masterfile (Dec. 31, 2018).

Note: The total excludes active physicians whose school type was unavailable (n = 50) and physicians who are graduates of Canadian schools (n = 9,048).

Figure 1.8. Percentage of active physicians who are international medical graduates (IMGs), 2018.

Table 1.8. Active Physicians by School Type, 2018

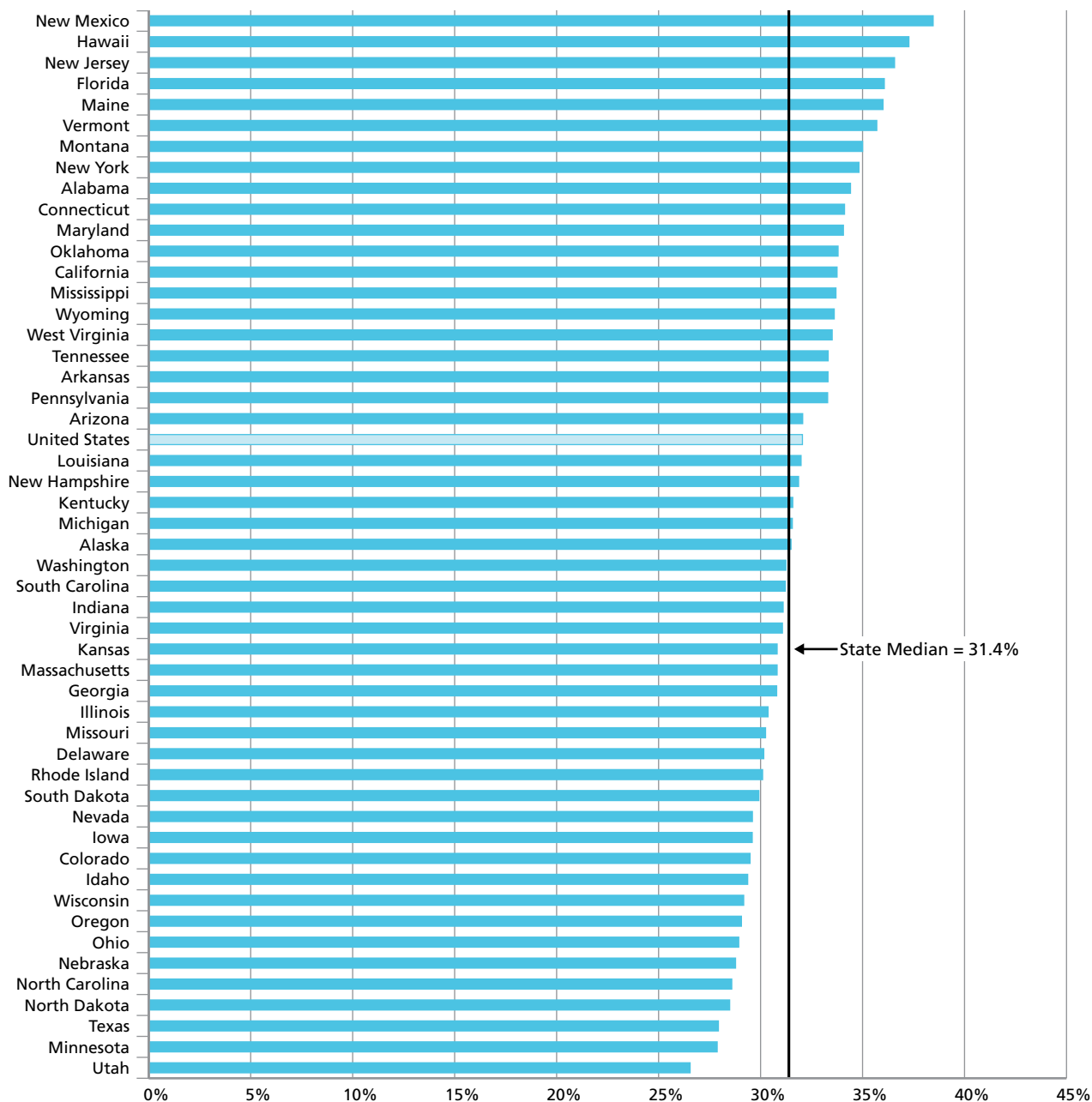
	Total Active Physicians*	U.S. MD		U.S. DO		IMG		
		Number	Percentage	Number	Percentage	Number	Percentage	Rank
United States	908,711	603,696	66.4%	72,812	8.0%	223,154	24.6%	N.R.
Alabama	10,613	8,036	75.7%	569	5.4%	1,923	18.1%	30
Alaska	2,042	1,640	80.3%	265	13.0%	125	6.1%	48
Arizona	17,355	10,711	61.7%	2,052	11.8%	4,311	24.8%	14
Arkansas	6,256	4,751	75.9%	336	5.4%	1,139	18.2%	29
California	110,602	76,830	69.5%	5,857	5.3%	26,536	24.0%	17
Colorado	16,272	13,203	81.1%	1,569	9.6%	1,351	8.3%	47
Connecticut	12,577	8,252	65.6%	482	3.8%	3,732	29.7%	5
Delaware	2,753	1,663	60.4%	351	12.7%	723	26.3%	10
District of Columbia	5,950	4,410	74.1%	134	2.3%	1,366	23.0%	N.R.
Florida	56,484	30,565	54.1%	5,160	9.1%	20,301	35.9%	3
Georgia	24,051	17,331	72.1%	1,157	4.8%	5,404	22.5%	19
Hawaii	4,461	3,528	79.1%	250	5.6%	619	13.9%	41
Idaho	3,379	2,667	78.9%	493	14.6%	185	5.5%	50
Illinois	36,235	22,266	61.4%	2,580	7.1%	11,120	30.7%	4
Indiana	15,448	10,814	70.0%	1,145	7.4%	3,358	21.7%	21
Iowa	6,886	4,138	60.1%	1,332	19.3%	1,345	19.5%	25
Kansas	6,627	4,670	70.5%	791	11.9%	1,130	17.1%	34
Kentucky	10,318	7,354	71.3%	722	7.0%	2,144	20.8%	23
Louisiana	12,132	9,417	77.6%	252	2.1%	2,407	19.8%	24
Maine	4,420	2,956	66.9%	762	17.2%	612	13.8%	42
Maryland	23,318	16,017	68.7%	846	3.6%	6,253	26.8%	9
Massachusetts	31,022	21,880	70.5%	936	3.0%	7,446	24.0%	16
Michigan	28,688	14,900	51.9%	5,160	18.0%	8,382	29.2%	6
Minnesota	16,984	12,861	75.7%	840	4.9%	2,924	17.2%	33
Mississippi	5,713	4,393	76.9%	413	7.2%	879	15.4%	37
Missouri	16,732	10,889	65.1%	2,262	13.5%	3,500	20.9%	22
Montana	2,625	2,205	84.0%	252	9.6%	151	5.8%	49
Nebraska	4,614	3,640	78.9%	255	5.5%	681	14.8%	40
Nevada	6,478	3,604	55.6%	1,053	16.3%	1,767	27.3%	8
New Hampshire	4,274	3,020	70.7%	390	9.1%	760	17.8%	31
New Jersey	27,303	13,647	50.0%	3,110	11.4%	10,426	38.2%	1
New Mexico	5,129	3,796	74.0%	304	5.9%	992	19.3%	26
New York	73,290	41,475	56.6%	3,949	5.4%	27,147	37.0%	2
North Carolina	26,481	20,653	78.0%	1,468	5.5%	4,151	15.7%	36
North Dakota	1,806	1,180	65.3%	106	5.9%	472	26.1%	11
Ohio	34,216	20,806	60.8%	4,478	13.1%	8,596	25.1%	13
Oklahoma	8,151	4,856	59.6%	1,767	21.7%	1,494	18.3%	28
Oregon	12,714	10,099	79.4%	984	7.7%	1,456	11.5%	44
Pennsylvania	41,039	25,406	61.9%	5,696	13.9%	9,636	23.5%	18
Puerto Rico	9,786	4,916	50.2%	2	0.0%	4,868	49.7%	N.R.
Rhode Island	3,912	2,657	67.9%	261	6.7%	942	24.1%	15
South Carolina	11,666	9,076	77.8%	766	6.6%	1,774	15.2%	39
South Dakota	2,121	1,594	75.2%	174	8.2%	339	16.0%	35
Tennessee	17,132	13,172	76.9%	857	5.0%	2,975	17.4%	32
Texas	64,530	42,537	65.9%	4,773	7.4%	16,709	25.9%	12
Utah	6,833	5,506	80.6%	625	9.1%	636	9.3%	46
Vermont	2,299	1,881	81.8%	89	3.9%	246	10.7%	45
Virginia	22,417	15,980	71.3%	1,365	6.1%	4,934	22.0%	20
Washington	21,006	15,994	76.1%	1,362	6.5%	3,219	15.3%	38
West Virginia	4,757	2,633	55.4%	790	16.6%	1,307	27.5%	7
Wisconsin	15,399	11,235	73.0%	1,087	7.1%	2,968	19.3%	27
Wyoming	1,201	902	75.1%	135	11.2%	161	13.4%	43

Source: AMA Physician Masterfile (Dec. 31, 2018).

Note: N.R. = not ranked.

*The total excludes active physicians whose school type was unavailable (n = 50). Physicians who are graduates of Canadian schools are included in the total (n = 9,048).

9. Active Physicians by Selected Age Groups, 2018



Source: 2019 AMA Physician Masterfile (Dec. 31, 2018).

Note: Physicians whose age was missing (n = 2,424) are excluded.

Figure 1.9. Percentage of active physicians who are age 60 or older, 2018.

Table 1.9. Active Physicians by Selected Age Groups, 2018

	Total Active Physicians*	Age 39 or Younger		Age 60 or Older		
		Number	Percentage	Number	Percentage	Rank
United States	906,366	154,324	17.0%	290,514	32.1%	N.R.
Alabama	10,602	1,750	16.5%	3,648	34.4%	9
Alaska	2,029	339	16.7%	639	31.5%	25
Arizona	17,240	2,471	14.3%	5,528	32.1%	20
Arkansas	6,251	1,113	17.8%	2,082	33.3%	18
California	110,431	17,206	15.6%	37,270	33.7%	13
Colorado	16,222	2,691	16.6%	4,783	29.5%	40
Connecticut	12,563	1,974	15.7%	4,286	34.1%	10
Delaware	2,749	492	17.9%	829	30.2%	35
District of Columbia	5,948	1,380	23.2%	1,816	30.5%	N.R.
Florida	56,216	7,455	13.3%	20,275	36.1%	4
Georgia	24,015	3,867	16.1%	7,394	30.8%	32
Hawaii	4,459	609	13.7%	1,662	37.3%	2
Idaho	3,371	500	14.8%	990	29.4%	41
Illinois	36,201	7,044	19.5%	10,993	30.4%	33
Indiana	15,434	2,577	16.7%	4,801	31.1%	28
Iowa	6,857	1,312	19.1%	2,029	29.6%	39
Kansas	6,611	1,337	20.2%	2,037	30.8%	30
Kentucky	10,295	1,826	17.7%	3,251	31.6%	23
Louisiana	12,121	2,453	20.2%	3,877	32.0%	21
Maine	4,405	618	14.0%	1,586	36.0%	5
Maryland	23,287	3,706	15.9%	7,932	34.1%	11
Massachusetts	31,012	5,577	18.0%	9,555	30.8%	31
Michigan	28,463	5,834	20.5%	8,982	31.6%	24
Minnesota	16,974	3,245	19.1%	4,731	27.9%	49
Mississippi	5,698	963	16.9%	1,920	33.7%	14
Missouri	16,651	3,237	19.4%	5,036	30.2%	34
Montana	2,617	343	13.1%	916	35.0%	7
Nebraska	4,605	970	21.1%	1,325	28.8%	45
Nevada	6,436	1,076	16.7%	1,905	29.6%	38
New Hampshire	4,265	581	13.6%	1,359	31.9%	22
New Jersey	27,247	3,598	13.2%	9,964	36.6%	3
New Mexico	5,122	739	14.4%	1,970	38.5%	1
New York	73,197	13,006	17.8%	25,490	34.8%	8
North Carolina	26,470	4,531	17.1%	7,567	28.6%	46
North Dakota	1,801	384	21.3%	513	28.5%	47
Ohio	34,021	6,874	20.2%	9,842	28.9%	44
Oklahoma	8,083	1,374	17.0%	2,732	33.8%	12
Oregon	12,656	2,000	15.8%	3,678	29.1%	43
Pennsylvania	40,894	7,332	17.9%	13,613	33.3%	19
Puerto Rico	9,757	1,008	10.3%	4,232	43.4%	N.R.
Rhode Island	3,907	811	20.8%	1,176	30.1%	36
South Carolina	11,647	2,075	17.8%	3,635	31.2%	27
South Dakota	2,116	373	17.6%	633	29.9%	37
Tennessee	17,104	2,715	15.9%	5,698	33.3%	17
Texas	64,382	12,009	18.7%	17,983	27.9%	48
Utah	6,811	1,083	15.9%	1,808	26.5%	50
Vermont	2,297	367	16.0%	820	35.7%	6
Virginia	22,348	3,470	15.5%	6,944	31.1%	29
Washington	20,976	3,317	15.8%	6,553	31.2%	26
West Virginia	4,682	861	18.4%	1,569	33.5%	16
Wisconsin	15,381	2,695	17.5%	4,487	29.2%	42
Wyoming	1,196	164	13.7%	402	33.6%	15

Source: 2019 AMA Physician Masterfile (Dec. 31, 2018).

Note: N.R. = not ranked.

*Physicians whose age was missing (n = 2,424) are excluded.

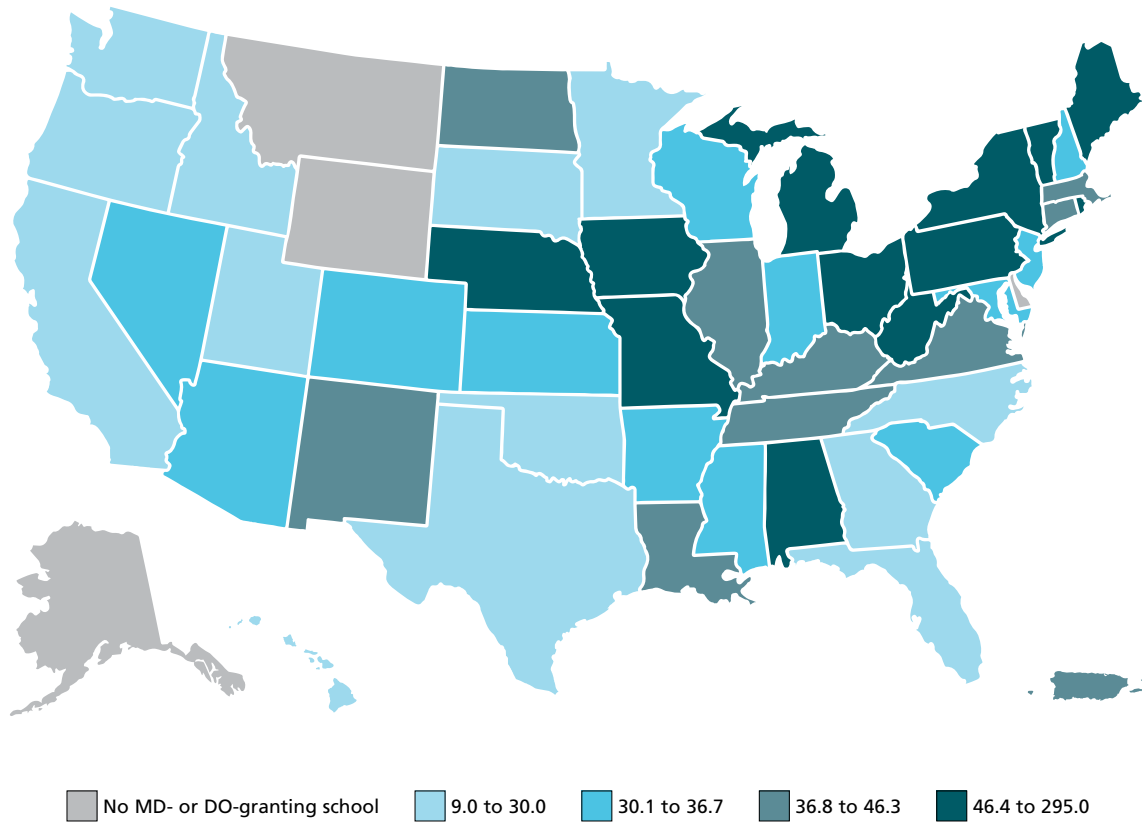
SECTION 2

Undergraduate Medical Education (UME)

Key Findings

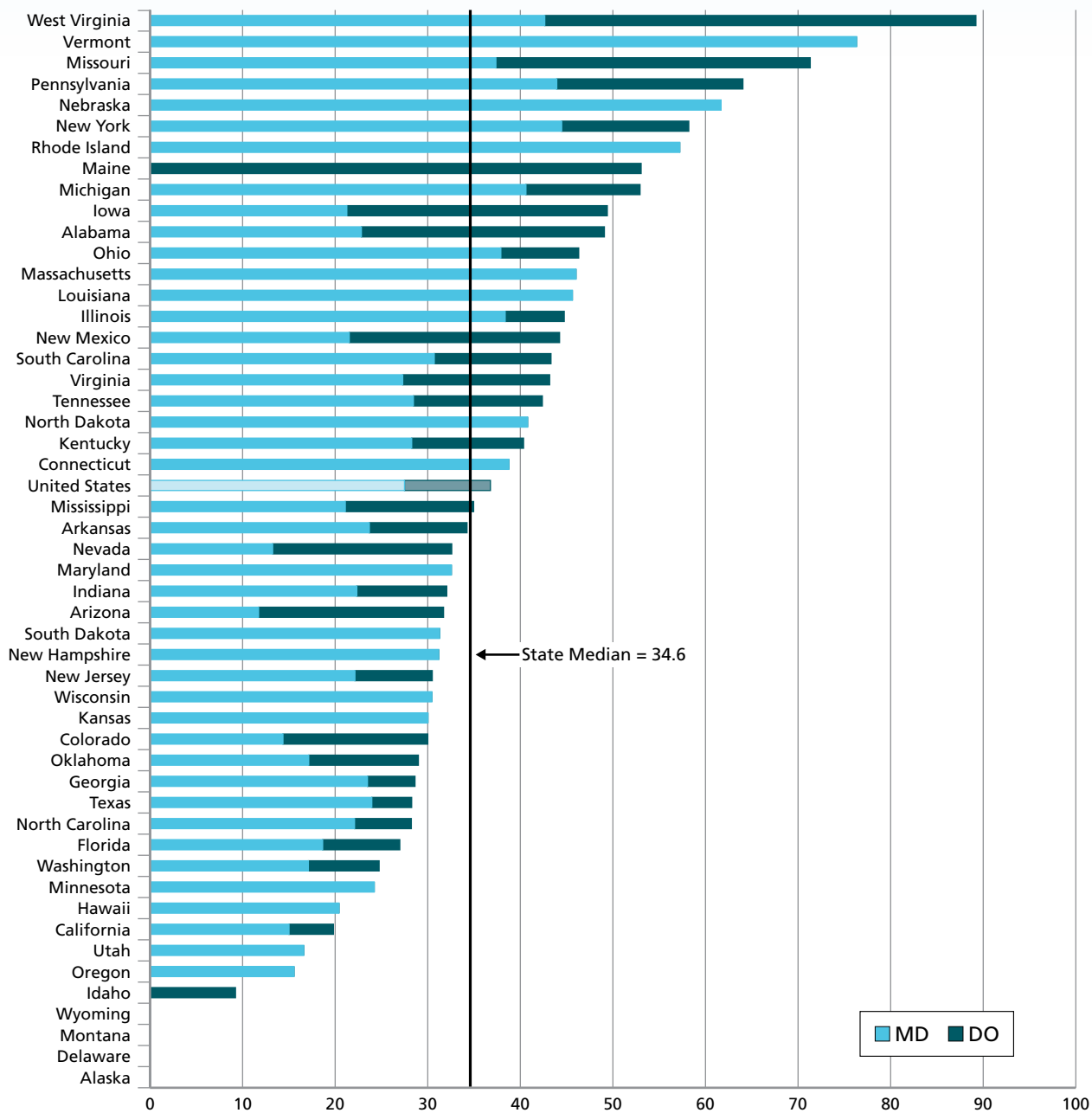
- During the 2018-2019 academic year, 36.8 students per 100,000 population were enrolled in MD-granting and DO-granting schools in the United States. The states with the highest student-to-population ratio were concentrated in the Northeast and the Midwest (see Map 2.1, Figure 2.1, and Table 2.1).
- More than half (61.1%) of the students enrolled in MD-granting schools in the United States were enrolled in public schools, while less than one-fifth (17.1%) of students enrolled in DO-granting schools were enrolled in public schools. The rate of students enrolled in public schools per 100,000 population varied widely across states where a public school exists, from a low of 8.8 in California to a high of 89.2 in West Virginia (see Map 2.2, Figure 2.2, and Table 2.2). In the United States overall, there were 18.4 MD and DO students enrolled in public schools per 100,000 population.
- Between the 2008-2009 and 2018-2019 academic years, the total number of students enrolled in MD-granting and DO-granting schools increased by 35.1% in the United States. The growth was driven by a greater increase in the total number of students enrolled in MD-granting schools (17,799) compared with DO-granting schools (13,474). This represents a 24.7% increase in MD enrollment and a 79.8% increase in DO enrollment during the 10-year period. Every state and the District of Columbia and Puerto Rico experienced an increase in enrollment, and 32 states had enrollment increases of 21.0% or more (see Figure 2.3 and Table 2.3).
- For the 2018-2019 academic year, 60.7% of new students in MD-granting schools matriculated in their home state. Arkansas, North Dakota, South Carolina, and Puerto Rico had the highest in-state matriculation rates — more than 90% of new medical students matriculated in state. In contrast, New Hampshire had the lowest in-state matriculation rate of states with a medical school — only 17.8% of the new medical students from New Hampshire matriculated in state (see Figure 2.4 and Table 2.4).

