

Idaho's Physician Workforce in 2016

KEY FINDINGS

- In 2016, there were 176 physicians per 100,000 population providing direct patient care in Idaho, including 65 primary care physicians per 100,000 population.
- The mean age of Idaho's practicing physicians was 51 years.
- Women comprised 25% of the state's physician workforce but 33% of the primary care, including about 43% of general pediatricians.
- Most rural areas of Idaho had fewer physicians per capita and many rural counties had higher percentages of physicians age 55 or older than urban areas.
- About 30% of Idaho's family medicine physician workforce completed a residency in Idaho and 42% completed a residency in one of the WWAMI states: Washington, Wyoming, Alaska, Montana and Idaho.
- About 11% of Idaho's physicians graduated from the University of Washington School of Medicine, a higher percentage than for any other school.
- Since 2014, Idaho's physician workforce grew in size, the percent of female physicians increased, and average ages, overall and for most specializations, decreased slightly.

INTRODUCTION

The population of Idaho grew by about 6% between 2010 and 2015.¹ At the same time, the state's population is aging. In 2010, the population 65 years and older represented about 12% of Idaho's population, while in 2015 that figure grew to about 15%. These demographic factors will have significant effects on the state's health care delivery and payment systems. Important questions for healthcare policy and planning include whether there will be enough physicians in the right places and with the needed specialties to meet growing and changing demand. This Brief offers data on the size, distribution and education history of Idaho's physician workforce. It updates a similar report from 2014² and addresses the following questions:

- *How many physicians practice in Idaho? (overall and by specialty group)*
- *How are physicians distributed by county, and by urban versus rural areas?*
- *How many physicians practice in the state relative to the size of the population?*
- *Where did Idaho's physicians graduate from medical school and complete residencies?*

To estimate the physician workforce providing direct patient care in Idaho, analyses used data from the American Medical Association (AMA) Physician Masterfile (see Methods, Appendix A).

Idaho's per capita supply of physicians providing direct patient care is smaller than the national per capita supply.

NUMBER, DEMOGRAPHIC CHARACTERISTICS, AND DISTRIBUTION OF PHYSICIANS IN IDAHO

OVERALL SUPPLY AND DEMOGRAPHICS

Idaho's per capita supply of physicians providing direct patient care is smaller than the national per capita supply (Figure 1). In 2016, there were 2,910 total physicians (176 per 100,000 population) providing direct patient care in the state, and 1,074 (65 per 100,000) primary care physicians. Nationally, in 2016 there were 229 physicians per 100,000 providing direct patient care, and 75 primary care physicians per 100,000.

Table 1 shows the number of physicians providing direct patient care in Idaho in 2016, total and by specialty group, as well as the number per capita, percent female, mean age, and percent change between 2014 and 2016. Detailed findings from 2014 analyses are available in the report "Idaho State's Physician Workforce in 2014".² The mean age overall and by specialty for

Figure 1. Idaho compared with national estimates of physicians per 100,000 population in 2016

