

Oregon Healthcare  
Workforce Institute



# Retention of Physicians in Rural and Frontier Oregon: 2008 - 2012

Oregon Healthcare Workforce Institute  
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## Acknowledgement

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## Retention of Physicians in Rural and Frontier Oregon: 2008 - 2012

Oregon's ability to retain physicians in the state's rural and frontier counties is critically important to meet the goals of the Triple Aim, address access needs created by health insurance coverage expansion, and fulfill the health needs of a growing and aging population.

The retention of physicians in rural areas is affected by a myriad of personal, professional and social factors, including job satisfaction, reimbursement, practice support, community integration, and spousal/partner and family perspectives.<sup>1,2</sup> Additionally, the loss of a rural physician impacts patient access, the work environment, organizational revenue, the community, and the local economy.<sup>3,4</sup>

To inform public policy, program incentives, community engagement, and rural practice retention plans, this report uses the Oregon Medical Board's licensing data on Oregon's rural physician workforce over a four-year span to identify and analyze physician workforce capacity retention and growth trends.

### Data Sources and Methods

Active licensed Oregon physician data for this report comes from the:

- 2008 Oregon Medical Board's (OMB) licensing database obtained in May 2008. When available, comparison data with licensing data from other years is presented. Physician demographics and practice data for retention analysis are limited or not available in this database. Of the 9,450 active licensed physicians, 1,887 were identified as having a rural practice address.

Caution is warranted in the interpretation of the 2008 licensing data and in comparison with the 2010 and 2012 licensing data as limitations exist. The 2008 database does not include workforce-related data (e.g. employment status) and, as a result, may count physicians who were no longer practicing but maintained their active license status with the OMB.

- 2010 physician licensing database as submitted to the Oregon Health Care Workforce Licensing Database by the OMB in January 2010, which includes workforce-related data and practice characteristics.<sup>5</sup>
- 2012 physician licensing database as submitted to the Oregon Health Care Workforce Licensing Database by the OMB in February 2012, which includes workforce-related data and practice characteristics.<sup>6</sup>

Physicians identified as primary care providers include those who listed practice specialties in family medicine/family practice, general practice, geriatrics, pediatrics, adolescent medicine, and (general) internal medicine. Physicians who are categorized in the psychiatry field include those who identified practice specialties in psychiatry, child and/or adolescent psychiatry, forensic psychiatry, geriatric psychiatry, or psychoanalysis.

The physicians' rural practice address status was determined by using the Oregon Office of Rural Health's (ORH) rural/urban zip code designation list.<sup>7</sup> The ORH designations identify Oregon's frontier counties, those with six or fewer people per square mile, as Baker, Gilliam, Grant, Harney, Lake, Malheur, Morrow, Sherman, Wallowa and Wheeler counties. Rural counties are identified as those geographic areas ten or more miles from the centroid of a population center of 40,000 or greater.<sup>8</sup> Oregon's rural counties include Clatsop, Columbia, Coos, Crook, Curry, Douglas, Hood River, Jefferson, Josephine, Klamath, Lincoln, Tillamook, Umatilla, Union, Wasco, and Yamhill. Counties with rural areas include Benton, Clackamas, Deschutes, Jackson, Lane, Linn, Marion, Multnomah, Polk, and Washington.

The two-year (2010-2012) county rural physician workforce capacity retention rate was determined by subtracting the number of new licensees (those initially licensed by the OMB between 2010 and 2012) in the rural area from the number of physicians listing a practice address in the area in 2012, then dividing that number by the number of physicians listing a practice address in the area in 2010. The resulting percentage provides the county-level rural physician workforce capacity retention rate. This number does not reflect individual physician retention or turnover, but instead focuses on the county rural physician workforce capacity as the unit of analysis.

Similar formulas were used to determine the 2010-2012 rural physician workforce retention rates for practice specialties, gender, and medical degree.

### Oregon's Rural Physician Workforce

In 2008, the OMB licensing database included 1,826 physicians with a rural practice address (see Table 1). In 2010, that number increased to 2,046 physicians. In 2012, the number of physicians with a rural practice address decreased to 2,030. The percentage of Oregon's physician workforce with rural practice addresses has remained relatively stable at 19% to 20% since 2008.