1. Student Enrollment per 100,000 Population by School Type, Academic Year 2018-2019



Sources: Enrollment data from MD-granting schools are from the AAMC FACTS tables and are as of July 2019. Enrollment data from DO-granting schools are from the American Association of Colleges of Osteopathic Medicine (AACOM) and are as of July 2019. July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018).

Map 2.1. Student enrollment per 100,000 population, academic year 2018-2019.



Sources: Enrollment data from MD-granting schools are from the AAMC FACTS tables and are as of June 2019. Enrollment data from DO-granting schools were obtained from the American Association of Colleges of Osteopathic Medicine (AACOM) and are as of June 2019. July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018).

Note: California enrollment data for DO-granting schools includes enrollment at Western University's Northwest campus in Lebanon, Oregon.

Figure 2.1. Student enrollment per 100,000 population by degree type, academic year 2018-2019.

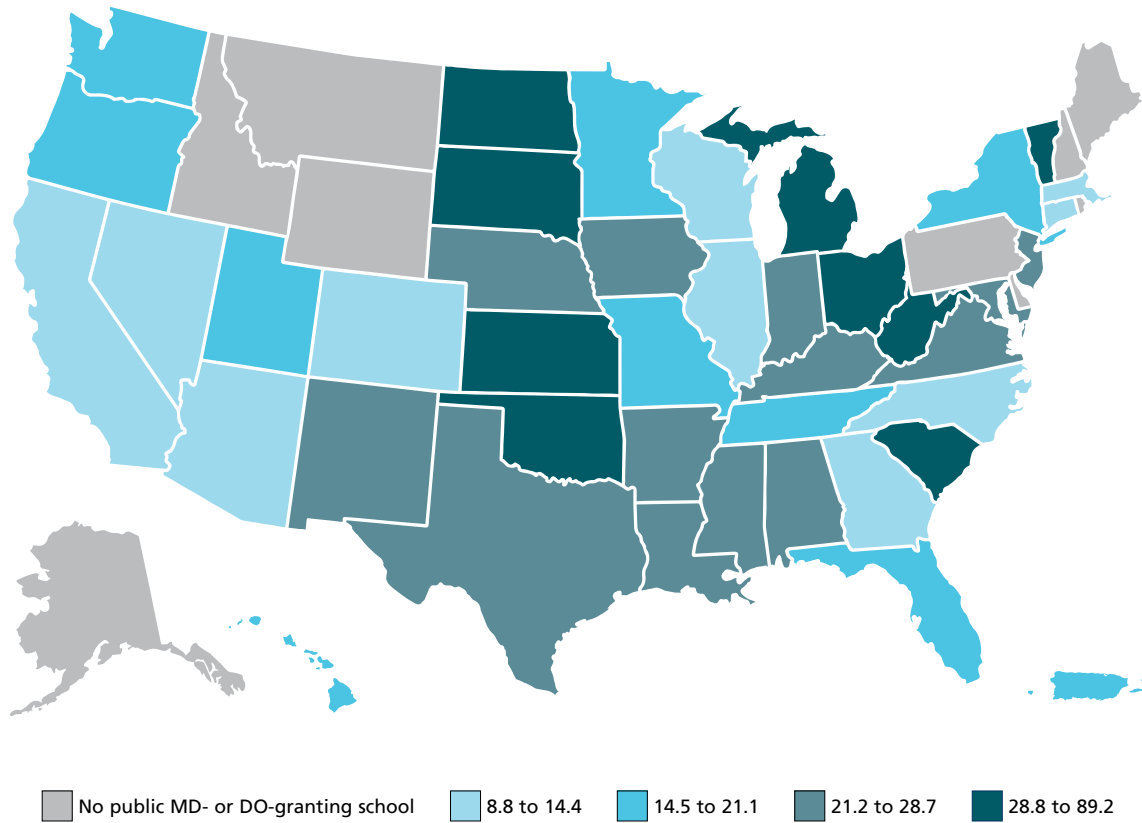
Table 2.1. Student Enrollment per 100,000 Population by School Type, Academic Year 2018-2019

	Total Population	Total Students Enrolled in an MD- or DO-Granting Schools			Students Enrolled in MD-Granting Schools		Students Enrolled in DO-Granting Schools	
		Number	Rate per 100,000	Rank	Number	Rate per 100,000	Number	Rate per 100,000
United States	327,167,434	120,301	36.8	N.R.	89,934	27.5	30,367	9.3
Alabama	4,887,871	2,399	49.1	11	1,116	22.8	1,283	26.2
Alaska	737,438	---	---	---	---	---	---	---
Arizona	7,171,646	2,274	31.7	28	841	11.7	1,433	20.0
Arkansas	3,013,825	1,032	34.2	24	714	23.7	318	10.6
California	39,557,045	7,837	19.8	43	5,940	15.0	1,897	5
Colorado	5,695,564	1,709	30.0	34	818	14.4	891	15.6
Connecticut	3,572,665	1,385	38.8	22	1,385	38.8	---	---
Delaware	967,171	---	---	---	---	---	---	---
District of Columbia	702,455	2,072	295.0	N.R.	2,072	295.0	---	---
Florida	21,299,325	5,747	27.0	39	3,972	18.6	1,775	1,775
Georgia	10,519,475	3,011	28.6	36	2,471	23.5	540	5.1
Hawaii	1,420,491	290	20.4	42	290	20.4	---	---
Idaho	1,754,208	162	9.2	46	---	---	162	9.2
Illinois	12,741,080	5,701	44.7	15	4,888	38.4	813	6.4
Indiana	6,691,878	2,145	32.1	27	1,495	22.3	650	9.7
Iowa	3,156,145	1,559	49.4	10	671	21.3	888	28.1
Kansas	2,911,505	874	30.0	33	874	30.0	---	---
Kentucky	4,468,402	1,803	40.3	21	1,263	28.3	540	12.1
Louisiana	4,659,978	2,126	45.6	14	2,126	45.6	---	---
Maine	1,338,404	710	53.0	8	---	---	710	53.0
Maryland	6,042,718	1,967	32.6	26	1,967	32.6	---	---
Massachusetts	6,902,149	3,176	46.0	13	3,176	46.0	---	---
Michigan	9,995,915	5,291	52.9	9	4,059	40.6	1,232	12.3
Minnesota	5,611,179	1,359	24.2	41	1,359	24.2	---	---
Mississippi	2,986,530	1,044	35.0	23	630	21.1	414	14
Missouri	6,126,452	4,369	71.3	3	2,289	37.4	2,080	34.0
Montana	1,062,305	---	---	---	---	---	---	---
Nebraska	1,929,268	1,190	61.7	5	1,190	61.7	---	---
Nevada	3,034,392	989	32.6	25	402	13.2	587	19
New Hampshire	1,356,458	423	31.2	30	423	31.2	---	---
New Jersey	8,908,520	2,716	30.5	31	1,972	22.1	744	8.4
New Mexico	2,095,428	927	44.2	16	451	21.5	476	22.7
New York	19,542,209	11,373	58.2	6	8,690	44.5	2,683	14
North Carolina	10,383,620	2,931	28.2	38	2,294	22.1	637	6.1
North Dakota	760,077	310	40.8	20	310	40.8	---	---
Ohio	11,689,442	5,413	46.3	12	4,430	37.9	983	8.4
Oklahoma	3,943,079	1,143	29.0	35	676	17.1	467	12
Oregon	4,190,713	652	15.6	45	652	15.6	---	---
Pennsylvania	12,807,060	8,202	64.0	4	5,627	43.9	2,575	20.1
Puerto Rico	3,195,153	1,457	45.6	N.R.	1,457	45.6	---	---
Rhode Island	1,057,315	605	57.2	7	605	57.2	---	---
South Carolina	5,084,127	2,202	43.3	17	1,561	30.7	641.0	12.6
South Dakota	882,235	276	31.3	29	276	31.3	---	---
Tennessee	6,770,010	2,869	42.4	19	1,926	28.4	943	13.9
Texas	28,701,845	8,112	28.3	37	6,876	24.0	1,236	4.3
Utah	3,161,105	525	16.6	44	525	16.6	---	---
Vermont	626,299	478	76.3	2	478	76.3	---	---
Virginia	8,517,685	3,677	43.2	18	2,325	27.3	1,352	15.9
Washington	7,535,591	1,865	24.7	40	1,289	17.1	576	7.6
West Virginia	1,805,832	1,611	89.2	1	770	42.6	841	47
Wisconsin	5,813,568	1,770	30.4	32	1,770	30.4	---	---
Wyoming	577,737	---	---	---	---	---	---	---

Sources: Enrollment data from MD-granting schools were obtained from the AAMC FACTS tables and are as of June 2019. Enrollment data from DO-granting schools were obtained from the American Association of Colleges of Osteopathic Medicine (AACOM) and are as of June 2019. June 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018).

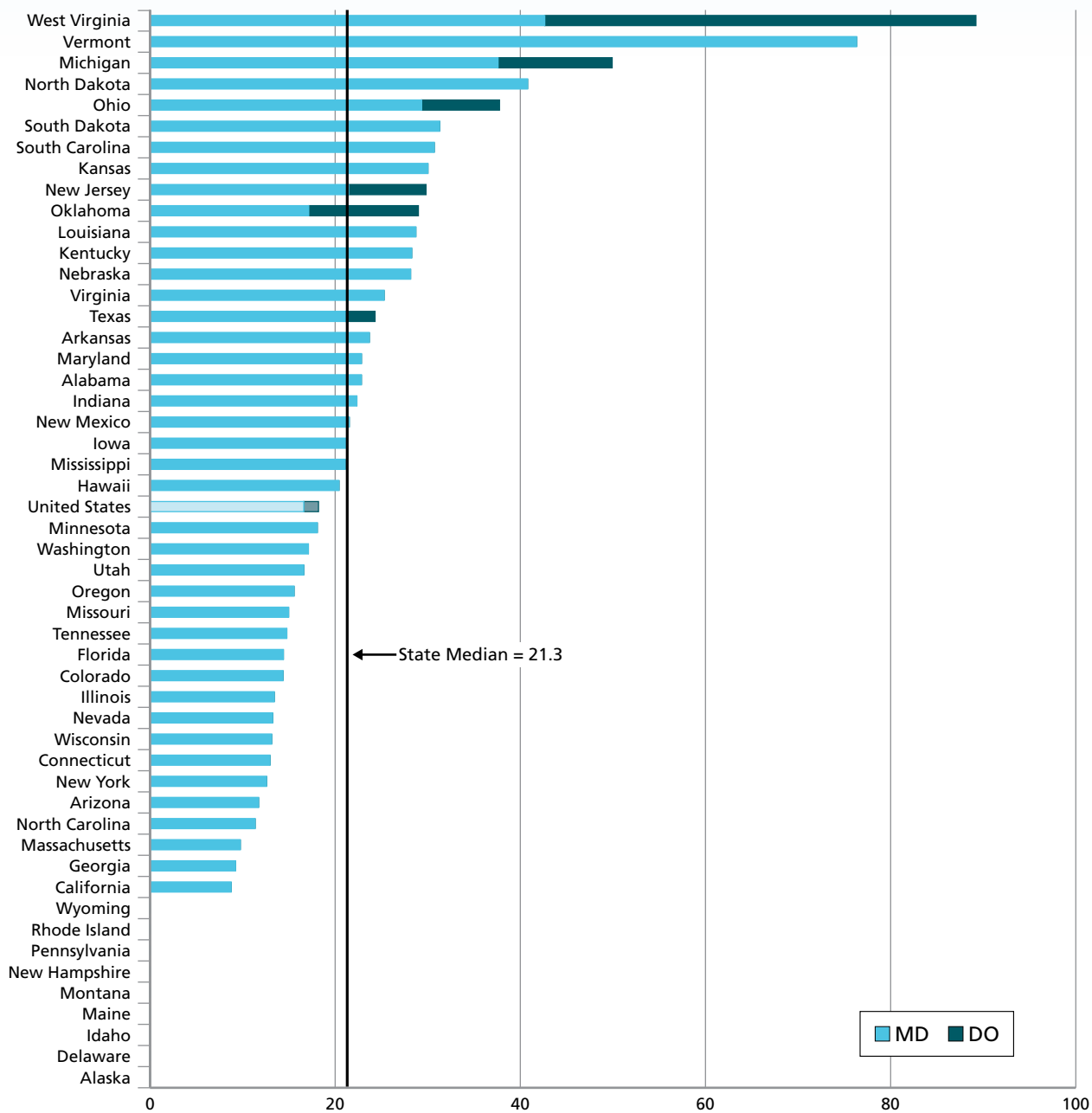
Note: N.R. = not ranked. --- Indicates that category is not applicable because some states do not have an MD-granting or a DO-granting school. California enrollment data for DO-granting schools includes enrollment at Western University's Northwest campus in Lebanon, Oregon.

2. Student Enrollment in Public Schools per 100,000 Population by School Type, Academic Year 2018-2019



Sources: Enrollment data from MD-granting schools are from the AAMC FACTS tables and are as of July 2019. Enrollment data from DO-granting schools are from the American Association of Colleges of Osteopathic Medicine (AACOM) and are as of July 2019. July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018).

Map 2.2. Student enrollment in public schools per 100,000 population, academic year 2018-2019.



Sources: Enrollment data from MD-granting schools are from the AAMC FACTS tables and are as of June 2019. Enrollment data from DO-granting schools are from the American Association of Colleges of Osteopathic Medicine (AACOM) and are as of June 2019. July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018).

Note: California enrollment data for DO-granting schools include enrollment at Western University's Northwest campus in Lebanon, Oregon.

Figure 2.2. Student enrollment in public schools per 100,000 population by degree type, academic year 2018-2019.

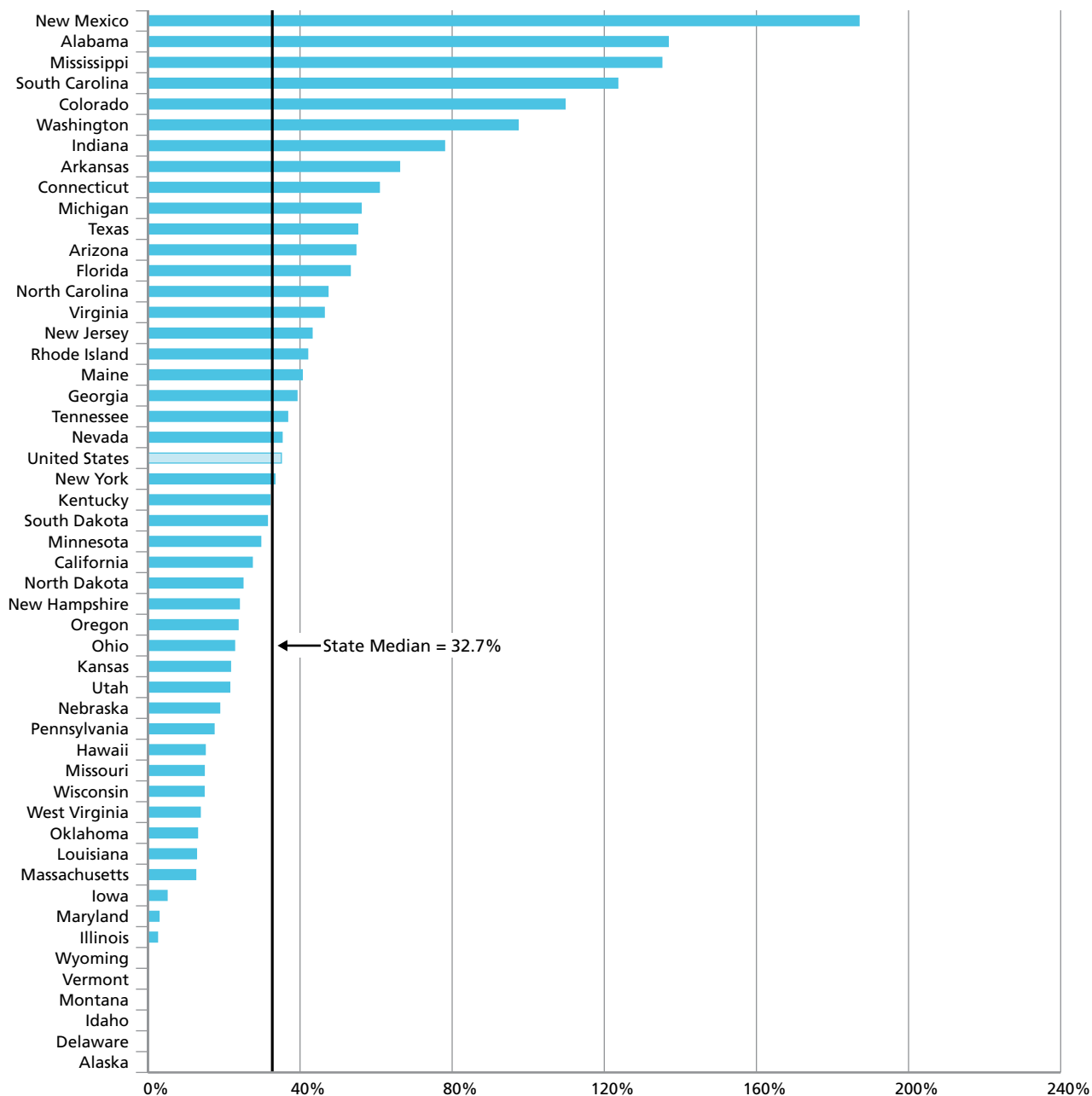
Table 2.2. Student Enrollment in Public Schools per 100,000 Population by School Type, Academic Year 2018-2019