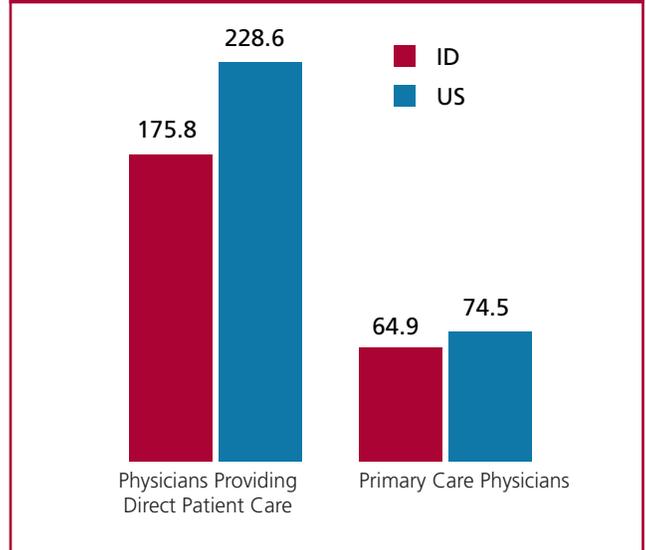


Table 1. Number, gender and age of Idaho physicians in 2016

Physicians providing direct patient care*	2016					% Changes between 2014-2016				
	#	#/100,000 population	% female	Mean age (Years)	% age 55 or older	#	#/100,000 population	% female	Mean age (Years)	% age 55 or older
Total	2,910	175.8	24.9%	50.9	38.1%	9.1%	6.3%	6.5%	-0.4%	-1.8%
Primary care	1,074	64.9	33.4%	49.5	33.1%	9.9%	7.1%	2.2%	-0.6%	-4.2%
Family medicine	706	42.7	29.2%	49.8	34.3%	10.7%	7.7%	3.8%	-0.4%	-3.2%
General internal medicine	223	13.5	40.8%	49.6	31.8%	12.1%	9.6%	-1.0%	-1.2%	-4.1%
General pediatrics	145	8.8	42.8%	48.1	29.0%	3.6%	0.7%	3.3%	-0.7%	-9.8%
Surgeons	348	21.0	26.4%	52.6	44.0%	1.2%	-1.3%	5.7%	0.2%	4.2%
General surgery	85	5.1	15.3%	52.0	41.2%	-3.4%	-6.6%	49.9%	-0.7%	0.7%
Obstetrics-gynecology	158	9.5	41.8%	51.2	40.5%	-0.6%	-3.6%	0.7%	-0.3%	7.4%
Other surgery	105	6.3	12.4%	55.0	51.4%	8.2%	5.7%	9.6%	1.4%	1.8%
Psychiatrists	91	5.5	33.0%	52.8	45.1%	7.1%	3.7%	16.9%	-0.4%	-1.8%
Other Specialists	1,397	84.4	17.5%	51.4	40.1%	10.7%	7.9%	12.7%	-0.4%	-1.5%

*Not federally employed, age <75 years, in Idaho

Source: http://healthandwelfare.idaho.gov/Portals/0/Health/Statistics/2015-Reports/2015_Population.pdf

most Idaho physicians was between 48 and 55 years and 38% of physicians overall were age 55 or older. About a quarter of Idaho’s overall physician workforce was female, and women comprised a third of the primary care specialties (including 43% of general pediatricians and 42% of obstetrician-gynecologists). In general, between 2014 and 2016, the size of the Idaho’s physician workforce grew. The percent of female physicians increased overall, but slightly decreased in general internal medicine. The average ages for physicians overall and most specialties decreased slightly.

DISTRIBUTION

In 2016, fewer physicians provided direct patient care per 100,000 population in rural compared with urban areas of Idaho, although there was more rural-urban parity among practicing primary care physicians (Figure 2).

Between 2014 and 2016 the size of the Idaho physician workforce grew. The percent of female physicians increased...[and] the average ages for physicians... decreased slightly.

Figure 2. Idaho physicians* in urban and rural areas per 100,000 population in 2016