Table 1: Oregon's Active Licensed Physician Workforce: 2008 - 2012

	Active Licensed Physician Workforce: 2008	Active Licensed Physician Workforce: 2010	Active Licensed Physician Workforce: 2012
Rural Physicians	1,826	2,046	2,030
Non-Rural Physicians	7,624	8,776	8,477
<b>Total</b>	<b>9,450</b>	<b>10,822</b>	<b>10,507</b>

### County Retention Rates of Oregon's Rural Physician Workforce

Between 2010 and 2012, the statewide rural physician workforce net retention rate was 77% (see Table 2). During this time period, eighteen of Oregon's 36 counties had rural physician retention rates higher than the statewide average. The highest county retention rates were in Gilliam (100%) and Wallowa (100%) and the rural areas of Benton (100%), Clackamas (94%), and Polk (94%) counties.

Between 2010 and 2012, Sherman County lost the only physician listing practice address in that county. In addition to Sherman County, Harney (40%), Lake (50%) and Grant (50%) had the lowest county-level rural physician workforce retention rates.

Table 2: Count and Retention of Oregon’s Rural Physician Workforce Capacity by County

Oregon County	Count of Rural Physicians 2008	Count of Rural Physicians 2010	Total New Rural Licensees 2008-2010	Count of Rural Physicians 2012	Total New Rural Licensees 2010-2012	Total Retained Licensees 2010-2012	Rural Physician Workforce Capacity Retention Rate 2010-2012
Baker	22	24	4	44	24	20	83%
Benton	0	1	0	2	1	1	100%
Clackamas	52	36	7	47	13	34	94%
Clatsop	63	76	12	82	18	64	84%
Columbia	15	18	0	17	4	13	72%
Coos	133	135	13	125	16	109	81%
Crook	17	17	2	14	3	11	65%
Curry	20	27	5	29	10	19	70%
Deschutes	53	79	2	72	11	61	77%
Douglas	196	231	26	195	29	166	72%
Gilliam	0	1	0	1	0	1	100%
Grant	5	8	2	7	3	4	50%
Harney	7	10	0	8	4	4	40%
Hood River	60	80	7	75	11	64	80%
Jackson	97	125	9	116	14	102	82%
Jefferson	17	21	2	21	3	18	86%
Josephine	136	152	18	134	21	113	74%
Klamath	126	155	31	137	34	103	66%
Lake	12	10	0	6	1	5	50%
Lane	67	87	12	74	9	65	75%
Lincoln	65	77	4	77	13	64	83%
Linn	40	51	8	53	7	46	90%
Malheur	57	64	10	61	22	39	61%
Marion	105	106	4	98	9	89	84%
Morrow	6	6	0	5	0	5	83%
Multnomah	0	0	0	1	0	1	-
Polk	26	31	6	31	2	29	94%
Sherman	0	1	0	0	0	0	0%
Tillamook	28	40	2	42	8	34	85%
Umatilla	98	117	18	112	22	90	77%
Union	45	66	14	64	15	49	74%
Wallowa	9	11	1	12	1	11	100%
Wasco	66	77	10	81	15	66	86%
Washington	23	27	0	18	2	16	59%
Wheeler	0	3	0	2	0	2	67%
Yamhill	160	181	20	167	23	144	80%
<b>Total</b>	<b>1,826</b>	<b>2,151</b>	<b>249</b>	<b>2,030</b>	<b>368</b>	<b>1,662</b>	<b>77%</b>

### Changes in Oregon's Rural Physician Workforce

Between 2008 and 2012, Oregon's rural physician workforce increased by 204, or 11.2% (see Table 3). Over the four-year period, the greatest increase in the number of rural physicians occurred in Baker (22) county. Union, Jackson, Deschutes, and Clatsop counties each added 19 rural physicians to their workforce. One previously-licensed Oregon physician relocated to the rural area of Multnomah County between 2010 and 2012.

Table 3: Change in the Count and Percentage of Oregon's Rural Physician Workforce by County