	Total Population	Total Students Enrolled in Public MD- or DO-Granting Schools			Students Enrolled in Public MD-Granting Schools		Students Enrolled in Public DO-Granting Schools	
		Number	Rate per 100,000	Rank	Number	Rate per 100,000	Number	Rate per 100,000
United States	327,167,434	60,137	18.4	N.R.	54,949	16.8	5,188	1.6
Alabama	4,887,871	1,116	22.8	18	1,116	22.8	---	---
Alaska	737,438	---	---	---	---	---	---	---
Arizona	7,171,646	841	11.7	37	841	11.7	---	---
Arkansas	3,013,825	714	23.7	16	714	23.7	---	---
California	39,557,045	3,467	8.8	41	3,467	8.8	---	---
Colorado	5,695,564	818	14.4	32	818	14.4	---	---
Connecticut	3,572,665	463	13.0	36	463	13.0	---	---
Delaware	967,171	---	---	---	---	---	---	---
District of Columbia	702,455	---	---	N.R.	---	---	---	---
Florida	21,299,325	3,068	14.4	31	3,068	14.4	---	---
Georgia	10,519,475	972	9.2	40	972	9.2	---	---
Hawaii	1,420,491	290	20.4	23	290	20.4	---	---
Idaho	1,754,208	---	---	---	---	---	---	---
Illinois	12,741,080	1,710	13.4	33	1,710	13.4	---	---
Indiana	6,691,878	1,495	22.3	19	1,495	22.3	---	---
Iowa	3,156,145	671	21.3	21	671	21.3	---	---
Kansas	2,911,505	874	30.0	8	874	30.0	---	---
Kentucky	4,468,402	1,263	28.3	12	1,263	28.3	---	---
Louisiana	4,659,978	1,338	28.7	11	1,338	28.7	---	---
Maine	1,338,404	---	---	---	---	---	---	---
Maryland	6,042,718	1,380	22.8	17	1,380	22.8	---	---
Massachusetts	6,902,149	673	9.8	39	673	9.8	---	---
Michigan	9,995,915	4,990	49.9	3	3,758	37.6	1,232	12.3
Minnesota	5,611,179	1,014	18.1	24	1,014	18.1	---	---
Mississippi	2,986,530	630	21.1	22	630	21.1	---	---
Missouri	6,126,452	917	15.0	29	917	15.0	---	---
Montana	1,062,305	---	---	---	---	---	---	---
Nebraska	1,929,268	543	28.1	13	543	28.1	---	---
Nevada	3,034,392	402	13.2	34.0	402	13.2	---	---
New Hampshire	1,356,458	---	---	---	---	---	---	---
New Jersey	8,908,520	2,656	29.8	9	1,912	21.5	744	8.4
New Mexico	2,095,428	451	21.5	20	451	21.5	---	---
New York	19,542,209	3,049	15.6	27	3,049	15.6	---	---
North Carolina	10,383,620	1,179	11.4	38	1,179	11.4	---	---
North Dakota	760,077	310	40.8	4	310	40.8	---	---
Ohio	11,689,442	4,413	37.8	5	3,430	29.3	983	8.4
Oklahoma	3,943,079	1,143	29.0	10	676	17.1	467	12
Oregon	4,190,713	652	15.6	28	652	15.6	---	---
Pennsylvania	12,807,060	---	---	---	---	---	---	---
Puerto Rico	3,195,153	470	14.7	N.R.	470	14.7	---	---
Rhode Island	1,057,315	---	---	---	---	---	---	---
South Carolina	5,084,127	1,561	30.7	7	1,561	30.7	---	---
South Dakota	882,235	276	31.3	6	276	31.3	---	---
Tennessee	6,770,010	1,000	14.8	30	1,000	14.8	---	---
Texas	28,701,845	6,977	24.3	15	6,056	21.1	921	3.2
Utah	3,161,105	525	16.6	26	525	16.6	---	---
Vermont	626,299	478	76.3	2	478	76.3	---	---
Virginia	8,517,685	2,154	25.3	14	2,154	25.3	---	---
Washington	7,535,591	1,289	17.1	25	1,289	17.1	---	---
West Virginia	1,805,832	1,611	89.2	1	770	42.6	841	47
Wisconsin	5,813,568	764	13.1	35	764	13.1	---	---
Wyoming	577,737	---	---	---	---	---	---	---

Sources: Enrollment data from MD-granting schools were obtained from the AAMC FACTS tables and are as of June 2019. Enrollment data from DO-granting schools were obtained from the American Association of Colleges of Osteopathic Medicine (AACOM) and are as of June 2019. July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018).

Note: N.R. = not ranked. --- Indicates that category is not applicable because some states do not have a public MD-granting or DO-granting school. California enrollment data for DO-granting schools includes enrollment at Western University's Northwest campus in Lebanon, Oregon.

3. Percentage Change in Student Enrollment by School Type, 2008-2018



Sources: Enrollment data from MD-granting schools are from the AAMC FACTS tables and are as of June 2019. Enrollment data from DO-granting schools were obtained from the American Association of Colleges of Osteopathic Medicine (AACOM) and are as of June 2019. July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018).
Note: California enrollment data for DO-granting schools includes enrollment at Western University's Northwest campus in Lebanon, Oregon.

Figure 2.3. Percentage change in student enrollment, 2008-2018.

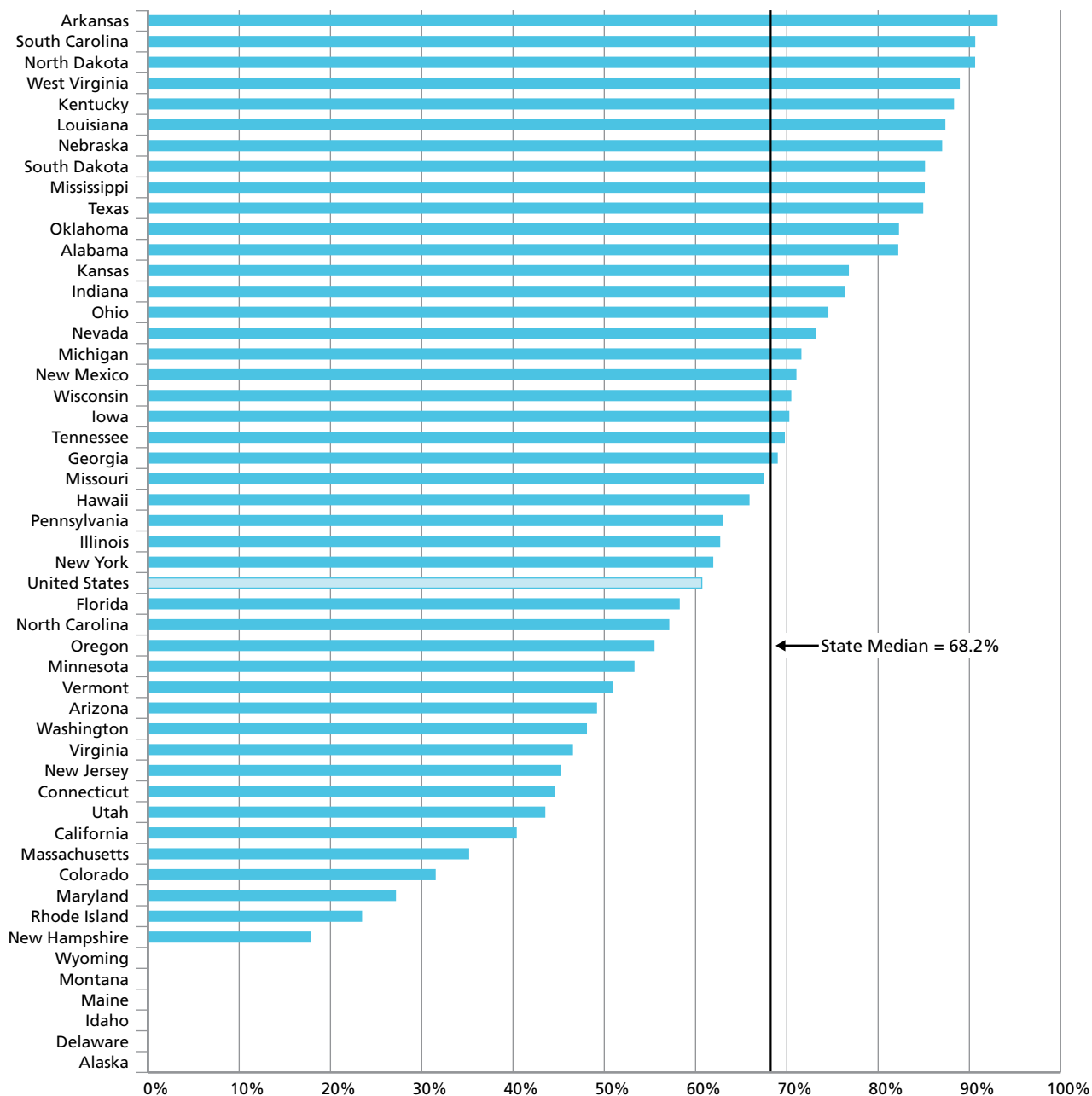
Table 2.3. Percentage Change in Student Enrollment by School Type, 2008-2018

	Total Students Enrolled in UME				Students Enrolled in an MD-Granting School		Students Enrolled in a DO-Granting School	
	2008	2018	Percentage Change	Rank	2008	2018	2008	2018
United States	89,028	120,301	35.1%	N.R.	72,135	89,934	16,893	30,367
Alabama	1,013	2,399	136.8%	2	1,013	1,116	---	1,283
Alaska	---	---	---	---	---	---	---	---
Arizona	1,470	2,274	54.7%	12	561	841	909	1,433
Arkansas	621	1,032	66.2%	8	621	714	---	318
California	6,149	7,837	27.5%	26	4,751	5,940	1,398	1,897
Colorado	815	1,709	109.7%	5	656	818	159	891
Connecticut	861	1,385	60.9%	9	861	1,385	---	---
Delaware	---	---	---	---	---	---	---	---
District of Columbia	2,032	2,072	2.0%	N.R.	2,032	2,072	---	---
Florida	3,751	5,747	53.2%	13	2,194	3,972	1,557	1,775
Georgia	2,163	3,011	39.2%	19	1,825	2,471	338	540
Hawaii	252	290	15.1%	35	252	290	---	---
Idaho	---	162	---	---	---	---	---	162
Illinois	5,560	5,701	2.5%	44	4,884	4,888	676	813
Indiana	1,205	2,145	78.0%	7	1,205	1,495	---	650
Iowa	1,484	1,559	5.1%	42	634	671	850	888
Kansas	718	874	21.7%	31	718	874	---	---
Kentucky	1,365	1,803	32.1%	23	1,059	1,263	306	540
Louisiana	1,885	2,126	12.8%	40	1,885	2,126	---	---
Maine	505	710	40.6%	18	---	---	505	710
Maryland	1,911	1,967	2.9%	43	1,911	1,967	---	---
Massachusetts	2,821	3,176	12.6%	41	2,821	3,176	---	---
Michigan	3,390	5,291	56.1%	10	2,545	4,059	845	1,232
Minnesota	1,048	1,359	29.7%	25	1,048	1,359	---	---
Mississippi	444	1,044	135.1%	3	444	630	---	414
Missouri	3,805	4,369	14.8%	36	2,085	2,289	1,720	2,080
Montana	---	---	---	---	---	---	---	---
Nebraska	1,001	1,190	18.9%	33	1,001	1,190	---	---
Nevada	731	989	35.3%	21	237	402	494	587
New Hampshire	341	423	24.0%	28	341	423	---	---
New Jersey	1,897	2,716	43.2%	16	1,469	1,972	428	744
New Mexico	323	927	187.0%	1	323	451	---	476
New York	8,526	11,373	33.4%	22	7,083	8,690	1,443	2,683
North Carolina	1,989	2,931	47.4%	14	1,989	2,294	---	637
North Dakota	248	310	25.0%	27	248	310	---	---
Ohio	4,408	5,413	22.8%	30	3,961	4,430	447	983
Oklahoma	1,011	1,143	13.1%	39	657	676	354	467
Oregon	527	652	23.7%	29	527	652	---	---
Pennsylvania	6,964	8,202	17.8%	34	4,903	5,627	2,061	2,575
Puerto Rico	1,293	1,457	12.7%	N.R.	1,293	1,457	---	---
Rhode Island	426	605	42.0%	17	426	605	---	---
South Carolina	985	2,202	123.6%	4	985	1,561	---	641
South Dakota	210	276	31.4%	24	210	276	---	---
Tennessee	2,098	2,869	36.7%	20	1,778	1,926	320	943
Texas	5,228	8,112	55.2%	11	4,591	6,876	637	1,236
Utah	432	525	21.5%	32	432	525	---	---
Vermont	0	478	---	---	0	478	---	---
Virginia	2,512	3,677	46.4%	15	1,836	2,325	676	1,352
Washington	945	1,865	97.4%	6	870	1,289	75	576
West Virginia	1,416	1,611	13.8%	38	721	770	695	841
Wisconsin	1,542	1,770	14.8%	37	1,542	1,770	---	---
Wyoming	---	---	---	---	---	---	---	---

Sources: Enrollment data from MD-granting schools were obtained from the AAMC FACTS tables and are as of June 2019. Enrollment data from DO-granting schools are from the American Association of Colleges of Osteopathic Medicine (AACOM) and are as of June 2019. July 1, 2018, population estimates are from the U.S. Census Bureau (released December 2018).

Note: N.R. = not ranked. --- Indicates that category is not applicable because some states do not have an MD-granting or a DO-granting school. California enrollment data for DO-granting schools includes enrollment at Western University's Northwest campus in Lebanon, Oregon.

4. Percentage of Students Matriculating in State, Academic Year 2018-2019



Source: AAMC FACTS tables as of June 2019.

Note: The data shown here are for students in MD-granting schools only. Students attending DO-granting schools are excluded.

Figure 2.4. Percentage of students matriculating in state, academic year 2018-2019.

Table 2.4. Percentage of Students Matriculating to In-State, MD-Granting Schools, Academic Year 2018-2019

	Matriculants to an MD-Granting School by State of Legal Residence	Medical Students Who Matriculated to an MD-Granting School in Their Legal State of Residence		
		Number	Percentage	Rank
United States	21,135	12,825	60.7%	N.R.
Alabama	280	230	82.1%	12
Alaska	28	---	---	---
Arizona	291	143	49.1%	33
Arkansas	172	160	93.0%	1
California	2,585	1,043	40.3%	39
Colorado	286	90	31.5%	41
Connecticut	245	109	44.5%	37
Delaware	44	---	---	---
District of Columbia	54	17	31.5%	N.R.
Florida	1,237	720	58.2%	28
Georgia	644	444	68.9%	22
Hawaii	82	54	65.9%	25
Idaho	68	---	---	---
Illinois	977	612	62.6%	27
Indiana	388	296	76.3%	14
Iowa	141	99	70.2%	20
Kansas	245	188	76.7%	13
Kentucky	298	263	88.3%	5
Louisiana	386	337	87.3%	6
Maine	46	---	---	---
Maryland	531	144	27.1%	42
Massachusetts	612	215	35.1%	40
Michigan	794	568	71.5%	17
Minnesota	385	209	54.3%	31
Mississippi	194	165	85.1%	9
Missouri	310	209	67.4%	23
Montana	56	---	---	---
Nebraska	138	120	87.0%	7
Nevada	149	109	73.2%	16
New Hampshire	45	8	17.8%	44
New Jersey	864	390	45.1%	36
New Mexico	131	93	71.0%	18
New York	1,608	1,077	67.0%	24
North Carolina	538	307	57.1%	29
North Dakota	53	48	90.6%	3
Ohio	737	549	74.5%	15
Oklahoma	180	148	82.2%	11
Oregon	193	107	55.4%	30
Pennsylvania	789	497	63.0%	26
Puerto Rico	297	283	95.3%	N.R.
Rhode Island	47	11	23.4%	43
South Carolina	329	298	90.6%	2
South Dakota	67	57	85.1%	8
Tennessee	360	251	69.7%	21
Texas	1,713	1,454	84.9%	10
Utah	207	90	43.5%	38
Vermont	57	29	50.9%	32
Virginia	587	273	46.5%	35
Washington	408	196	48.0%	34
West Virginia	153	136	88.9%	4
Wisconsin	372	262	70.4%	19
Wyoming	31	---	---	---

Source: AAMC FACTS tables as of June 2019.

Note: N.R. = not ranked. --- Indicates that category is not applicable because some states do not have a medical school. The data shown here are for students in MD-granting schools only. Students attending DO-granting schools are excluded.