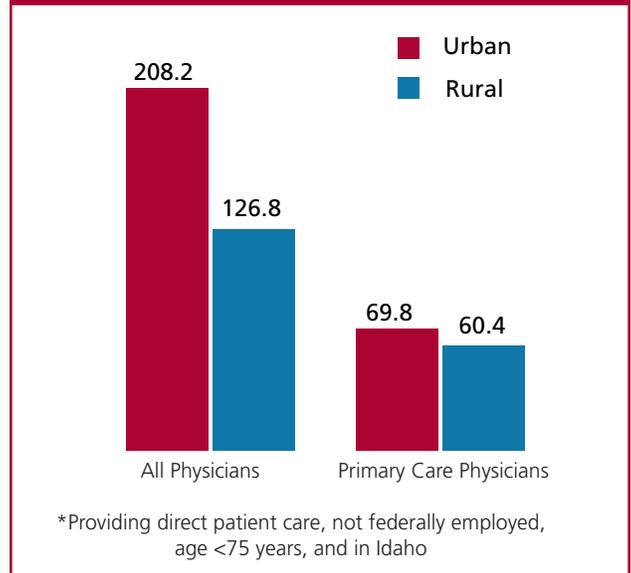


Figure 3. Location of urban and rural areas in Idaho

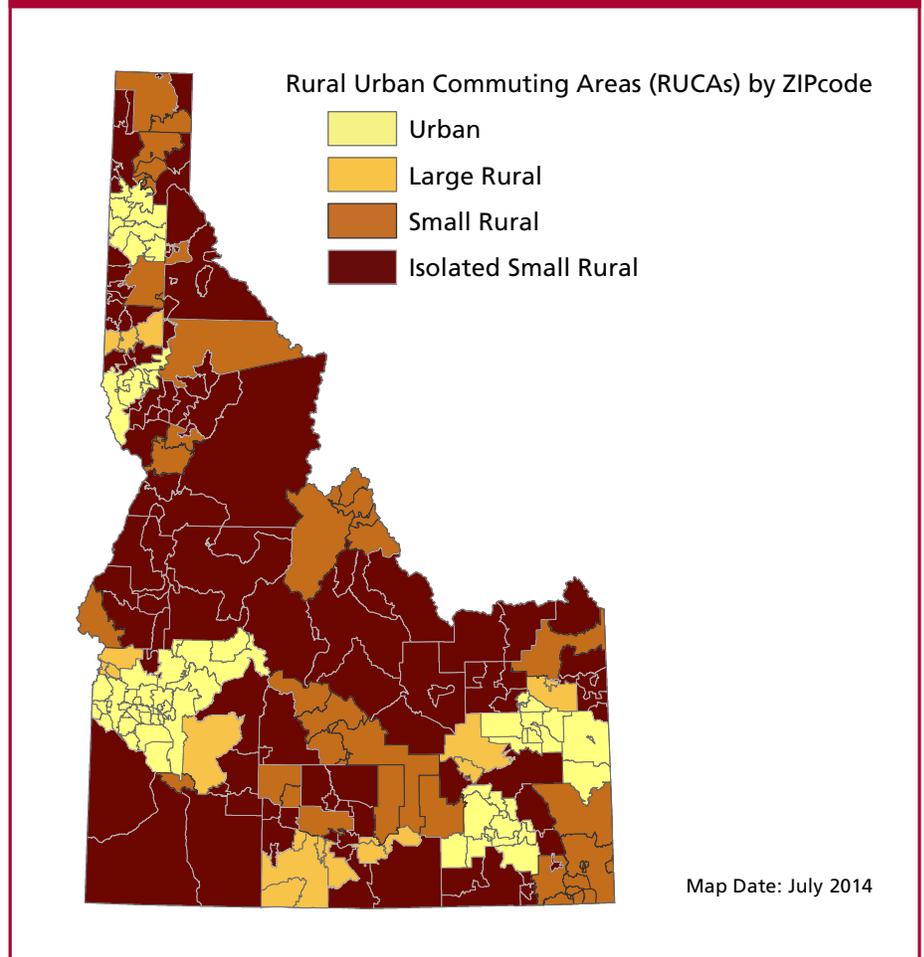


Table 2 details the rural-urban distribution of the state’s physicians, overall and by specialty, and in addition shows their distribution among three sub-rural area types: large rural, small rural and isolated small rural. Figure 3 shows where rural and urban areas are located in Idaho. As expected, specialists congregated in urban areas where more specialty care services and larger hospitals are provided, and were almost entirely absent from isolated small rural areas.

On a per capita basis there were higher densities of primary care physicians, especially family physicians, in large rural and small rural areas of Idaho than were found in urban areas. Isolated small rural areas, however, had significantly smaller supplies of physicians than were found in other areas of the state.