Oregon County	Change 2008 to 2010	% Change 2008 to 2010	Change 2010 to 2012	% Change 2010 to 2012	Change 2008 to 2012	% Change 2008 to 2012
Baker	2	9.1%	20	83.3%	22	100.0%
Benton	1	100.0%	1	100.0%	2	200.0%
Clackamas	-16	-30.8%	11	30.0%	-5	-9.6%
Clatsop	13	20.6%	6	7.9%	19	30.2%
Columbia	3	20.0%	-1	-5.6%	2	13.3%
Coos	2	1.5%	-10	-7.4%	-8	-6.0%
Crook	0	0.0%	-3	-17.6%	-3	-17.6%
Curry	7	35.0%	2	7.4%	9	45.0%
Deschutes	26	49.1%	-7	-8.9%	19	35.8%
Douglas	35	17.9%	-36	-15.6%	-1	-0.5%
Gilliam	1	100.0%	0	0.0%	1	100.0%
Grant	3	60.0%	-1	-12.5%	2	40.0%
Harney	3	42.9%	-2	-20.0%	1	14.3%
Hood River	20	33.3%	-5	-6.3%	15	25.0%
Jackson	28	28.9%	-9	-7.2%	19	19.6%
Jefferson	4	23.5%	0	0.0%	4	23.5%
Josephine	16	11.8%	-18	-11.8%	-2	-1.5%
Klamath	29	23.0%	-18	-11.6%	11	8.7%
Lake	-2	-16.7%	-4	-40.0%	-6	-50.0%
Lane	20	29.9%	-13	-14.9%	7	10.4%
Lincoln	12	18.5%	0	0.0%	12	18.5%
Linn	11	27.5%	2	3.9%	13	32.5%
Malheur	7	12.3%	-3	-4.7%	4	7.0%
Marion	1	1.0%	-8	-7.5%	-7	-6.7%
Morrow	0	0.0%	-1	-16.7%	-1	-16.7%
Multnomah	0	0.0%	1	100.0%	1	100.0%
Polk	5	19.2%	0	0.0%	5	19.2%
Sherman	1	100.0%	-1	-100.0%	0	0.0%
Tillamook	12	42.9%	2	5.0%	14	50.0%
Umatilla	19	19.4%	-5	-4.3%	14	14.3%
Union	21	46.7%	-2	-3.0%	19	42.2%
Wallowa	2	22.2%	1	9.1%	3	33.3%
Wasco	11	16.7%	4	5.2%	15	22.7%
Washington	4	17.4%	-9	-33.3%	-5	-21.7%
Wheeler	3	300.0%	-1	-33.3%	2	200.0%
Yamhill	21	13.1%	-14	-7.7%	7	4.4%
<b>Total</b>	<b>325</b>	<b>17.8%</b>	<b>-121</b>	<b>-5.6%</b>	<b>204</b>	<b>11.2%</b>

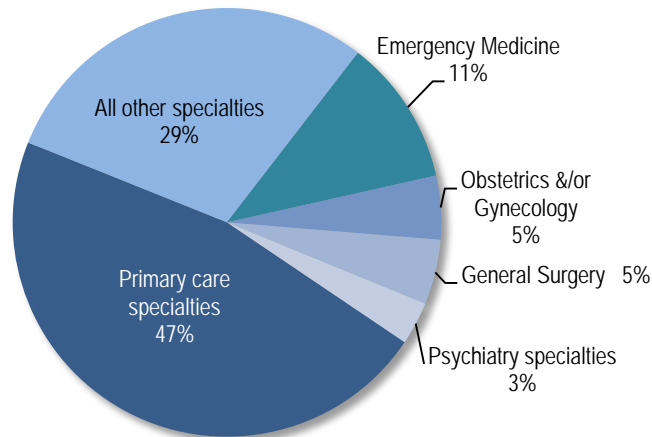
The greatest percentage increases in the rural physician workforce occurred in rural Benton and Wheeler counties (200%), with the count of rural physicians in both counties increasing from zero in 2008 to 2 in 2012.

Eight of Oregon’s counties experienced losses in their rural physician workforce between 2008 and 2012. The greatest county-level losses occurred in Coos (-8), Marion (-7) and Lake (-6) counties. The greatest percentage decreases were in Lake (-50%), Washington (-22%), Crook (-10%), and Morrow (-17%) counties.

### Retention Rates of Oregon’s Rural Physician Workforce by Practice Specialty

Primary care physicians play a significant role in the provision of health care in Oregon’s rural communities and represent the most frequently reported specialty area. In 2012, nearly half (47%) of the state’s rural physician workforce identified primary care practice specialties, including family medicine/practice (27%), general internal medicine (13%), pediatrics (4%), general practice (2%), geriatrics (0.1%), and adolescent medicine (0.05%) (see Figure 1). Emergency medicine physicians constituted 11% and general surgeons constituted 5% of Oregon’s rural physician workforce. Three percent of Oregon’s rural physicians identified practice specialties in the psychiatry field.