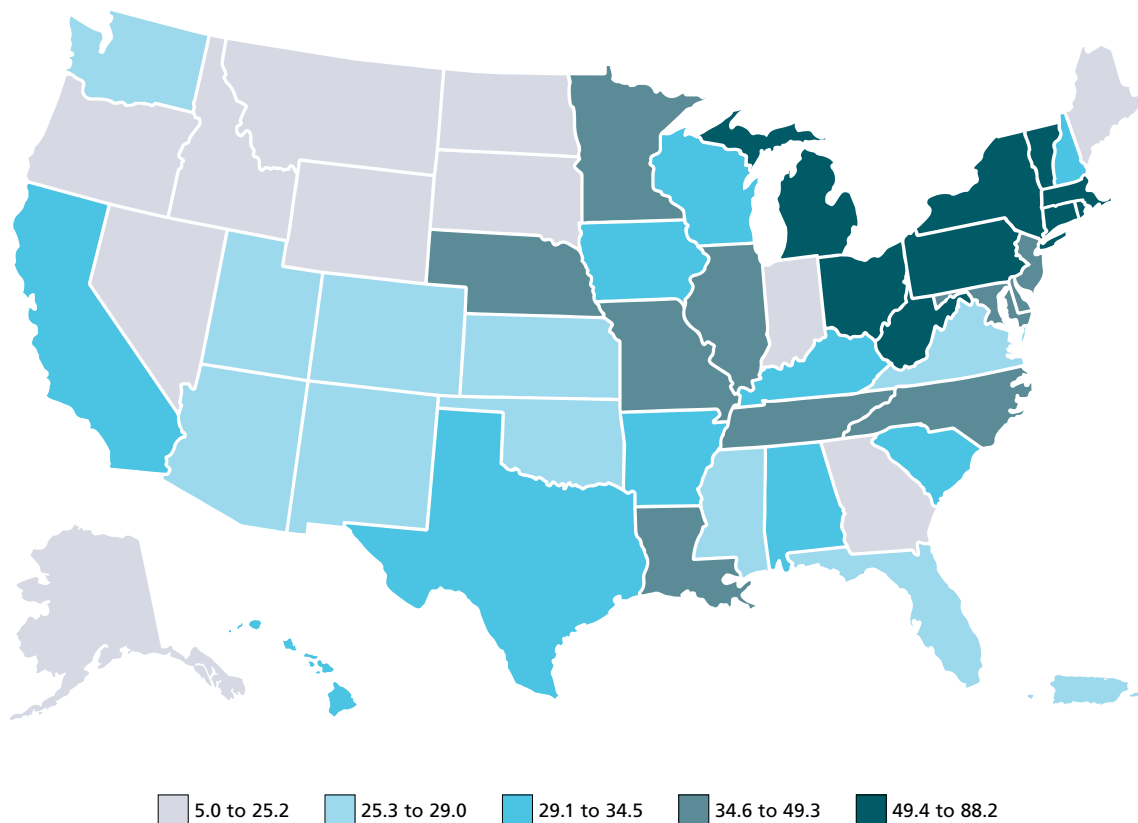
SECTION 3

Graduate Medical Education

Key Findings

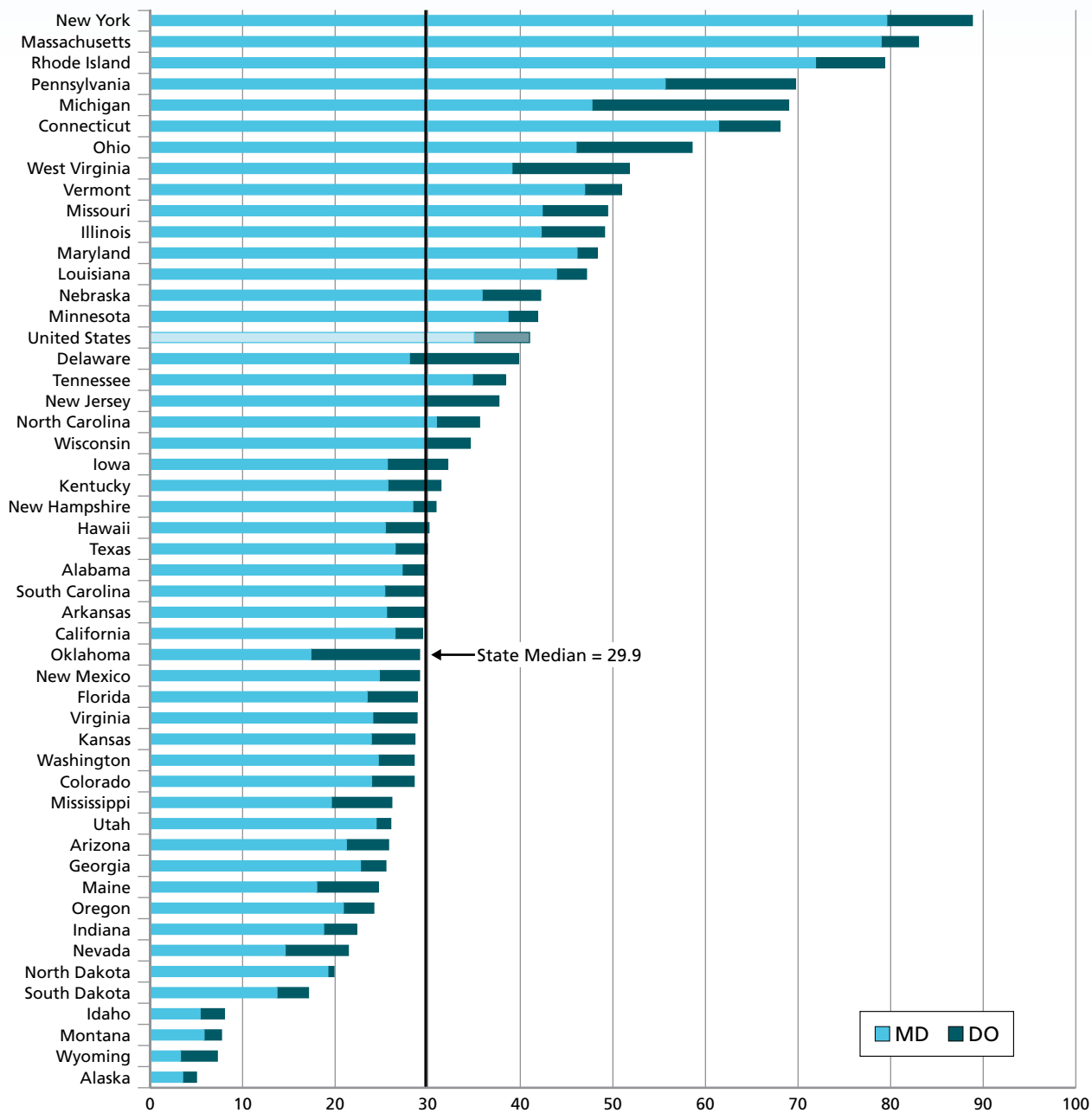
- In 2018, every state in the United States had at least one ACGME-accredited GME program. The number of residents and fellows in ACGME-accredited training programs per 100,000 population varied widely across the United States, from a low of 5.0 in Alaska to a high of 88.8 in New York (see Map 3.1, Figure 3.1, and Table 3.1). The national average was 29.9 residents and fellows per 100,000 population.
- There were 15.1 residents and fellows in primary care programs accredited by the ACGME per 100,000 population in the United States in 2018. There was a wide range among the states; the highest numbers of residents and fellows in primary care GME programs per 100,000 population were primarily in the Northeast and Midwest (see Map 3.2, Figure 3.2, and Table 3.2).
- Nationally, about one-quarter (23.3%) of the residents and fellows in ACGME training programs were IMGs in 2018. The percentage varied widely across the states. In Alaska, only one resident was an IMG. At the other end of the spectrum, almost half the residents and fellows in North Dakota and New Jersey were IMGs (see Figure 3.3 and Table 3.3).
- In 2018, there were more residents and fellows in ACGME and OGME programs than there were students in MD- and DO-granting schools in the United States, in part because of the inflow of IMGs to GME. The ratio of total GME residents and fellows to total UME students was 1.14. However, many states had fewer residents and fellows than medical students, and the state median ratio of GME to UME individuals was 0.97. The ratio of GME residents and fellows to UME students was lowest (0.47) in North Dakota (see Map 3.4, Figure 3.4, and Table 3.4).
- Between 2008 and 2018, the number of residents and fellows in ACGME programs increased by 24,310 (22.1%). All states saw an increase over that period in the number of residents and fellows (see Map 3.5.1, Figure 3.5, and Table 3.5). The rate of change varied widely by state, as can be seen in Map 3.5.2, Figure 3.5, and Table 3.5.

1. Residents and Fellows on Duty as of Dec. 31, 2018, in ACGME-Accredited Programs per 100,000 Population by Degree Type



Sources: July 1, 2018, population estimates are from the U.S. Census Bureau (released Dec. 31, 2018). Resident physician data are from National GME Census in GME Track® as of September 2019.

Map 3.1. Residents and fellows on duty as of Dec. 31, 2018, in ACGME-accredited programs per 100,000 population.



Sources: July 1, 2018, population estimates are from the U.S. Census Bureau (released Dec. 31, 2018). Resident physician data are from the National GME Census in GME Track® as of September 2019.

Figure 3.1. Residents and fellows on duty as of Dec. 31, 2018, in ACGME-accredited programs per 100,000 population by degree type.

Table 3.1. Residents and Fellows on Duty as of Dec. 31, 2018, in ACGME-Accredited Programs per 100,000 Population by Degree Type

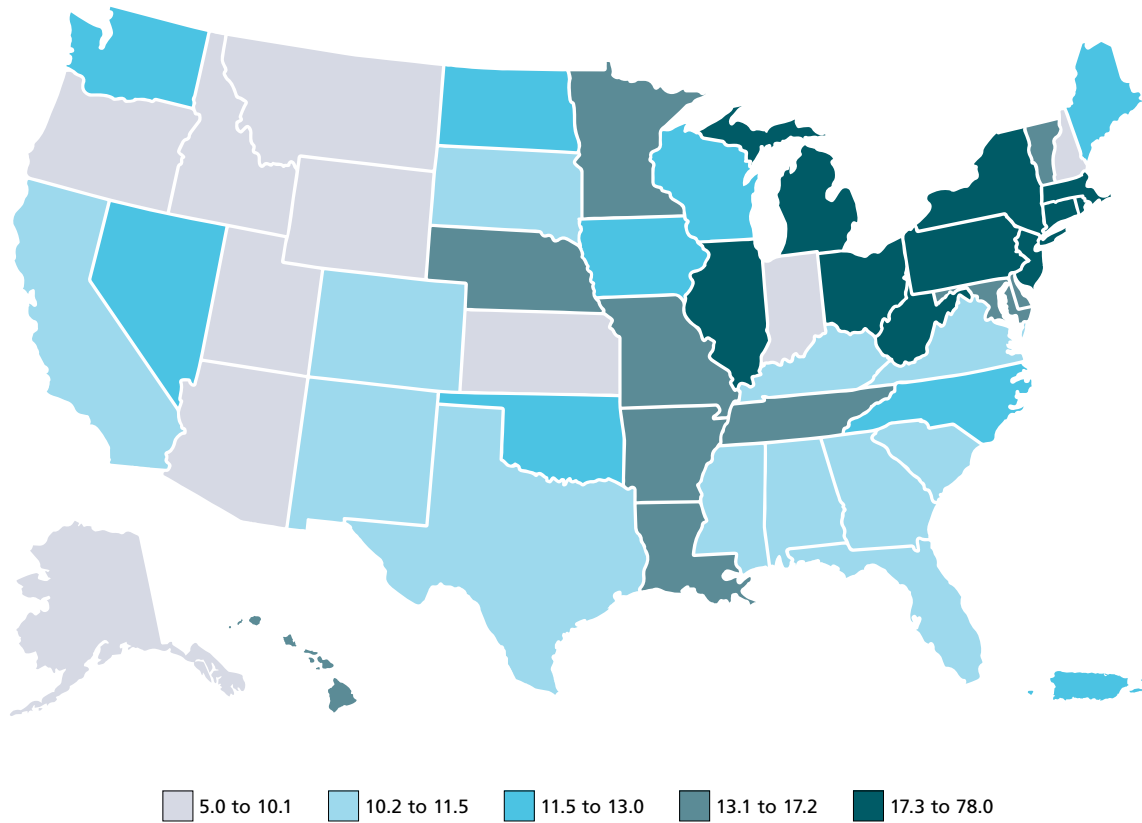
	Total Population	Total Residents/Fellows in ACGME Programs			MDs in ACGME Programs*		DOs in ACGME Programs	
		Number	Rate per 100,000	Rank	Number	Rate per 100,000	Number	Rate per 100,000
United States	327,167,434	134,126	41.0	N.R.	114,594	35.0	19,532	6.0
Alabama	4,887,871	1,460	29.9	26	1,331	27.2	129	2.6
Alaska	737,438	37	5.0	50	26	3.5	11	1.5
Arizona	7,171,646	1,848	25.8	39	1,521	21.2	327	4.6
Arkansas	3,013,825	893	29.6	28	770	25.5	123	4.1
California	39,557,045	11,646	29.4	29	10,468	26.5	1,178	3.0
Colorado	5,695,564	1,625	28.5	36	1,363	23.9	262	4.6
Connecticut	3,572,665	2,431	68.0	6	2,194	61.4	237	6.6
Delaware	967,171	385	39.8	16	271	28.0	114	11.8
District of Columbia	702,455	1,678	238.9	N.R.	1,584	225.5	94	13.4
Florida	21,299,325	6,150	28.9	32	4,995	23.5	1,155	5.4
Georgia	10,519,475	2,680	25.5	40	2,391	22.7	289	2.7
Hawaii	1,420,491	428	30.1	24	361	25.4	67	4.7
Idaho	1,754,208	141	8.0	47	95	5.4	46	2.6
Illinois	12,741,080	6,255	49.1	11	5,383	42.2	872	6.8
Indiana	6,691,878	1,493	22.3	43	1,255	18.8	238	3.6
Iowa	3,156,145	1,015	32.2	21	809	25.6	206	6.5
Kansas	2,911,505	833	28.6	34	696	23.9	137	4.7
Kentucky	4,468,402	1,404	31.4	22	1,148	25.7	256	5.7
Louisiana	4,659,978	2,197	47.1	13	2,046	43.9	151	3.2
Maine	1,338,404	330	24.7	41	241	18.0	89	6.6
Maryland	6,042,718	2,919	48.3	12	2,787	46.1	132	2.2
Massachusetts	6,902,149	5,729	83.0	2	5,451	79.0	278	4.0
Michigan	9,995,915	6,895	69.0	5	4,771	47.7	2,124	21.2
Minnesota	5,611,179	2,349	41.9	15	2,170	38.7	179	3.2
Mississippi	2,986,530	780	26.1	37	585	19.6	195	6.5
Missouri	6,126,452	3,028	49.4	10	2,595	42.4	433	7.1
Montana	1,062,305	82	7.7	48	62	5.8	20	1.9
Nebraska	1,929,268	814	42.2	14	692	35.9	122	6.3
Nevada	3,034,392	650	21.4	44	443	14.6	207	6.8
New Hampshire	1,356,458	419	30.9	23	385	28.4	34	2.5
New Jersey	8,908,520	3,357	37.7	18	2,650	29.7	707	7.9
New Mexico	2,095,428	610	29.1	31	519	24.8	91	4.3
New York	19,542,209	17,358	88.8	1	15,551	79.6	1,807	9.2
North Carolina	10,383,620	3,696	35.6	19	3,212	30.9	484	4.7
North Dakota	760,077	151	19.9	45	146	19.2	5	0.7
Ohio	11,689,442	6,844	58.5	7	5,380	46.0	1,464	12.5
Oklahoma	3,943,079	1,148	29.1	30	685	17.4	463	11.7
Oregon	4,190,713	1,013	24.2	42	875	20.9	138	3.3
Pennsylvania	12,807,060	8,930	69.7	4	7,126	55.6	1,804	14.1
Puerto Rico	3,195,153	860	26.9	N.R.	860	26.9	0	0.0
Rhode Island	1,057,315	839	79.4	3	760	71.9	79	7.5
South Carolina	5,084,127	1,511	29.7	27	1,289	25.4	222	4.4
South Dakota	882,235	151	17.1	46	121	13.7	30	3.4
Tennessee	6,770,010	2,599	38.4	17	2,358	34.8	241	3.6
Texas	28,701,845	8,589	29.9	25	7,600	26.5	989	3.4
Utah	3,161,105	822	26.0	38	772	24.4	50	1.6
Vermont	626,299	319	50.9	9	294	46.9	25	4.0
Virginia	8,517,685	2,457	28.8	33	2,049	24.1	408	4.8
Washington	7,535,591	2,150	28.5	35	1,858	24.7	292	3.9
West Virginia	1,805,832	935	51.8	8	706	39.1	229	12.7
Wisconsin	5,813,568	2,011	34.6	20	1,735	29.8	276	4.7
Wyoming	577,737	42	7.3	49	19	3.3	23	4.0

Sources: July 1, 2018, population estimates are from the U.S. Census Bureau (released Dec. 31, 2018). Resident physician data are from National GME Census in GME Track® as of September 2019.

Note: N.R. = not ranked.

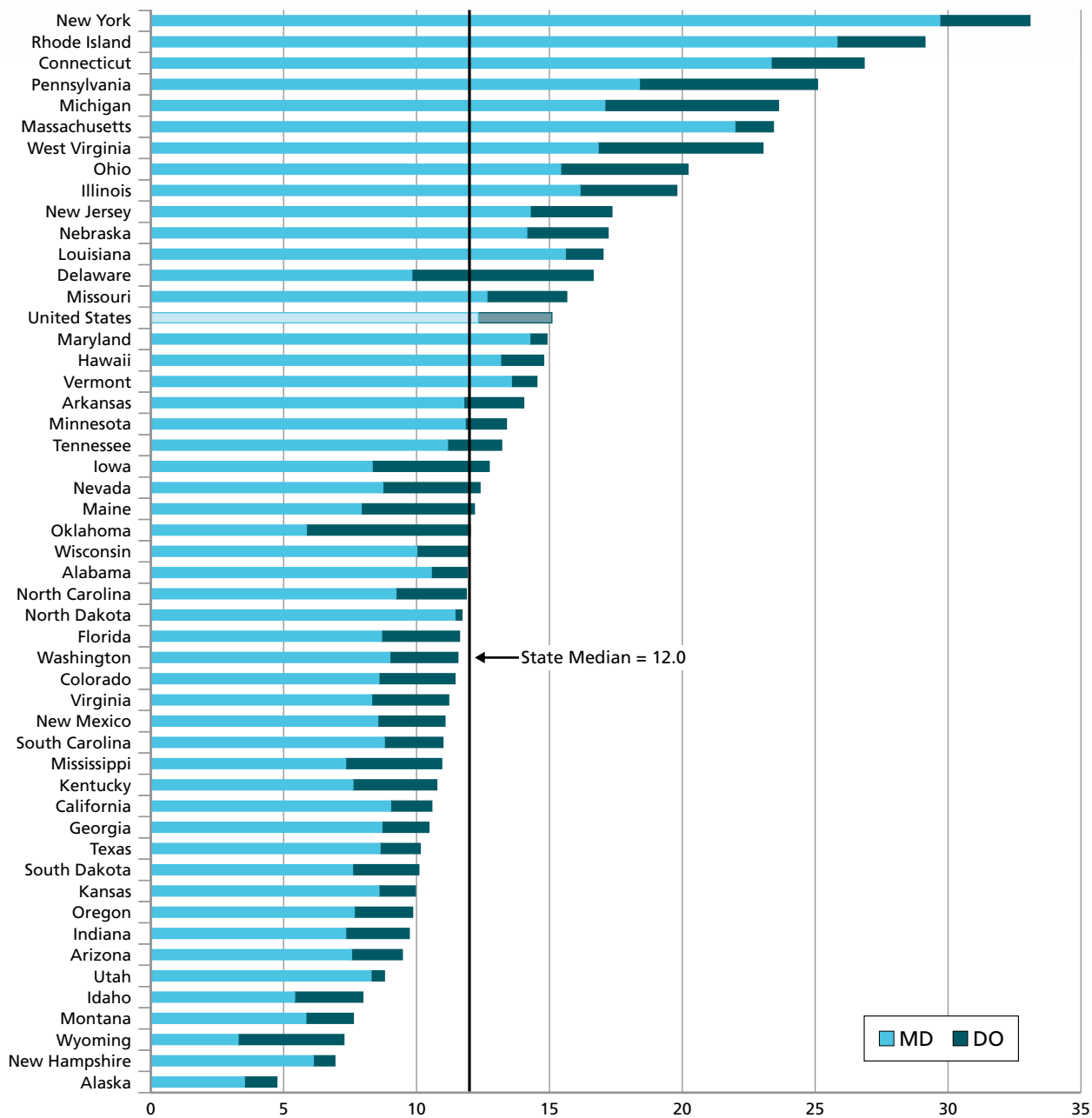
*Includes MDs from international medical schools.

2. Residents and Fellows on Duty as of Dec. 31, 2018, in ACGME-Accredited Primary Care Programs per 100,000 Population by Degree Type



Sources: July 1, 2018, population estimates are from the U.S. Census Bureau (released Dec. 31, 2018). Resident physician data are from the National GME Census in GME Track® as of September 2019.

Map 3.2. Residents and fellows on duty as of Dec. 31, 2016, in ACGME-accredited primary care programs per 100,000 population.



Sources: July 1, 2018, population estimates are from the U.S. Census Bureau (released Dec. 31, 2018). Resident physician data are from the National GME Census in GME Track® as of September 2019.

Figure 3.2. Residents and fellows on duty as of Dec. 31, 2018, in ACGME-accredited primary care programs per 100,000 population by degree type.