On a per capita basis, there were higher densities of primary care physicians...in large rural and small rural areas of Idaho than were found in urban areas.

Table 2. Idaho physicians in urban, rural and sub-rural areas in 2016**

Physicians providing direct patient care*	Urban		Overall rural		Large rural		Small rural		Isolated small rural	
	#	#/100,000 population	#	#/100,000 population	#	#/100,000 population	#	#/100,000 population	#	#/100,000 population
Total	2,211	208.2	699	126.8	386	167.3	252	148.5	61	40.5
Primary care	741	69.8	333	60.4	171	74.1	124	73.1	38	25.2
Family medicine	457	43.0	249	45.2	114	49.4	101	59.5	34	22.6
General internal medicine	173	16.3	50	9.1	33	14.3	14	8.3	3	2.0
General pediatrics	111	10.5	34	6.2	24	10.4	9	5.3	1	0.7
Surgeons	271	25.5	77	14.0	43	18.6	27	15.9	7	4.6
General surgery	56	5.3	29	5.3	15	6.5	11	6.5	3	2.0
Obstetrics-gynecology	120	11.3	38	6.9	21	9.1	13	7.7	4	2.7
Other surgery	95	8.9	10	1.8	7	3.0	3	1.8	0	0.0
Psychiatrists	75	7.1	16	2.9	8	3.5	8	4.7	0	0.0
Other Specialists	1,124	105.8	273	49.5	164	71.1	93	54.8	16	10.6

*Not federally employed, age <75 years, in Idaho

**Rural-urban determined using ZIP code RUCA taxonomy. Overall rural is a combination of the three rural subcategories.

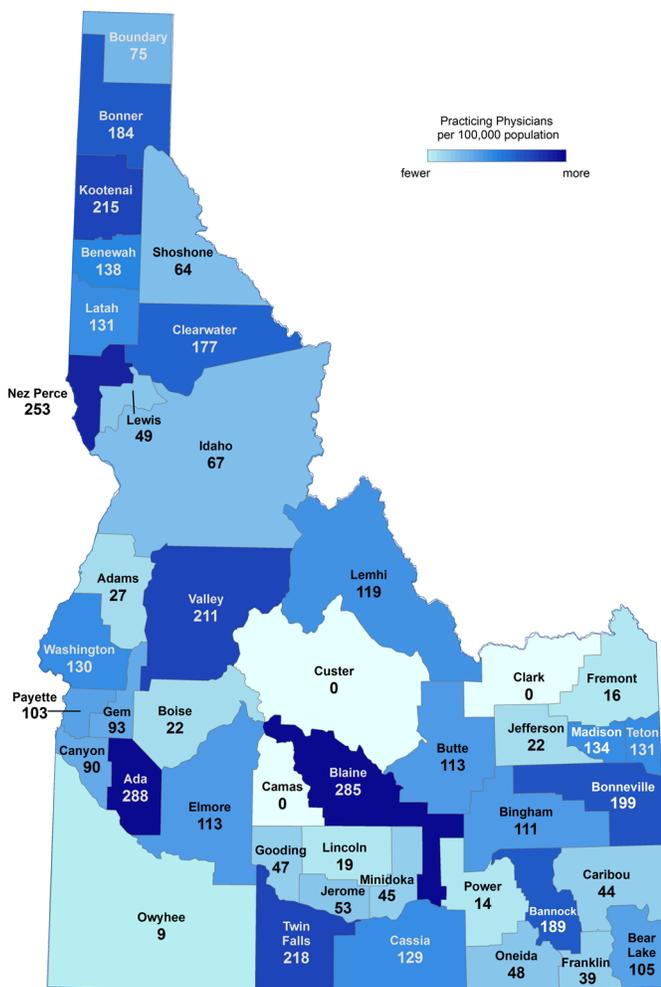
Three Idaho counties... had no practicing physicians and 5 had no primary care physicians.