Table 3.2. Residents and Fellows on Duty as of Dec. 31, 2018, in ACGME-Accredited Primary Care Programs per 100,000 Population by Degree Type

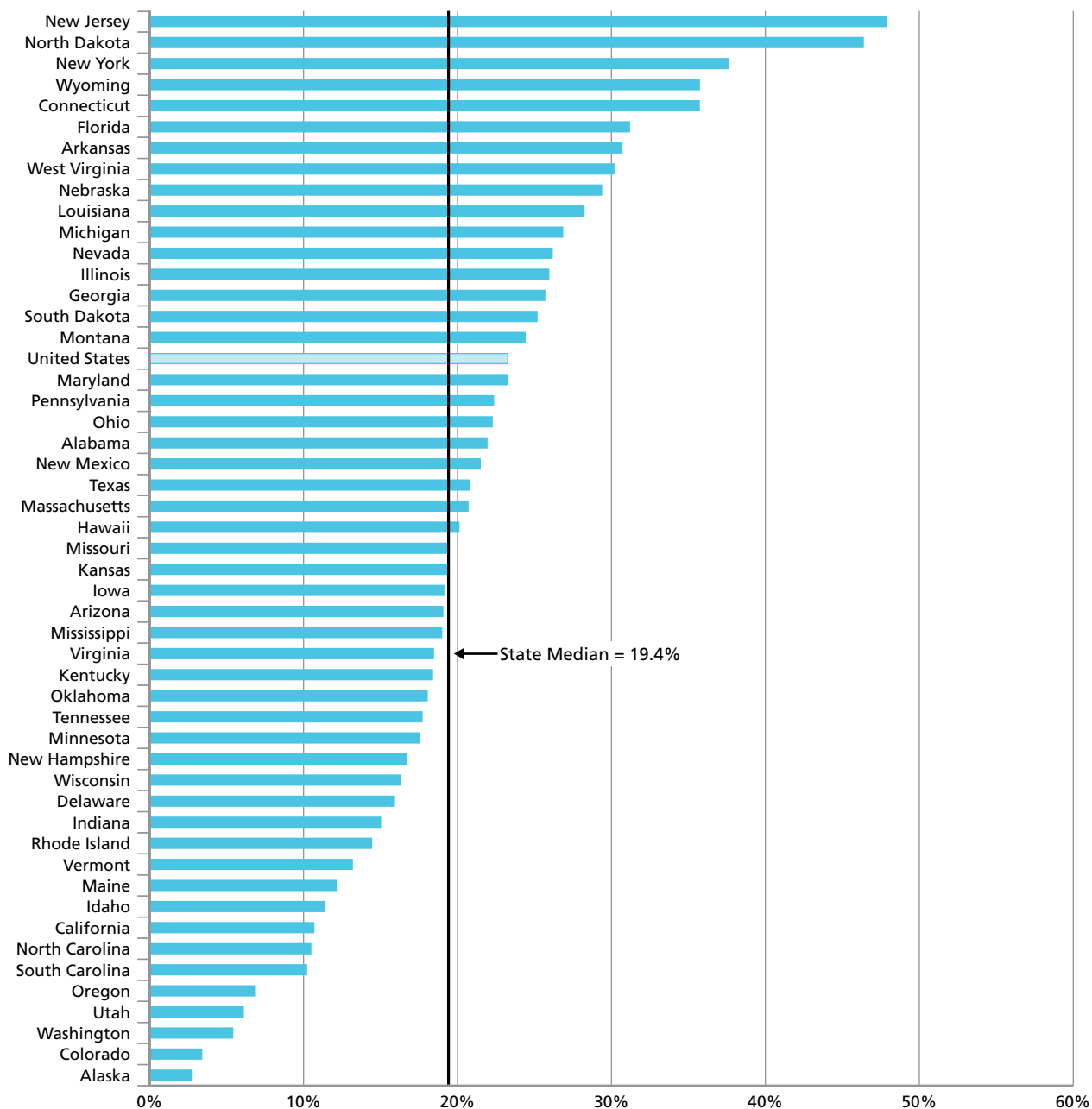
	Total Population	Total Residents in Primary Care ACGME Programs			MDs in Primary Care ACGME Programs*		DOs in Primary Care ACGME Programs	
		Number	Rate per 100,000	Rank	Number	Rate per 100,000	Number	Rate per 100,000
United States	327,167,434	49,387	15.1	N.R.	40,330	12.3	9,057	2.8
Alabama	4,887,871	582	11.9	26	516	10.6	66	1.4
Alaska	737,438	35	4.7	50	26	3.5	9	1.2
Arizona	7,171,646	679	9.5	44	542	7.6	137	1.9
Arkansas	3,013,825	423	14.0	18	355	11.8	68	2.3
California	39,557,045	4,184	10.6	37	3,571	9.0	613	1.5
Colorado	5,695,564	652	11.4	31	489	8.6	163	2.9
Connecticut	3,572,665	959	26.8	3	834	23.3	125	3.5
Delaware	967,171	161	16.6	13	95	9.8	66	6.8
District of Columbia	702,455	547	77.9	N.R.	526	74.9	21	3.0
Florida	21,299,325	2,475	11.6	29	1,850	8.7	625	2.9
Georgia	10,519,475	1,101	10.5	38	915	8.7	186	1.8
Hawaii	1,420,491	210	14.8	16	187	13.2	23	1.6
Idaho	1,754,208	140	8.0	46	95	5.4	45	2.6
Illinois	12,741,080	2,522	19.8	9	2,058	16.2	464	3.6
Indiana	6,691,878	651	9.7	43	491	7.3	160	2.4
Iowa	3,156,145	402	12.7	21	263	8.3	139	4.4
Kansas	2,911,505	290	10.0	41	250	8.6	40	1.4
Kentucky	4,468,402	481	10.8	36	340	7.6	141	3.2
Louisiana	4,659,978	793	17.0	12	727	15.6	66	1.4
Maine	1,338,404	163	12.2	23	106	7.9	57	4.3
Maryland	6,042,718	901	14.9	15	862	14.3	39	0.6
Massachusetts	6,902,149	1,617	23.4	6	1,517	22.0	100	1.4
Michigan	9,995,915	2,361	23.6	5	1,708	17.1	653	6.5
Minnesota	5,611,179	751	13.4	19	664	11.8	87	1.6
Mississippi	2,986,530	327	10.9	35	219	7.3	108	3.6
Missouri	6,126,452	959	15.7	14	775	12.7	184	3.0
Montana	1,062,305	81	7.6	47	62	5.8	19	1.8
Nebraska	1,929,268	332	17.2	11	273	14.2	59	3.1
Nevada	3,034,392	376	12.4	22	265	8.7	111	3.7
New Hampshire	1,356,458	94	6.9	49	83	6.1	11	0.8
New Jersey	8,908,520	1,546	17.4	10	1,272	14.3	274	3.1
New Mexico	2,095,428	232	11.1	33	179	8.5	53	2.5
New York	19,542,209	6,465	33.1	1	5,802	29.7	663	3.4
North Carolina	10,383,620	1,233	11.9	27	958	9.2	275	2.6
North Dakota	760,077	89	11.7	28	87	11.4	2	0.3
Ohio	11,689,442	2,363	20.2	8	1,803	15.4	560	4.8
Oklahoma	3,943,079	474	12.0	24	231	5.9	243	6.2
Oregon	4,190,713	413	9.9	42	321	7.7	92	2.2
Pennsylvania	12,807,060	3,213	25.1	4	2,355	18.4	858	6.7
Puerto Rico	3,195,153	409	12.8	N.R.	409	12.8	0	0.0
Rhode Island	1,057,315	308	29.1	2	273	25.8	35	3.3
South Carolina	5,084,127	559	11.0	34	447	8.8	112	2.2
South Dakota	882,235	89	10.1	40	67	7.6	22	2.5
Tennessee	6,770,010	894	13.2	20	756	11.2	138	2.0
Texas	28,701,845	2,909	10.1	39	2,477	8.6	432	1.5
Utah	3,161,105	278	8.8	45	262	8.3	16	0.5
Vermont	626,299	91	14.5	17	85	13.6	6	1.0
Virginia	8,517,685	955	11.2	32	708	8.3	247	2.9
Washington	7,535,591	871	11.6	30	678	9.0	193	2.6
West Virginia	1,805,832	416	23.0	7	304	16.8	112	6.2
Wisconsin	5,813,568	698	12.0	25	582	10.0	116	2.0
Wyoming	577,737	42	7.3	48	19	3.3	23	4.0

Sources: July 1, 2018, population estimates are from the U.S. Census Bureau (released Dec. 31, 2018). Resident physician data are from the National GME Census in GME Track® as of September 2019.

Note: N.R. = not ranked.

*Includes MDs from international medical schools.

3. Residents and Fellows on Duty as of Dec. 31, 2018, in ACGME-Accredited Programs by School Type



Source: National GME Census in GME Track® as of September 2019.

Figure 3.3. Percentage of residents and fellows on duty as of Dec. 31, 2018, in ACGME-accredited programs who are international medical graduates (IMGs).

Table 3.3. Residents and Fellows on Duty as of Dec. 31, 2018, in ACGME-Accredited Programs by School Type

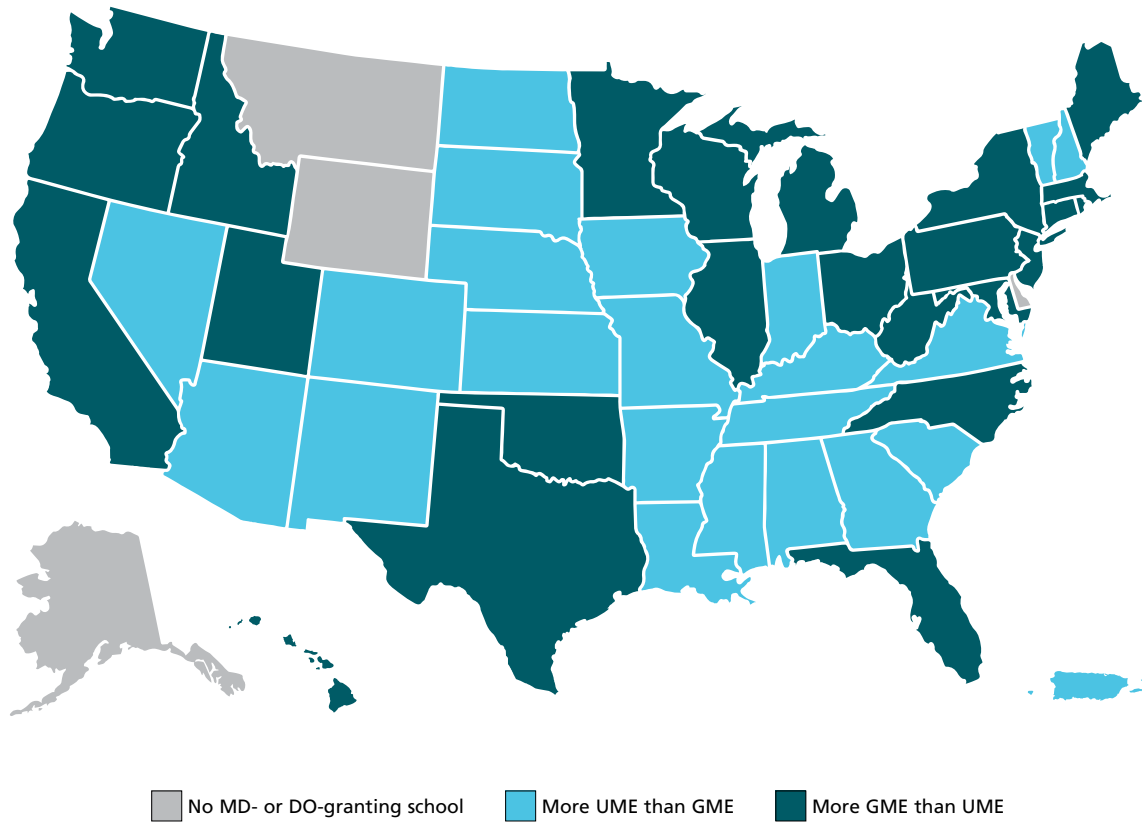
	Total Residents/ Fellows*	U.S. MD		U.S. DO		IMG		
		Number	Percentage	Number	Percentage	Number	Percentage	Rank
United States	134,126	83,243	62.1%	19,532	14.6%	31,212	23.3%	N.R.
Alabama	1,460	1,011	69.2%	129	8.8%	320	21.9%	20
Alaska	37	25	67.6%	11	29.7%	1	2.7%	50
Arizona	1,848	1,168	63.2%	327	17.7%	352	19.0%	28
Arkansas	893	496	55.5%	123	13.8%	274	30.7%	7
California	11,646	9,202	79.0%	1,178	10.1%	1,242	10.7%	43
Colorado	1,625	1,308	80.5%	262	16.1%	55	3.4%	49
Connecticut	2,431	1,321	54.3%	237	9.7%	868	35.7%	5
Delaware	385	210	54.5%	114	29.6%	61	15.8%	37
District of Columbia	1,678	1,083	64.5%	94	5.6%	501	29.9%	N.R.
Florida	6,150	3,077	50.0%	1,155	18.8%	1,917	31.2%	6
Georgia	2,680	1,702	63.5%	289	10.8%	688	25.7%	14
Hawaii	428	275	64.3%	67	15.7%	86	20.1%	24
Idaho	141	79	56.0%	46	32.6%	16	11.3%	42
Illinois	6,255	3,757	60.1%	872	13.9%	1,622	25.9%	13
Indiana	1,493	1,030	69.0%	238	15.9%	224	15.0%	38
Iowa	1,015	615	60.6%	206	20.3%	194	19.1%	27
Kansas	833	535	64.2%	137	16.4%	161	19.3%	26
Kentucky	1,404	890	63.4%	256	18.2%	258	18.4%	31
Louisiana	2,197	1,424	64.8%	151	6.9%	620	28.2%	10
Maine	330	201	60.9%	89	27.0%	40	12.1%	41
Maryland	2,919	2,107	72.2%	132	4.5%	678	23.2%	17
Massachusetts	5,729	4,236	73.9%	278	4.9%	1,185	20.7%	23
Michigan	6,895	2,921	42.4%	2,124	30.8%	1,850	26.8%	11
Minnesota	2,349	1,751	74.5%	179	7.6%	411	17.5%	34
Mississippi	780	437	56.0%	195	25.0%	148	19.0%	29
Missouri	3,028	2,004	66.2%	433	14.3%	589	19.5%	25
Montana	82	42	51.2%	20	24.4%	20	24.4%	16
Nebraska	814	452	55.5%	122	15.0%	239	29.4%	9
Nevada	650	273	42.0%	207	31.8%	170	26.2%	12
New Hampshire	419	315	75.2%	34	8.1%	70	16.7%	35
New Jersey	3,357	1,043	31.1%	707	21.1%	1,607	47.9%	1
New Mexico	610	387	63.4%	91	14.9%	131	21.5%	21
New York	17,358	9,017	51.9%	1,807	10.4%	6,521	37.6%	3
North Carolina	3,696	2,821	76.3%	484	13.1%	387	10.5%	44
North Dakota	151	76	50.3%	5	3.3%	70	46.4%	2
Ohio	6,844	3,849	56.2%	1,464	21.4%	1,523	22.3%	19
Oklahoma	1,148	478	41.6%	463	40.3%	207	18.0%	32
Oregon	1,013	806	79.6%	138	13.6%	69	6.8%	46
Pennsylvania	8,930	5,119	57.3%	1,804	20.2%	1,995	22.3%	18
Puerto Rico	860	564	65.6%	0	0.0%	296	34.4%	N.R.
Rhode Island	839	637	75.9%	79	9.4%	121	14.4%	39
South Carolina	1,511	1,133	75.0%	222	14.7%	154	10.2%	45
South Dakota	151	83	55.0%	30	19.9%	38	25.2%	15
Tennessee	2,599	1,895	72.9%	241	9.3%	460	17.7%	33
Texas	8,589	5,816	67.7%	989	11.5%	1,783	20.8%	22
Utah	822	722	87.8%	50	6.1%	50	6.1%	47
Vermont	319	251	78.7%	25	7.8%	42	13.2%	40
Virginia	2,457	1,592	64.8%	408	16.6%	453	18.4%	30
Washington	2,150	1,738	80.8%	292	13.6%	116	5.4%	48
West Virginia	935	424	45.3%	229	24.5%	282	30.2%	8
Wisconsin	2,011	1,405	69.9%	276	13.7%	328	16.3%	36
Wyoming	42	4	9.5%	23	54.8%	15	35.7%	4

Source: National GME Census in GME Track® as of September 2019.

Note: N.R. = not ranked.

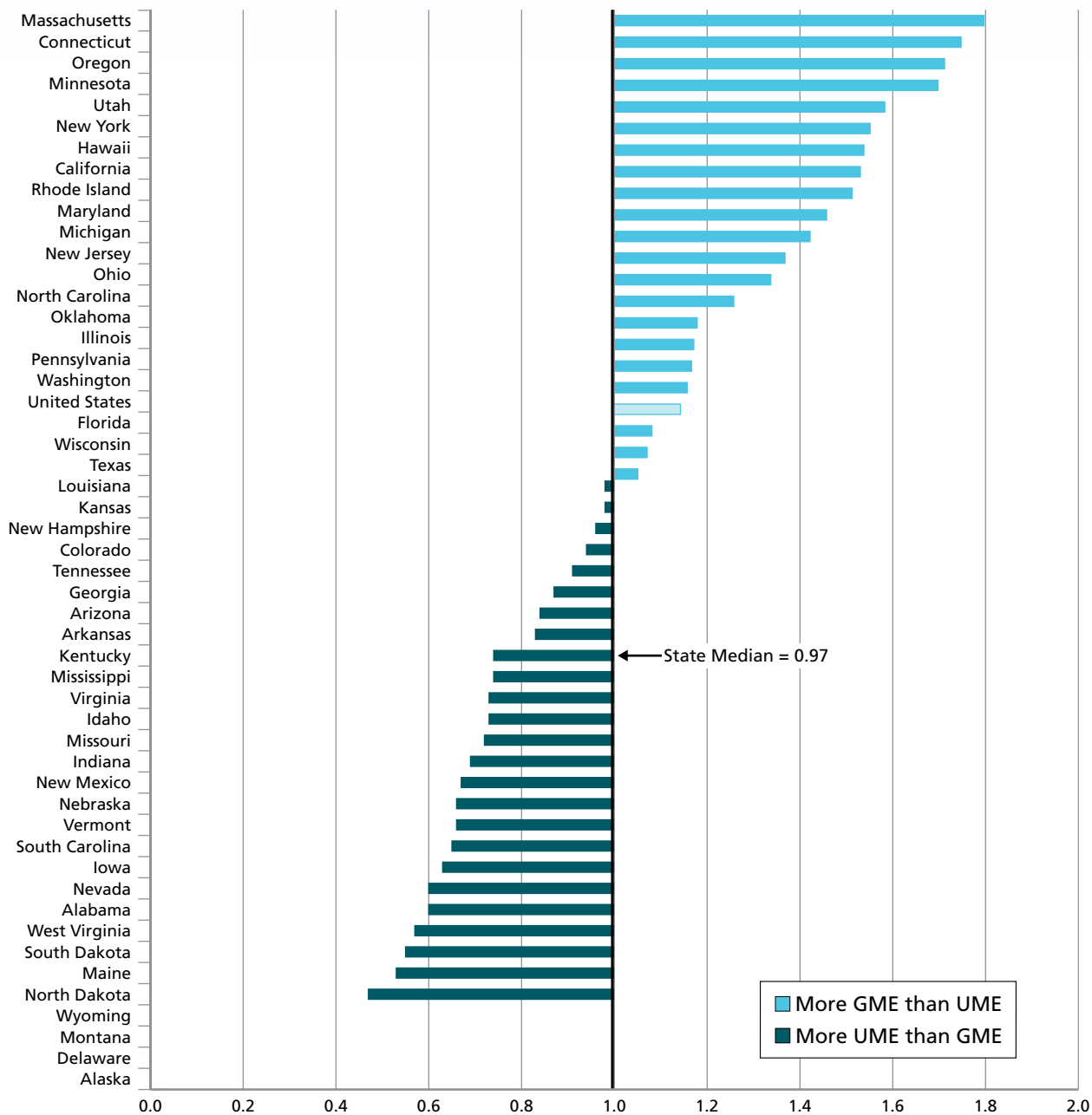
*Physicians who are graduates of Canadian schools (n=139) are included in the total.