In Figure 4, the numbers of all physicians and primary care physicians per 100,000 population in Idaho counties are shown. Greater concentrations of physicians were found in the more urban counties. Three Idaho counties (Camas, Clark and Custer) had no practicing physicians, and 5 had no primary care physicians (Adams, Camas, Clark, Custer and Fremont).

Three counties had higher numbers of physicians overall per capita than the national average (Ada, Blaine and Nez Perce), and 6 counties (Ada, Blaine, Bear Lake, Clearwater, Latah and Valley) had higher per capita numbers of primary care physicians.

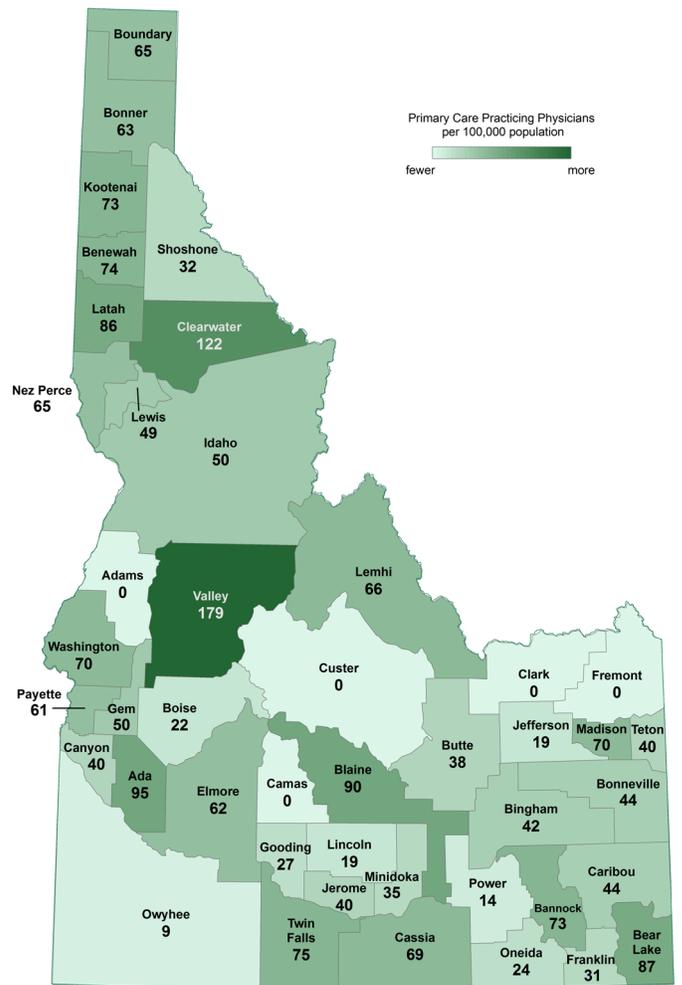
Figure 4: Idaho physicians per 100,000 population in 2016, by county

All physicians providing direct patient care



Data Source: AMA Physician Masterfile
Map Date: February 2017

Primary care physicians providing direct patient care



Data Source: AMA Physician Masterfile
Map Date: February 2017

...many of Idaho's most rural counties had the highest percentages of physicians age 55 and older.

As shown in Figure 5 many of Idaho's most rural counties had the highest percentages of physicians age 55 and older. More than 50% of all physicians providing direct patient care in 15 Idaho counties were age 55 or older in 2016. In 5 counties (Adams, Lewis, Lincoln, Power and Owyhee), 100 percent of physicians were age 55 or older. The percentages of primary care physicians age 55 or older were generally lower than for overall physicians, but still were high among the more rural counties and in 5 counties (Butte, Lewis, Lincoln, Owyhee and Power) all of the primary care physicians were age 55 or older.