4. Ratio of Graduate Medical Education (GME) to Undergraduate Medical Education (UME), Academic Year 2017-2018



Sources: Enrollment data from MD-granting schools were from the AAMC FACTS tables as of June 2019. Enrollment data from DO-granting schools were from the American Association of Colleges of Osteopathic Medicine (AACOM) and are as of June 2019. Data for residents in Accreditation Council for Graduate Medical Education (ACGME) programs are from JAMA (2018;320(10):1051-1070). Data for residents in Osteopathic Graduate Medical Education (OGME) programs are from JAOA (2019;119(4):268-272).

Map 3.4. Ratio of graduate medical education (GME) residents and fellows to undergraduate medical education (UME) students, academic year 2017-2018.



Sources: Enrollment data from MD-granting schools were obtained from the AAMC FACTS tables as of June 2019. Enrollment data from DO-granting schools were obtained from the American Association of Colleges of Osteopathic Medicine (AACOM) and are as of June 2019. Data for residents in Accreditation Council for Graduate Medical Education (ACGME) programs are from JAMA (2018;320(10):1051-1070). Data for residents in Osteopathic Graduate Medical Education (OGME) programs are from JAOA (2019;119(4):268-272).

Notes: GME data in this figure are from academic year 2017-2018, which differs from other tables and figures in this report. OGME data for 2018-2019 were not available at the time of publication. California UME enrollment data for DO-granting schools includes enrollment at all Western University campuses, including at Western University's Northwest campus in Lebanon, Oregon.

Figure 3.4. Ratio of graduate medical education (GME) residents and fellows to undergraduate medical education (UME) students, academic year 2017-2018.

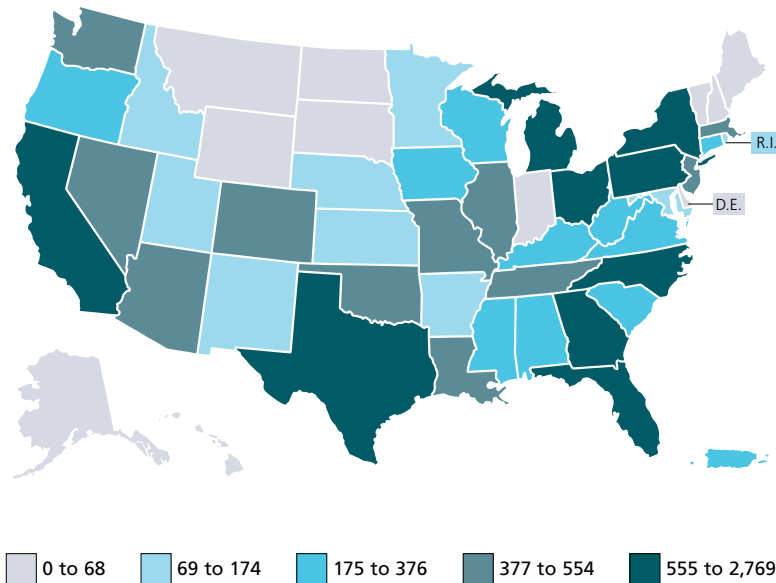
Table 3.4. Ratio of Graduate Medical Education (GME) Residents and Fellows to Undergraduate Medical Education (UME) Students, Academic Year 2017-2018

	Students Enrolled in UME			Residents and Fellows in GME			GME-to-UME Ratio	Rank
	Total	MD-Granting School	DO-Granting School	Total	ACGME Programs	OGME Programs		
United States	120,301	89,934	30,367	137,437	129,753	7,684	1.1	N.R.
Alabama	2,399	1,116	1,283	1,431	1,413	18	0.6	42
Alaska	---	---	---	45	37	8	---	---
Arizona	2,274	841	1,433	1,902	1,780	122	0.8	28
Arkansas	1,032	714	318	859	849	10	0.8	29
California	7,837	5,940	1,897	11,992	11,705	287	1.5	8
Colorado	1,709	818	891	1,605	1,516	89	0.9	25
Connecticut	1,385	1,385	---	2,420	2,371	49	1.7	2
Delaware	---	---	---	282	274	8	---	---
District of Columbia	2,072	2,072	---	1,933	1,917	16	1	N.R.
Florida	5,747	3,972	1,775	6,213	5,521	692	1.1	19
Georgia	3,011	2,471	540	2,624	2,582	42	0.9	27
Hawaii	290	290	---	446	446	---	1.5	7
Idaho	162	---	162	118	107	11	1	33
Illinois	5,701	4,888	813	6,677	6,261	416	1.2	16
Indiana	2,145	1,495	650	1,486	1,448	38	0.7	35
Iowa	1,559	671	888	980	960	20	0.6	40
Kansas	874	874	---	856	841	15	1	23
Kentucky	1,803	1,263	540	1,343	1,298	45	0.7	30
Louisiana	2,126	2,126	---	2,086	2,086	---	1.0	22
Maine	710	---	710	375	336	39	0.5	45
Maryland	1,967	1,967	---	2,867	2,867	0	1	10
Massachusetts	3,176	3,176	---	5,706	5,687	19	1.8	1
Michigan	5,291	4,059	1,232	7,523	6,404	1,119	1.4	11
Minnesota	1,359	1,359	---	2,307	2,307	---	1.7	4
Mississippi	1,044	630	414	770	712	58	0.7	31
Missouri	4,369	2,289	2,080	3,127	3,008	119	0.7	34
Montana	---	---	---	93	85	8	---	---
Nebraska	1,190	1,190	---	788	788	---	0.7	37
Nevada	989	402	587	598	570	28	0.6	41
New Hampshire	423	423	---	407	407	---	1.0	24
New Jersey	2,716	1,972	744	3,715	3,095	620	1.4	12
New Mexico	927	451	476	618	601	17	0.7	36
New York	11,373	8,690	2,683	17,642	16,869	773	1.6	6
North Carolina	2,931	2,294	637	3,685	3,522	163	1.3	14
North Dakota	310	310	---	145	145	---	0.5	46
Ohio	5,413	4,430	983	7,238	6,458	780	1.3	13
Oklahoma	1,143	676	467	1,347	980	367	1.2	15
Oregon	652	652	---	1,116	1,007	109	1.7	3
Pennsylvania	8,202	5,627	2,575	9,568	8,597	971	1.2	17
Puerto Rico	1,457	1,457	---	792	792	---	0.5	N.R.
Rhode Island	605	605	---	915	858	57	2	9
South Carolina	2,202	1,561	641	1,430	1,430	0	0.6	39
South Dakota	276	276	---	152	152	---	0.6	44
Tennessee	2,869	1,926	943	2,623	2,613	10	0.9	26
Texas	8,112	6,876	1,236	8,523	8,417	106	1.1	21
Utah	525	525	---	831	825	6	1.6	5
Vermont	478	478	---	314	314	---	0.7	38
Virginia	3,677	2,325	1,352	2,686	2,489	197	0.7	32
Washington	1,865	1,289	576	2,158	2,056	102	1.2	18
West Virginia	1,611	770	841	920	812	108	0.6	43
Wisconsin	1,770	1,770	---	1,895	1,889	6	1.1	20
Wyoming	---	---	---	57	41	16	---	---

Sources: Enrollment data from MD-granting schools were obtained from the AAMC FACTS tables as of June 2019. Enrollment data from DO-granting schools were obtained from the American Association of Colleges of Osteopathic Medicine (AACOM) and are as of June 2019. Data for residents in Accreditation Council for Graduate Medical Education (ACGME) programs are from JAMA (2018;320(10):1051-1070). Data for residents in Osteopathic Graduate Medical Education (OGME) programs are from JAOA (2019;119(4):268-272).

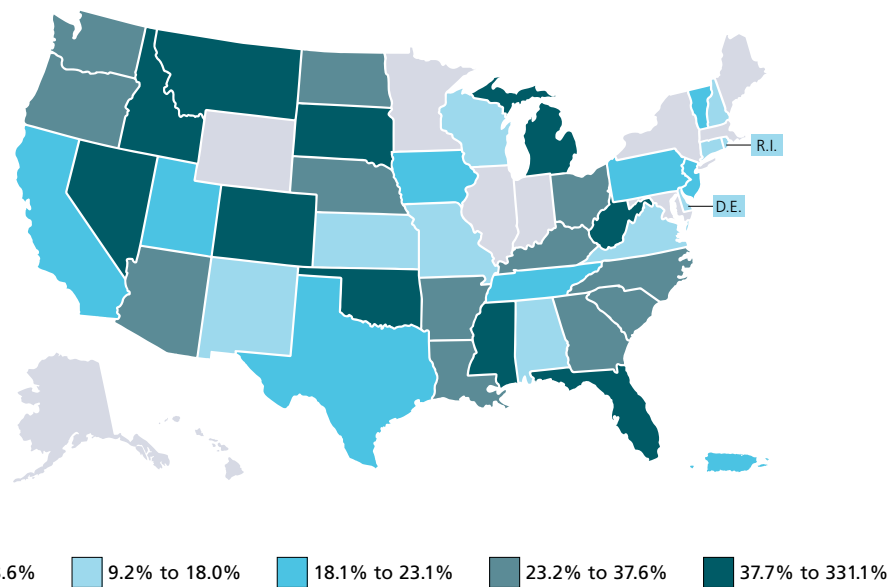
Notes: N.R. = not ranked. --- Indicates the data are not applicable. Some states did not have a school or a GME program in the 2017-2018 academic year. GME data in this table are from academic year 2017-2018, which differs from other tables. OGME data for 2018-2019 were not available at the time of publication. California UME enrollment data for DO-granting schools includes enrollment at all Western University campuses, including enrollment at Western University's Northwest campus in Lebanon, Oregon.

5. Change in Residents and Fellows in ACGME-Accredited Programs, 2008-2018



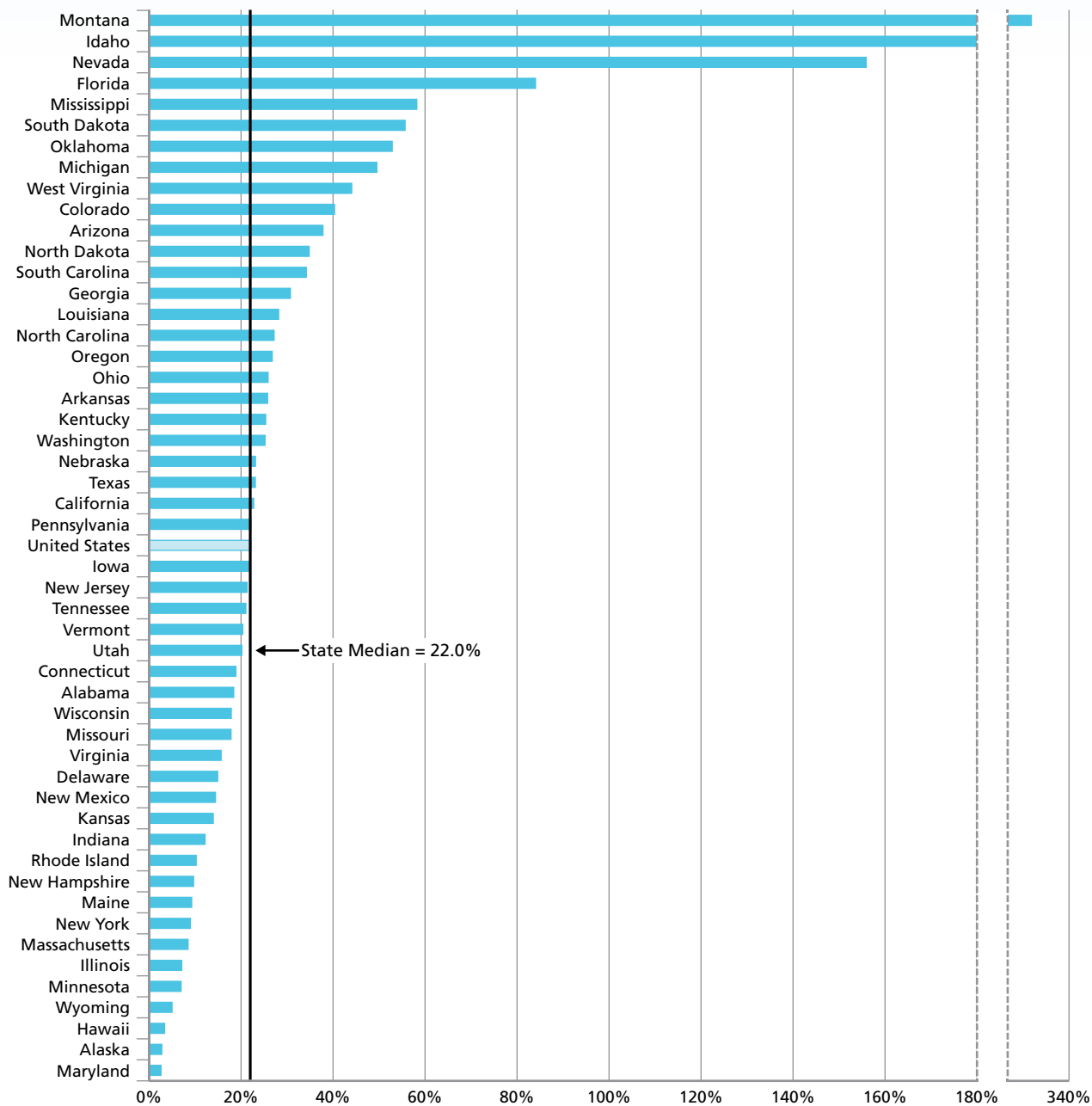
Source: 2008 and 2018 National GME Census in GME Track® as of September 2019.

Map 3.5.1. Change in the number of residents and fellows in ACGME-accredited programs, 2008-2018.



Source: 2008 and 2018 National GME Census in GME Track® as of September 2019.

Map 3.5.2. Percentage change in the number of residents and fellows in ACGME-accredited programs, 2008-2018.



Source: 2008 and 2018 National GME Census in GME Track[®] as of September 2019.

Figure 3.5. Percentage change in number of residents and fellows in ACGME-accredited programs, 2008-2018.

Table 3.5. Change in Number of Residents and Fellows in ACGME-Accredited Programs, 2008-2018

	Total Residents and Fellows in ACGME-Accredited Programs				
	2008	2018	Number Change	Percentage Change	Rank
United States	109,816	134,126	24,310	22.1%	N.R.
Alabama	1,233	1,460	227	18.4%	32
Alaska	36	37	1	2.8%	49
Arizona	1,341	1,848	507	37.8%	11
Arkansas	710	893	183	25.8%	19
California	9,488	11,646	2,158	22.7%	24
Colorado	1,158	1,625	467	40.3%	10
Connecticut	2,045	2,431	386	18.9%	31
Delaware	335	385	50	14.9%	36
District of Columbia	1,596	1,678	82	5.1%	N.R.
Florida	3,342	6,150	2,808	84.0%	4
Georgia	2,050	2,680	630	30.7%	14
Hawaii	414	428	14	3.4%	48
Idaho	50	141	91	182.0%	2
Illinois	5,840	6,255	415	7.1%	45
Indiana	1,331	1,493	162	12.2%	39
Iowa	833	1,015	182	21.8%	26
Kansas	731	833	102	14.0%	38
Kentucky	1,120	1,404	284	25.4%	20
Louisiana	1,714	2,197	483	28.2%	15
Maine	302	330	28	9.3%	42
Maryland	2,845	2,919	74	2.6%	50
Massachusetts	5,281	5,729	448	8.5%	44
Michigan	4,611	6,895	2,284	49.5%	8
Minnesota	2,196	2,349	153	7.0%	46
Mississippi	493	780	287	58.2%	5
Missouri	2,570	3,028	458	17.8%	34
Montana	19	82	63	331.6%	1
Nebraska	661	814	153	23.1%	22
Nevada	254	650	396	155.9%	3
New Hampshire	382	419	37	9.7%	41
New Jersey	2,767	3,357	590	21.3%	27
New Mexico	533	610	77	14.4%	37
New York	15,926	17,358	1,432	9.0%	43
North Carolina	2,906	3,696	790	27.2%	16
North Dakota	112	151	39	34.8%	12
Ohio	5,437	6,844	1,407	25.9%	18
Oklahoma	751	1,148	397	52.9%	7
Oregon	799	1,013	214	26.8%	17
Pennsylvania	7,311	8,930	1,619	22.1%	25
Puerto Rico	749	860	111	14.8%	N.R.
Rhode Island	761	839	78	10.2%	40
South Carolina	1,126	1,511	385	34.2%	13
South Dakota	97	151	54	55.7%	6
Tennessee	2,147	2,599	452	21.1%	28
Texas	6,977	8,589	1,612	23.1%	23
Utah	684	822	138	20.2%	30
Vermont	265	319	54	20.4%	29
Virginia	2,124	2,457	333	15.7%	35
Washington	1,717	2,150	433	25.2%	21
West Virginia	649	935	286	44.1%	9
Wisconsin	1,706	2,011	305	17.9%	33
Wyoming	40	42	2	5.0%	47

Source: 2008 and 2018 National GME Census in GME Track® as of September 2019.

Note: N.R. = not ranked.

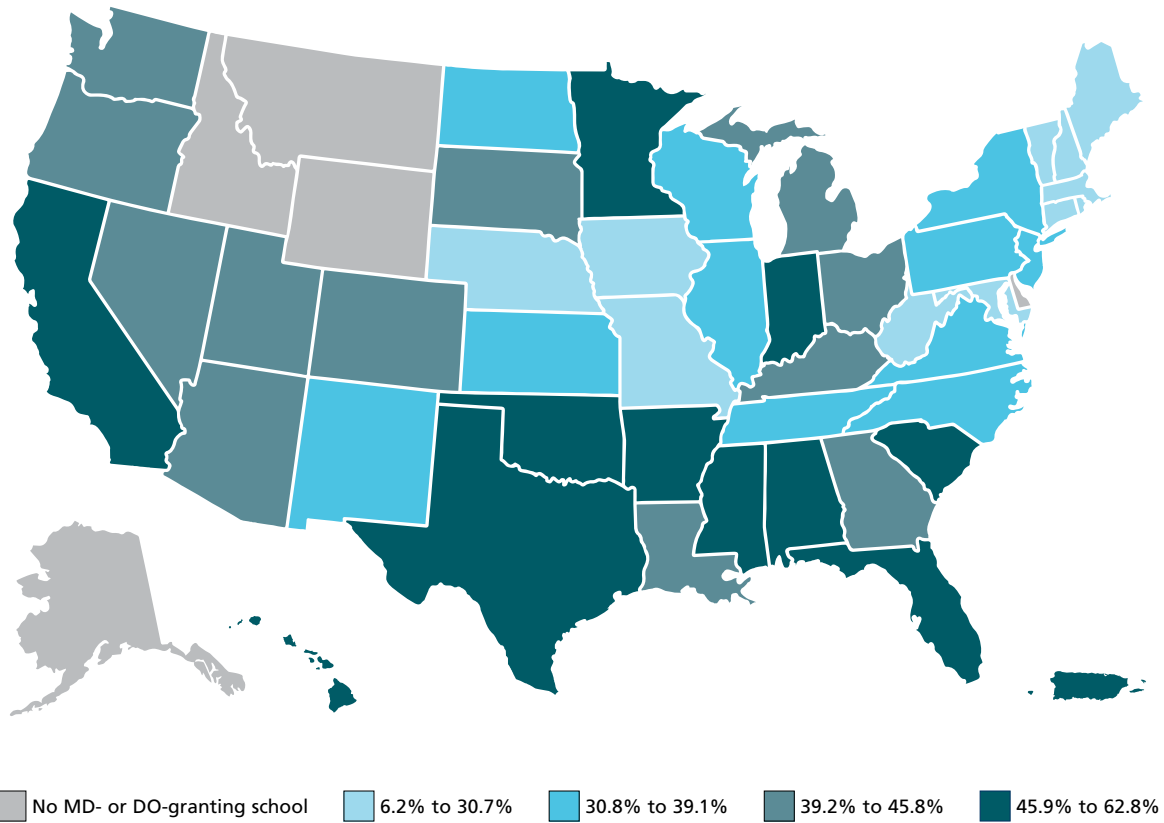
SECTION 4

Retention

Key Findings

- In 2018, 38.2% of physicians were active in the same state where they received their UME. Seven of the top 10 states for UME student retention were in the South (see Map 4.1, Figure 4.1, and Table 4.1).
- In 2018, 46.3% of the physicians who graduated from a public school were active in the same state where they completed UME (see Figure 4.2 and Table 4.2).
- In 2018, 47.5% of physicians were active in the state where they completed their most recent GME. Five of the top 10 states with the highest GME retention rates were in the West (see Map 4.3, Figure 4.3, and Table 4.3).
- Retention rates were highest among physicians who completed both UME and GME in the same state. Over two-thirds (67.3%) of the physicians who completed UME and GME in the same state remained in the state to practice. In terms of overall retention (i.e., both UME and GME were completed in the same state), eight of the top 10 states were in the South and West (see Figure 4.4 and Table 4.4).