Figure 5: Idaho physicians age 55 or older in 2014, by county

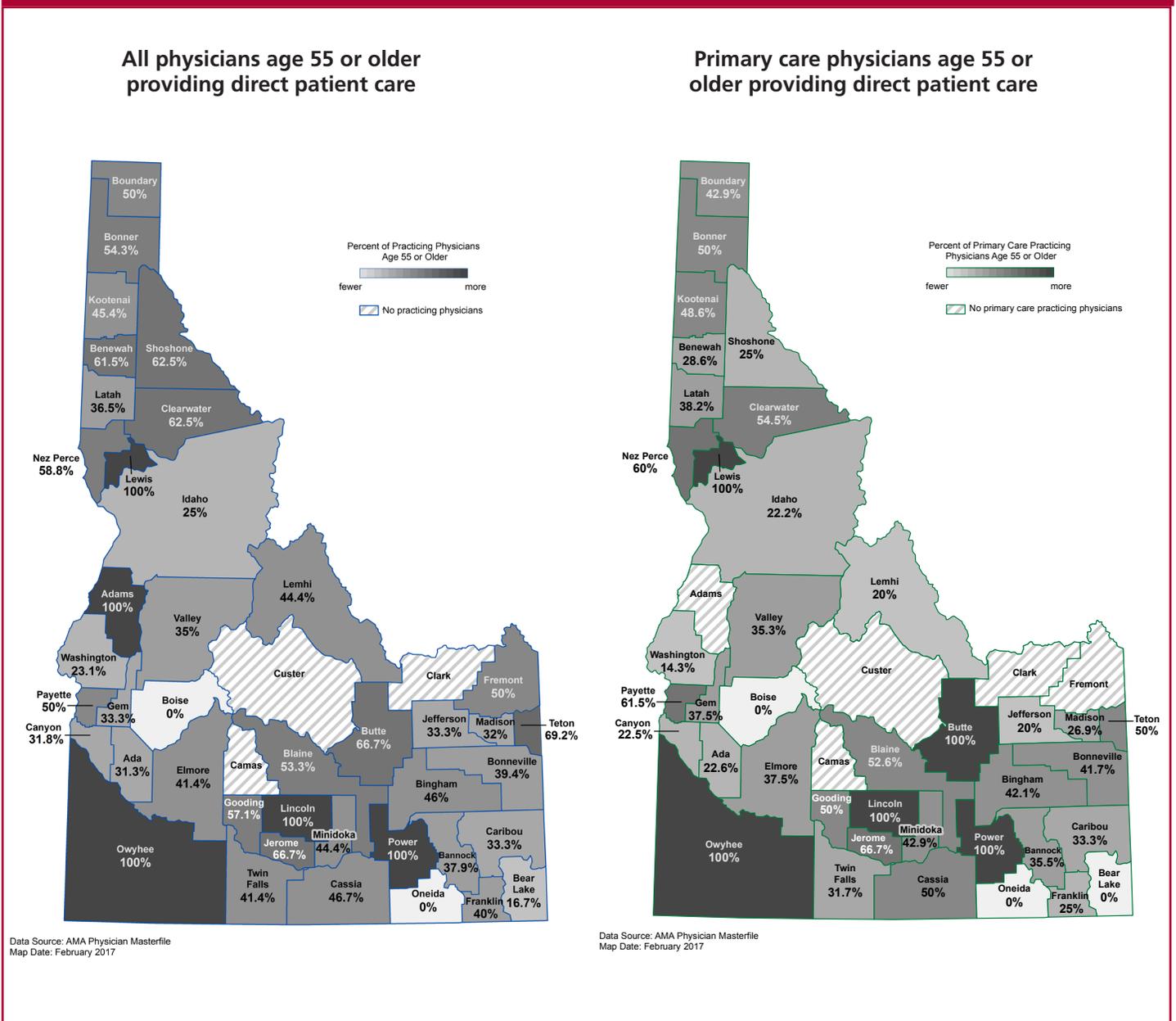


Table 3: Top 5 medical schools from which Idaho physicians graduated*

	State	#	% of ID physicians who graduated from school
University of Washington School of Medicine	WA	311	10.7%
University of Utah School of Medicine	UT	218	7.5%
Loma Linda University School of Medicine	CA	90	3.1%
Des Moines University College of Osteo Med & Surg	IA	78	2.7%
Oregon Health and Science University School of Medicine	OR	77	2.7%

*Among Idaho physicians in 2016 providing direct patient care, not federally employed, age <75 years

Among [Idaho's] physicians specializing in family medicine...42%... completed a residency in a WWAMI State.