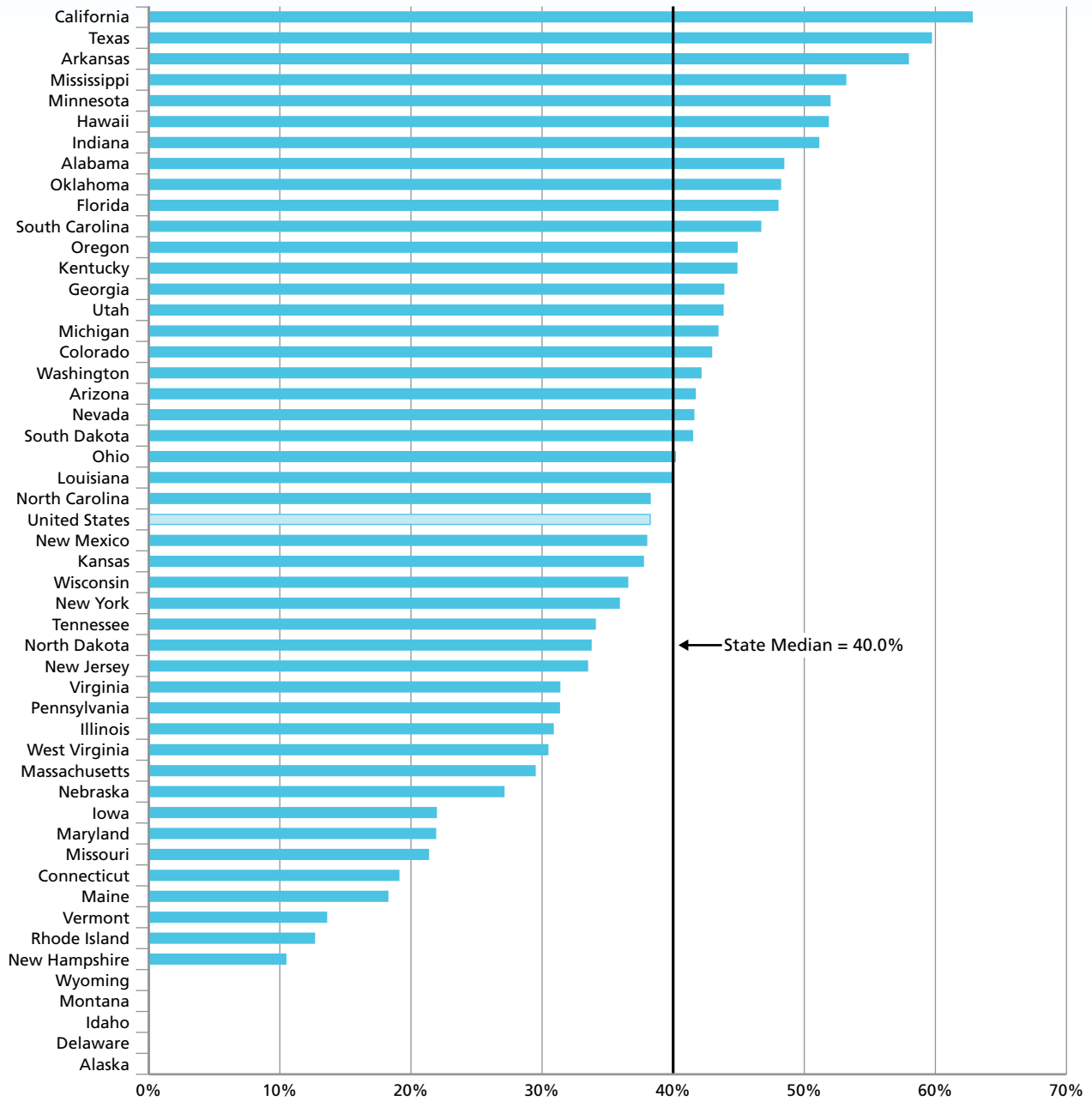
1. Physicians Retained From Undergraduate Medical Education (UME), 2018



Source: 2019 AMA Physician Masterfile (Dec. 31, 2018).

Note: Idaho has one DO-granting school. It received pre-accreditation status in 2017, so no graduate of this school has presented in the 2019 AMA Physician Masterfile.

Map 4.1. Percentage of physicians retained from undergraduate medical education (UME), 2018.



Source: 2019 AMA Physician Masterfile (Dec. 31, 2018).

Note: The University of Washington recruits students from Washington, Wyoming, Alaska, Montana, and Idaho (WWAMI) for admission to its WWAMI regional medical education program. However, retention numbers for the state of Washington do not include 993 graduates from the University of Washington who are active in the other four WWAMI states. When those graduates are included, the UME retention rate for the WWAMI region is 57.9%. Idaho has one DO-granting school. It received pre-accreditation status in 2017, so no graduate of this school has presented in the 2019 AMA Physician Masterfile.

Figure 4.1. Physicians retained from undergraduate medical education (UME), 2018.

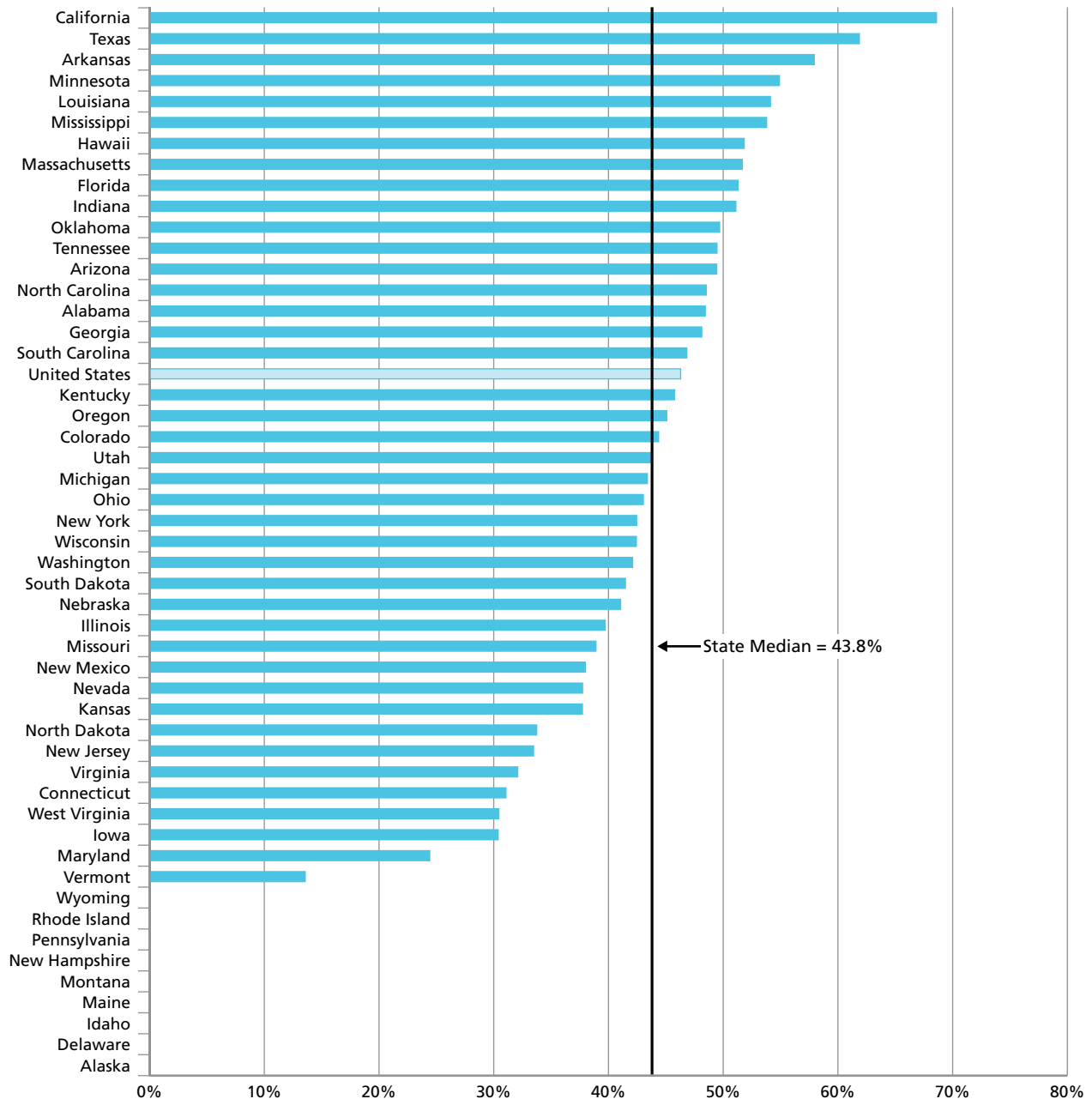
Table 4.1. Physicians Retained From Undergraduate Medical Education (UME), 2018

	Active Physicians Who Graduated from an MD- or DO-Granting School in State	Active Physicians Who Graduated From an MD- or DO-Granting School in State and Are Active in State		
		Number	Percentage	Rank
United States	673,270	257,512	38.2%	N.R.
Alabama	8,145	3,945	48.4%	8
Alaska	---	---	---	---
Arizona	5,069	2,113	41.7%	19
Arkansas	5,052	2,927	57.9%	3
California	44,247	27,791	62.8%	1
Colorado	5,343	2,294	42.9%	17
Connecticut	6,887	1,314	19.1%	41
Delaware	---	---	---	---
District of Columbia	17,156	1,056	6.2%	N.R.
Florida	18,751	8,999	48.0%	10
Georgia	13,541	5,939	43.9%	14
Hawaii	2,101	1,089	51.8%	6
Idaho	---	---	---	---
Illinois	44,322	13,675	30.9%	34
Indiana	10,463	5,347	51.1%	7
Iowa	12,672	2,780	21.9%	38
Kansas	6,605	2,492	37.7%	26
Kentucky	9,467	4,247	44.9%	13
Louisiana	16,101	6,444	40.0%	23
Maine	2,566	468	18.2%	42
Maryland	15,766	3,450	21.9%	39
Massachusetts	22,613	6,665	29.5%	36
Michigan	25,240	10,958	43.4%	16
Minnesota	10,523	5,468	52.0%	5
Mississippi	4,330	2,302	53.2%	4
Missouri	28,974	6,183	21.3%	40
Montana	---	---	---	---
Nebraska	9,211	2,496	27.1%	37
Nevada	2,446	1,017	41.6%	20
New Hampshire	2,256	236	10.5%	45
New Jersey	12,644	4,232	33.5%	31
New Mexico	2,567	975	38.0%	25
New York	73,809	26,493	35.9%	28
North Carolina	15,700	6,005	38.2%	24
North Dakota	1,793	605	33.7%	30
Ohio	33,307	13,378	40.2%	22
Oklahoma	8,267	3,984	48.2%	9
Oregon	3,855	1,730	44.9%	12
Pennsylvania	51,763	16,217	31.3%	33
Puerto Rico	9,562	4,786	50.1%	N.R.
Rhode Island	2,839	359	12.6%	44
South Carolina	7,457	3,481	46.7%	11
South Dakota	1,678	696	41.5%	21
Tennessee	15,463	5,267	34.1%	29
Texas	43,539	25,992	59.7%	2
Utah	3,728	1,633	43.8%	15
Vermont	3,501	475	13.6%	43
Virginia	15,573	4,883	31.4%	32
Washington	6,455	2,719	42.1%	18
West Virginia	6,993	2,129	30.4%	35
Wisconsin	12,492	4,564	36.5%	27
Wyoming	---	---	---	---

Source: 2019 AMA Physician Masterfile (Dec. 31, 2018).

Note: N.R. = not ranked. --- Indicates the data are not applicable. Some states do not have an MD-granting or a DO-granting school. The University of Washington recruits students from Washington, Wyoming, Alaska, Montana, and Idaho (WWAMI) for admission to its WWAMI regional medical education program. However, retention numbers for the state of Washington do not include 993 graduates from the University of Washington who are active in the other four WWAMI states. When those graduates are included, the UME retention rate for the WWAMI region is 57.9%. Idaho has one DO-granting school. It received pre-accreditation status in 2017, so no graduate of this school has presented in the 2019 AMA Physician Masterfile.

2. Physicians Retained From Public Undergraduate Medical Education (UME), 2018



Source: 2019 AMA Physician Masterfile (Dec. 31, 2018).

Note: The University of Washington recruits students from Washington, Wyoming, Alaska, Montana, and Idaho (WWAMI) for admission to its WWAMI regional medical education program. However, retention numbers for the state of Washington do not include 993 graduates from the University of Washington who are active in the other four WWAMI states. When those graduates are included, the UME retention rate for the WWAMI region is 57.9%.

Figure 4.2. Physicians retained from public undergraduate medical education (UME), 2018.

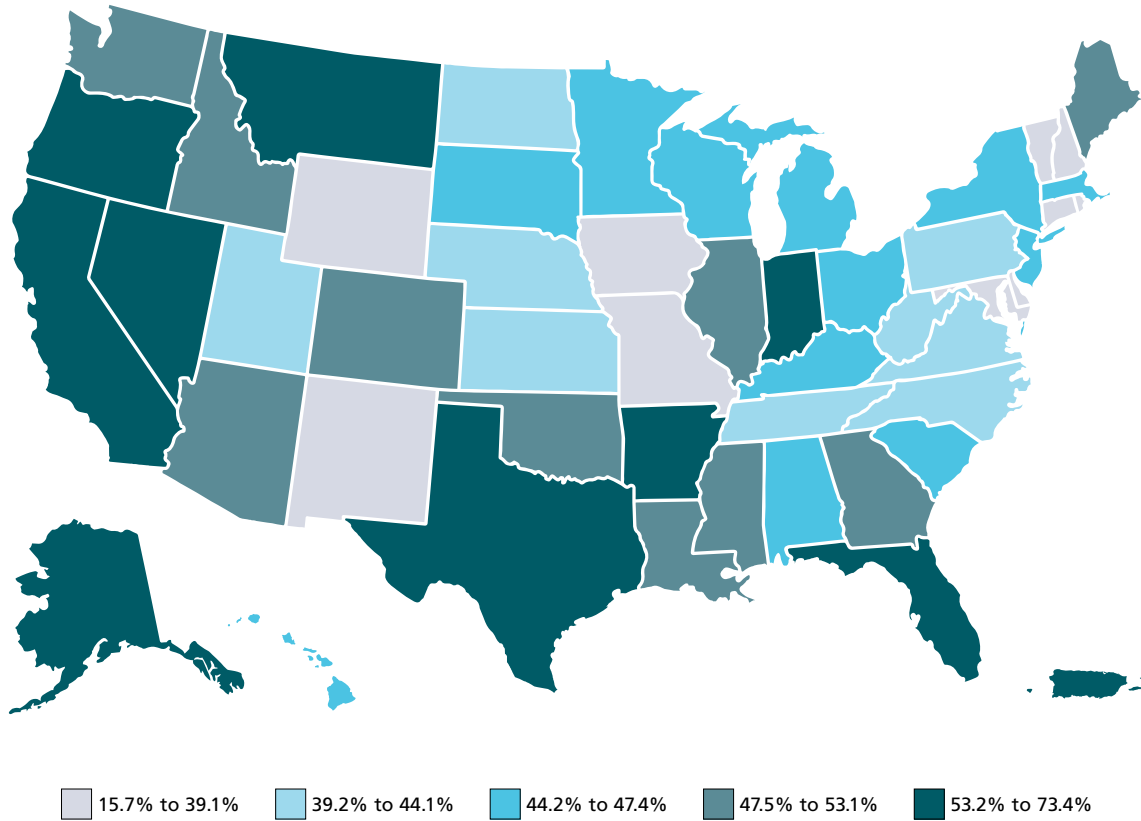
Table 4.2. Physicians Retained From Public Undergraduate Medical Education, 2018

	Active Physicians Who Graduated From a Public MD- or DO-Granting School in State	Active Physicians Who Graduated From a Public MD- or DO-Granting School in State and Are Active in State		
		Number	Percentage	Rank
United States	370,078	171,312	46.3%	N.R.
Alabama	8,144	3,945	48.4%	15
Alaska	---	---	---	---
Arizona	3,564	1,762	49.4%	13
Arkansas	5,052	2,927	57.9%	3
California	23,595	16,184	68.6%	1
Colorado	4,924	2,185	44.4%	20
Connecticut	2,849	885	31.1%	37
Delaware	---	---	---	---
District of Columbia	---	---	---	N.R.
Florida	8,564	4,393	51.3%	9
Georgia	6,669	3,210	48.1%	16
Hawaii	2,101	1,089	51.8%	7
Idaho	---	---	---	---
Illinois	13,830	5,493	39.7%	29
Indiana	10,463	5,347	51.1%	10
Iowa	5,970	1,814	30.4%	39
Kansas	6,605	2,492	37.7%	33
Kentucky	8,727	3,994	45.8%	18
Louisiana	10,048	5,438	54.1%	5
Maine	---	---	---	---
Maryland	11,048	2,698	24.4%	40
Massachusetts	3,401	1,757	51.7%	8
Michigan	25,225	10,946	43.4%	22
Minnesota	9,118	5,006	54.9%	4
Mississippi	4,243	2,282	53.8%	6
Missouri	6,854	2,667	38.9%	30
Montana	---	---	---	---
Nebraska	4,849	1,991	41.1%	28
Nevada	1,595	602	37.7%	32
New Hampshire	---	---	---	---
New Jersey	12,644	4,232	33.5%	35
New Mexico	2,567	975	38.0%	31
New York	23,305	9,895	42.5%	24
North Carolina	7,720	3,746	48.5%	14
North Dakota	1,793	605	33.7%	34
Ohio	27,681	11,914	43.0%	23
Oklahoma	7,955	3,953	49.7%	11
Oregon	3,822	1,723	45.1%	19
Pennsylvania	---	---	---	---
Puerto Rico	4,705	2,540	54.0%	N.R.
Rhode Island	---	---	---	---
South Carolina	7,397	3,464	46.8%	17
South Dakota	1,678	696	41.5%	27
Tennessee	8,152	4,032	49.5%	12
Texas	37,229	23,033	61.9%	2
Utah	3,728	1,633	43.8%	21
Vermont	3,501	475	13.6%	41
Virginia	14,633	4,696	32.1%	36
Washington	6,301	2,653	42.1%	26
West Virginia	6,993	2,129	30.4%	38
Wisconsin	5,541	2,351	42.4%	25
Wyoming	---	---	---	---

Source: 2019 AMA Physician Masterfile (Dec. 31, 2018).

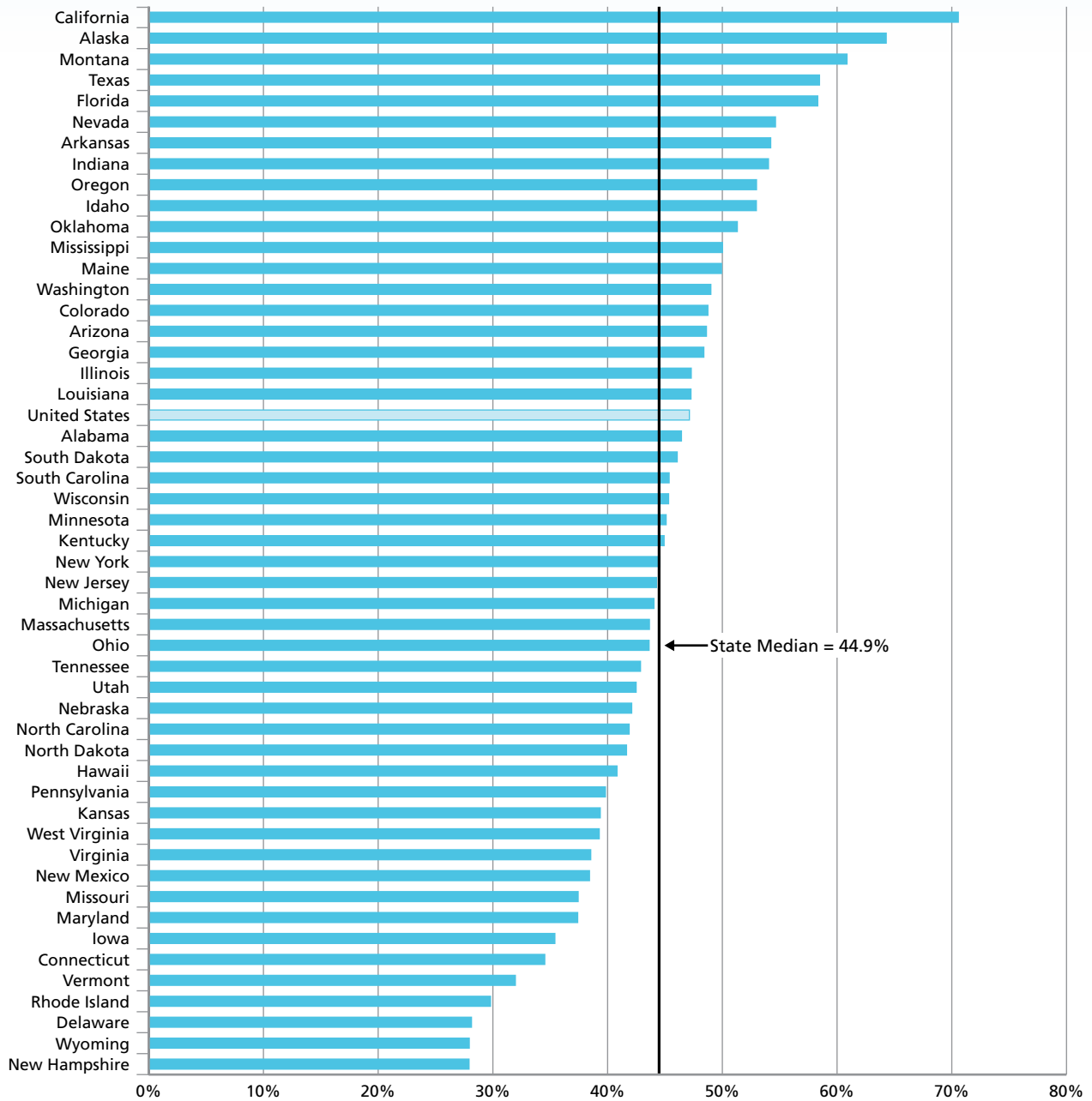
Note: N.R. = not ranked. --- Indicates the data are not applicable. Some states do not have an MD-granting or a DO-granting school. The University of Washington recruits students from Washington, Wyoming, Alaska, Montana, and Idaho (WWAMI) for admission to its WWAMI regional medical education program. However, retention numbers for the state of Washington do not include 993 graduates from the University of Washington who are active in the other four WWAMI states. When those graduates are included, the UME retention rate for the WWAMI region is 57.9%.

3. Physicians Retained From Graduate Medical Education (GME), 2018



Source: 2019 AMA Physician Masterfile (Dec. 31, 2018).

Map 4.3. Percentage of physicians retained from graduate medical education (GME), 2018.



Source: 2019 AMA Physician Masterfile (Dec. 31, 2018).

Figure 4.3. Physicians retained from graduate medical education (GME), 2018.

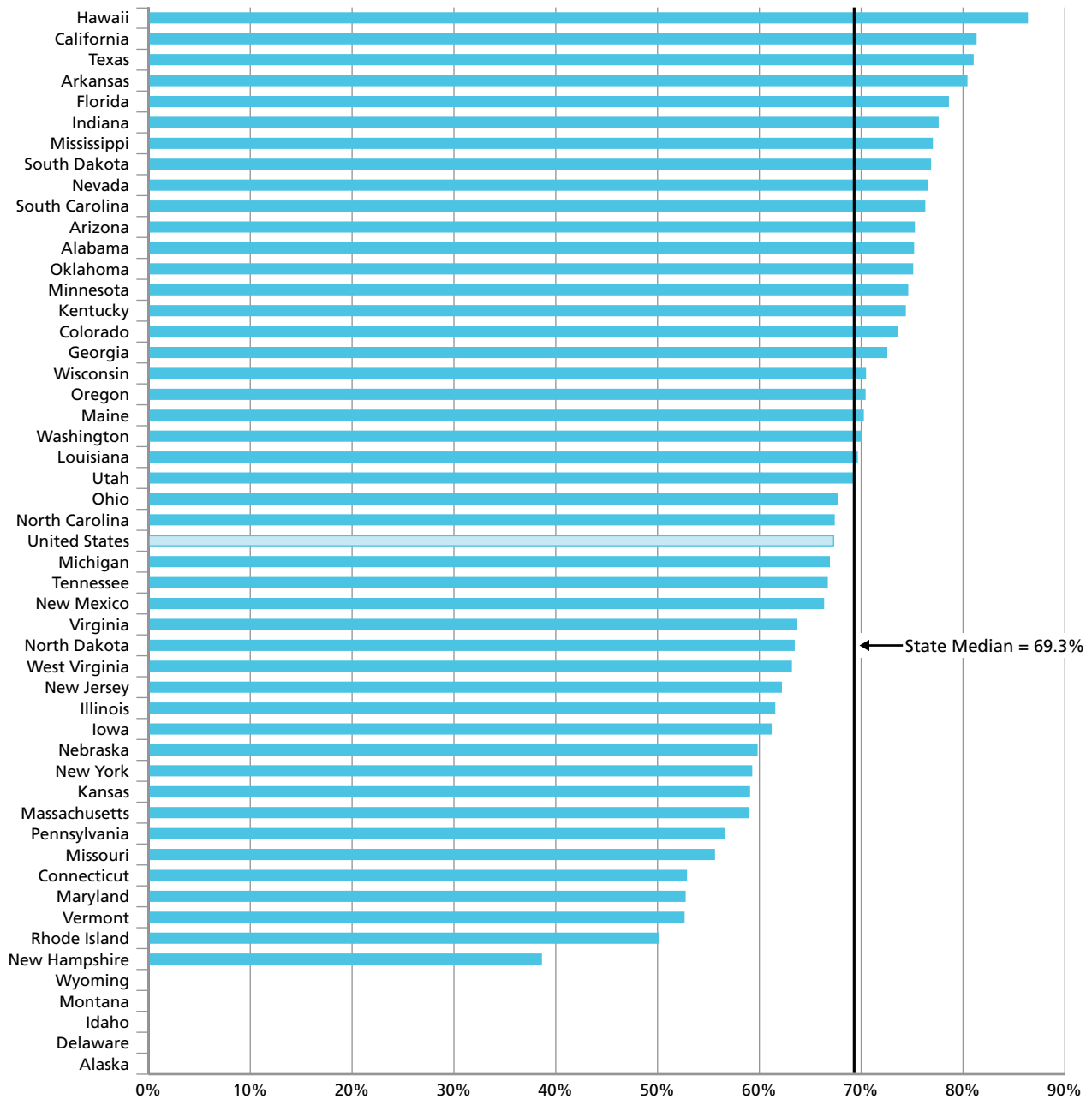
Table 4.3. Physicians Retained From Graduate Medical Education (GME), 2018

	Active Physicians Who Completed GME in State	Active Physicians Who Completed GME in State and Are Active in State		
		Number	Percentage	Rank
United States	844,499	398,010	47.1%	N.R.
Alabama	9,303	4,320	46.4%	20
Alaska	182	117	64.3%	2
Arizona	8,923	4,338	48.6%	16
Arkansas	5,133	2,783	54.2%	7
California	83,790	59,130	70.6%	1
Colorado	10,537	5,136	48.7%	15
Connecticut	14,367	4,960	34.5%	45
Delaware	1,603	451	28.1%	48
District of Columbia	16,524	2,588	15.7%	N.R.
Florida	25,510	14,877	58.3%	5
Georgia	16,144	7,812	48.4%	17
Hawaii	2,952	1,205	40.8%	36
Idaho	455	241	53.0%	10
Illinois	44,103	20,857	47.3%	18
Indiana	10,936	5,908	54.0%	8
Iowa	7,132	2,525	35.4%	44
Kansas	5,813	2,288	39.4%	38
Kentucky	8,405	3,776	44.9%	25
Louisiana	13,707	6,479	47.3%	19
Maine	2,133	1,065	49.9%	13
Maryland	21,389	7,998	37.4%	43
Massachusetts	39,662	17,311	43.6%	29
Michigan	35,537	15,651	44.0%	28
Minnesota	19,205	8,662	45.1%	24
Mississippi	3,773	1,887	50.0%	12
Missouri	19,772	7,401	37.4%	42
Montana	161	98	60.9%	3
Nebraska	4,627	1,948	42.1%	33
Nevada	1,435	784	54.6%	6
New Hampshire	2,199	614	27.9%	50
New Jersey	18,834	8,337	44.3%	27
New Mexico	3,662	1,407	38.4%	41
New York	117,482	52,353	44.6%	26
North Carolina	21,319	8,928	41.9%	34
North Dakota	910	379	41.6%	35
Ohio	41,629	18,157	43.6%	30
Oklahoma	6,159	3,160	51.3%	11
Oregon	6,006	3,182	53.0%	9
Pennsylvania	56,651	22,553	39.8%	37
Puerto Rico	6,897	5,065	73.4%	N.R.
Rhode Island	5,018	1,495	29.8%	47
South Carolina	8,586	3,895	45.4%	22
South Dakota	814	375	46.1%	21
Tennessee	15,079	6,464	42.9%	31
Texas	52,924	30,945	58.5%	4
Utah	5,258	2,234	42.5%	32
Vermont	1,796	574	32.0%	46
Virginia	15,710	6,053	38.5%	40
Washington	13,145	6,441	49.0%	14
West Virginia	4,395	1,726	39.3%	39
Wisconsin	13,302	6,028	45.3%	23
Wyoming	408	114	27.9%	49

Source: 2019 AMA Physician Masterfile (Dec. 31, 2018).

Note: N.R. = not ranked.

4. Physicians Retained From Undergraduate Medical Education (UME) and Graduate Medical Education (GME) Combined, 2018



Source: 2019 AMA Physician Masterfile (Dec. 31, 2018).

Figure 4.4. Physicians retained from undergraduate medical education (UME) and graduate medical education (GME) combined, 2018.

Table 4.4. Physicians Retained From Undergraduate Medical Education (UME) and Graduate Medical Education (GME) Combined, 2018

	Active Physicians Who Graduated From an MD- or DO-Granting School in State and Completed GME in State	Active Physicians Who Graduated From an MD- or DO-Granting School in State, Completed GME in State, and Are Active in State		
		Number	Percentage	Rank
United States	243,719	163,990	67.3%	N.R.
Alabama	3,126	2,349	75.1%	12
Alaska	---	---	---	---
Arizona	1,473	1,108	75.2%	11
Arkansas	2,355	1,893	80.4%	4
California	26,179	21,278	81.3%	2
Colorado	1,786	1,313	73.5%	16
Connecticut	1,480	782	52.8%	41
Delaware	---	---	---	---
District of Columbia	3,341	662	19.8%	N.R.
Florida	5,881	4,620	78.6%	5
Georgia	4,372	3,170	72.5%	17
Hawaii	607	524	86.3%	1
Idaho	---	---	---	---
Illinois	15,296	9,408	61.5%	33
Indiana	4,663	3,616	77.5%	6
Iowa	2,389	1,461	61.2%	34
Kansas	2,226	1,314	59.0%	37
Kentucky	3,046	2,264	74.3%	15
Louisiana	6,062	4,220	69.6%	22
Maine	245	172	70.2%	20
Maryland	3,552	1,872	52.7%	42
Massachusetts	8,239	4,853	58.9%	38
Michigan	10,384	6,944	66.9%	26
Minnesota	5,080	3,788	74.6%	14
Mississippi	1,686	1,298	77.0%	7
Missouri	6,025	3,349	55.6%	40
Montana	---	---	---	---
Nebraska	2,210	1,321	59.8%	35
Nevada	272	208	76.5%	9
New Hampshire	184	71	38.6%	45
New Jersey	3,079	1,914	62.2%	32
New Mexico	733	486	66.3%	28
New York	34,592	20,494	59.2%	36
North Carolina	4,881	3,287	67.3%	25
North Dakota	328	208	63.4%	30
Ohio	13,339	9,023	67.6%	24
Oklahoma	2,698	2,025	75.1%	13
Oregon	1,060	746	70.4%	19
Pennsylvania	18,841	10,659	56.6%	39
Puerto Rico	3,993	3,027	75.8%	N.R.
Rhode Island	375	188	50.1%	44
South Carolina	2,521	1,922	76.2%	10
South Dakota	263	202	76.8%	8
Tennessee	4,524	3,016	66.7%	27
Texas	21,478	17,395	81.0%	3
Utah	915	634	69.3%	23
Vermont	346	182	52.6%	43
Virginia	3,887	2,475	63.7%	29
Washington	2,089	1,463	70.0%	21
West Virginia	1,899	1,199	63.1%	31
Wisconsin	3,712	2,614	70.4%	18
Wyoming	---	---	---	---

Source: 2019 AMA Physician Masterfile (Dec. 31, 2018).

Note: N.R. = not ranked. --- Indicates the data are not applicable. Some states do not have an MD-granting or a DO-granting school. Idaho has one DO-granting school. It received pre-accreditation status in 2017, so no graduate of this school has presented in the 2019 AMA Physician Masterfile.

Summary

Key Findings

Between 2008 and 2018, there was an increase in the median number of active physicians and active patient care physicians per 100,000 population but very little increase in the median number of active primary care physicians and a small decrease in the median number of active general surgeons. From 2008 to 2018, the state medians for the percentage of physicians who are IMGs increased modestly, while the percentage of residents and fellows who are IMGs decreased modestly. The number of residents and fellows enrolled in GME did not increase as quickly as the number of students enrolled in UME during those 10 years. As a result, the median ratio of GME enrollees to UME enrollees decreased from 2008 to 2018, with a state median enrollment of fewer GME residents and fellows than UME students in 2018. State retention rates remain highest for physicians who completed both UME and GME in state, but there has been very little change in the percentage of physicians retained from UME alone and even less change for those retained from GME alone.

Summary Table. State Medians for Key Physician Workforce Measures, 2008, 2010, 2012, 2014, 2016, and 2018

	Median ¹ 2008	Median ² 2010	Median ³ 2012	Median ⁴ 2014	Median ⁵ 2016	Median 2018
Physician Supply						
Active Physicians per 100,000 Population	239.6	244.2	244.5	251.0	257.6	263.3
Total Active Patient Care Physicians per 100,000 Population	213.5	215.1	217.6	225.6	227.2	234.0
Active Primary Care Physicians per 100,000 Population	89.9	91.0	90.3	90.4	90.8	91.3
Active Patient Care Primary Care Physicians per 100,000 Population	80.1	80.4	81.5	83.1	82.5	82.9
Active General Surgeons per 100,000 Population	8.0	8.1	7.8	7.8	7.7	7.7
Active Patient Care General Surgeons per 100,000 Population	7.1	7.0	7.0	7.1	6.9	6.8
Percentage of Active Physicians Who Are Female	28.0%	29.3%	30.8%	32.4%	33.8%	35.0%
Percentage of Active Physicians Who Are International Medical Graduates (IMGs)	17.6%	17.8%	18.2%	18.7%	19.1%	19.4%
Percentage of Active Physicians Who Are Age 60 or Older	23.4%	25.2%	26.5%	28.5%	30.3%	31.4%
Undergraduate Medical Education (UME)						
Students Enrolled in an MD- or DO-Granting School per 100,000 Population	25.4	27.9	29.1	30.4	32.7	34.6
Students Enrolled in a Public MD- or DO-Granting School per 100,000 Population	15.5	19.7	18.8	21.4	21.2	21.3
Percentage of MD Students Matriculating in State	64.4%	67.1%	67.7%	69.2%	65.6%	68.2%
Graduate Medical Education (GME)						
Total Residents and Fellows in ACGME-Accredited Programs per 100,000 Population	26.8	26.2	26.8	27.4	28.1	29.9
Total Residents and Fellows in Primary Care ACGME-Accredited Programs per 100,000 Population	10.5	10.2	10.4	10.5	10.6	12.0
Percentage of Residents and Fellows in ACGME-Accredited Programs Who Are IMGs	22.9%	23.1%	22.4%	22.2%	20.5%	19.4%
Ratio of GME to UME Students	1.11	1.09	1.05	1.05	0.98	0.97
Retention						
Percentage of Physicians Retained in State From UME	37.2%	39.2%	38.7%	38.6%	38.5%	40.0%
Percentage of Physicians Retained in State From Public UME	42.4%	45.5%	44.9%	43.9%	44.1%	43.8%
Percentage of Physicians Retained in State From GME	45.4%	45.7%	44.9%	44.5%	44.9%	44.7%
Percentage of Physicians Retained in State From UME and GME Combined	66.5%	67.4%	68.1%	68.4%	69.0%	69.3%

1. 2009 State Physician Workforce Data Book, AAMC, <https://www.aamc.org/download/47340/data/statedata2009.pdf>.
 2. 2011 State Physician Workforce Data Book, AAMC, <https://www.aamc.org/download/263512/data/statedata2011.pdf>.
 3. 2013 State Physician Workforce Data Book, AAMC, <https://www.aamc.org/system/files/2019-09/2013statephysicianworkforcedatabook.pdf>.
 4. 2015 State Physician Workforce Data Book, AAMC, https://store.aamc.org/downloadable/download/sample/sample_id/210/.
 5. 2017 State Physician Workforce Data Book, AAMC, https://store.aamc.org/downloadable/download/sample/sample_id/30/.



**Association of
American Medical Colleges**

655 K Street, NW, Suite 100, Washington, DC 20001-2399

T 202 828 0400

aamc.org