EDUCATION AND TRAINING

The University of Washington School of Medicine led the list of medical schools from which Idaho's physicians graduated (Table 3). About 11% of Idaho's physicians completed a residency in California and smaller percentages completed residencies in Washington, Idaho, Utah and Texas (Table 4).

Table 4. Top 5 states where Idaho physicians completed a residency*

State	#	% of ID physicians who completed a residency in the state
CA	300	10.8%
WA	234	8.4%
ID	209	7.5%
UT	192	6.9%
TX	165	5.9%

*Among Idaho physicians in 2016 providing direct patient care, not federally employed, age <75 years

As shown in Table 5, about 11% of Idaho's overall practicing physician supply in 2016 graduated from one of the two medical schools in Washington and 17% completed a residency in a WWAMI state, including Idaho. Among primary care physicians, 14% graduated from a Washington medical school, 19% completed a residency in Idaho and 33% completed a residency in any WWAMI state. Among physicians specializing in family medicine these percentages were higher: 42% of Idaho's family medicine physicians completed a residency in a WWAMI state, including Idaho.

Table 5. Idaho physicians in 2016 who graduated from a medical school in Washington and/or completed a residency in Idaho or in any WWAMI* state

Physicians providing direct patient care**	Graduated from a medical school in Washington***		Completed a residency in ID****		Completed a residency in a WWAMI state	
	#	%	#	%	#	%
Total	317	10.9%	209	7.5%	473	17.0%
Primary care	147	13.7%	196	19.1%	342	33.4%
Family medicine	83	11.8%	196	29.5%	279	42.0%
General internal medicine	44	19.7%	0	0.0%	57	26.3%
General pediatrics	20	13.8%	0	0.0%	6	4.2%
Surgeons	30	8.6%	3	0.9%	29	8.5%
General surgery	7	8.2%	0	0.0%	11	13.6%
Obstetrics-gynecology	17	10.8%	3	1.9%	9	5.8%
Other surgery	6	5.7%	0	0.0%	9	8.7%
Psychiatrists	9	9.9%	0	0.0%	9	9.9%
Other Specialists	131	9.4%	10	0.8%	93	7.0%

* WWAMI = Washington, Wyoming, Alaska, Montana, and Idaho

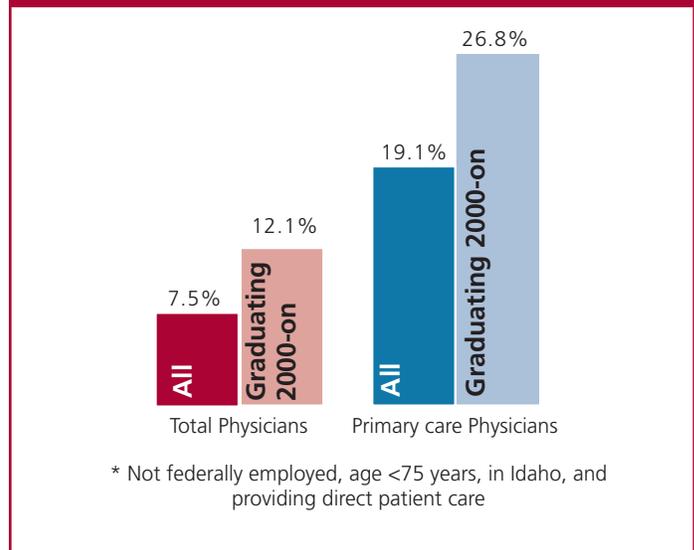
** Not federally employed, age <75 years, in Idaho

***Includes 6 graduates from Pacific Northwest University of Health Sciences and 311 from the University of Washington School of Medicine

**** Percentages are calculated based on physicians for whom residency state data were available. There were 130 records (4.5%) that were missing residency state and 0 were missing medical school information

Among physicians who graduated from medical school since 2000, the percentage of Idaho’s physicians who completed a residency in Idaho was higher than for the overall physician workforce (Figure 6). It is not clear if this is due to the availability of more residencies in the state, if it indicates a trend toward higher rates of post-residency retention by the more recent physician cohorts compared with older cohorts, or if there is a pattern for some physicians to remain in the state for a few years after completing residencies before migrating to other locations.

Figure 6. Idaho physicians* in 2016 who completed a residency in Idaho



* Not federally employed, age <75 years, in Idaho, and providing direct patient care

SUMMARY AND POLICY IMPLICATIONS

Idaho's physician supply, on a per capita basis, is generally smaller than national averages. Differences in distribution are apparent between urban and rural areas of the state. While more physicians practice in urban areas, the numbers of primary care physicians per capita in large and small rural areas are surprisingly similar. Many fewer physicians, however, work in isolated small rural areas of Idaho. The physician supply numbers in this report should be viewed with the understanding that the source data from the AMA Physician Masterfile has limitations. Locum tenens physicians, newly recruited physicians, and physicians with addresses in other locations may not be reflected in the supply of some counties, for example.

About 11% of Idaho's total physician supply graduated from the University of Washington (the highest percentage of any medical school), where Idaho participates in the WWAMI medical education program. Medical students from Idaho have been supported by the state to attend the WWAMI program since 1972, and by 2016, 586 Idaho students had completed medical school through the WWAMI program.

As shown in these findings as well as in the 2014 analyses, residency can be highly associated with the location where a physician eventually chooses to practice and of the population he or she prefers to serve, and is therefore a useful recruitment tool.³ In 2014 Idaho ranked ninth among states for retaining physicians who complete a residency in-state, with a 54% retention rate in 2014.⁴ This high rate of retention contributed to the 30% of all 2016 physicians in family medicine specialties who completed a residency in Idaho. The state has few physician residencies, however, so even with a high residency retention rate only about 8% of all practicing Idaho physicians (across all specialties) completed an in-state residency. While not easy to accomplish, the extent to which more residencies can be formed in locations and for specialties that serve the populations where shortages are greatest could help reduce disparities in the distribution of Idaho's physicians. This study also showed that higher percentages of physicians who were more recent medical school graduates (since 2000) completed a residency in-state (12% of the total). Efforts specifically designed to retain these young physicians could be a useful health workforce development strategy for Idaho.

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APPENDIX A: METHODS

The Idaho state physician supply data for this study came from the American Medical Association (AMA) Physician Masterfile, accessed in November, 2016. Changes in physician supply and characteristics for 2014-2016 were assessed using a prior study that used data from 2014 AMA Physician Masterfile.² There were 3,062 total allopathic and osteopathic physicians with Idaho license records in the dataset. Those selected for these analyses were the 2,910 with 1) an in-state practice address (or mail address, when practice was not available), 2) who were age 74 or younger, 3) provided direct patient care, and 4) were not a federal employee. Physicians were assigned specialties using the AMA dataset's "primary" and "secondary" specialty fields. The primary specialty was reassigned to the secondary specialty for about 6% of physicians when there was indication from the listed secondary specialty that the physician was likely to practice more specialized medicine than the primary specialty indicated. Physician specialties were grouped into "Primary care" (family medicine, general internal medicine and general pediatrics specialties), "Surgeons" (general surgery, obstetrics-gynecology, and other surgery), and "Other Specialists". Data for psychiatrists were analyzed and reported separately. State population data came from the Division of Public Health, Idaho Department of Health and Welfare.⁵ Rural-urban status was determined using Rural Urban Commuting Area (RUCA) taxonomy.⁶ and the population data for the various rural-urban categories came from a custom-prepared file of selected 2014 population data with ZIP codes cross-referenced to counties.⁷

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