Figure 1: Practice Specialties of Oregon's Rural Physician Workforce (2012)



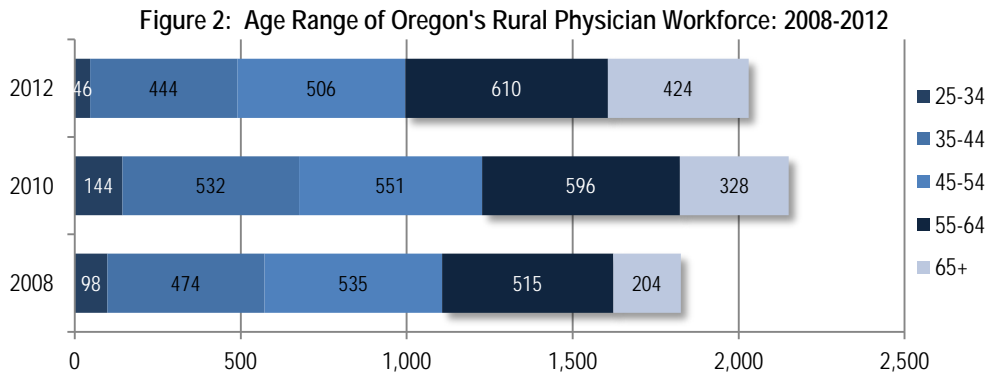
Between 2010 and 2012, rural primary care physicians had a 72% retention rate, rural general surgeons and obstetricians and/or gynecologists (OB-GYN) had a 66% retention rate (see Table 4). The retention rate for rural emergency medicine physicians was 87% and psychiatrists experienced an 81% retention rate, both of which were higher than the statewide average retention rate of 77%.

**Table 4: Count and Retention Rates of Oregon’s Rural Physician Workforce by Practice Specialty**

Specialty Area	Count of Rural Physicians 2010	Count of Rural Physicians 2012	Total New Rural Licensees 2010-2012	Total Retained Rural Licensees 2010-2012	Rural Physician Workforce Capacity Retention Rate 2010-2012	Change 2010 to 2012	% Change 2010 to 2012
Primary care specialties	1,090	958	168	790	72%	-132	-12%
Obstetrics &/or Gynecology	106	94	24	70	66%	-12	-11%
General Surgery	116	101	25	76	65%	-15	-13%
Psychiatry specialties	73	63	4	59	81%	-10	-14%
Emergency Medicine	211	223	39	184	87%	12	6%
All other specialties	555	586	108	478	86%	31	6%
Missing	-	5	-	-	-	5	-
<b>Total</b>	<b>2,151</b>	<b>2,030</b>	<b>368</b>	<b>1,657</b>	<b>77%</b>	<b>-121</b>	<b>-6%</b>

**Retention of Rural Physicians by Age**

Since 2008, the percentage of Oregon’s rural physician workforce 55 years of age and older increased from 39% in 2008, to 43% in 2010, and 51% in 2012 (see Figure 2). The larger number of older physicians at or approaching traditional retirement age will have an impact on retention and overall supply of Oregon’s rural physician workforce.



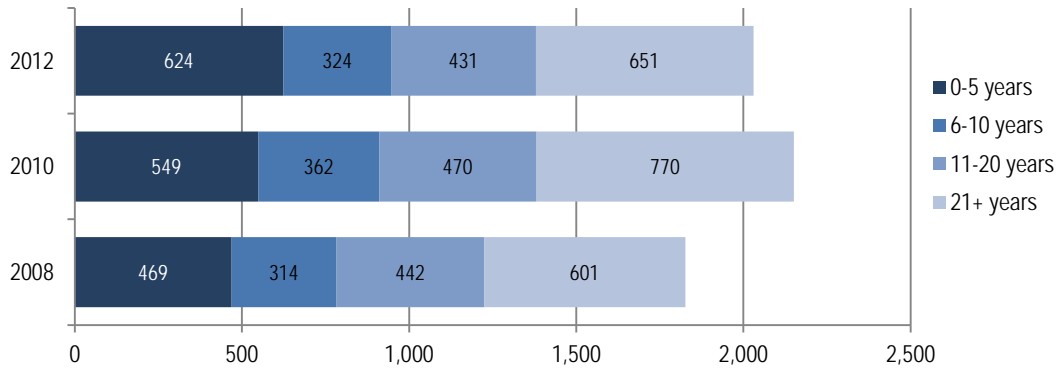
**Years Licensed in Oregon**

Another measure of retention is the number of years a physician has been licensed to practice in the state. Since 2008, roughly one-third of Oregon’s rural physicians have been licensed in the state for 21 or more years (see Figure 3).

Between 2008 and 2012, the number of rural physicians licensed for 5 years or less increased by 155, while the percentage increased from 26% to 31%.



Figure 3: Years Licensed in Oregon of Oregon's Rural Physicians Workforce: 2008 - 2012



Not all of Oregon’s newly licensed physicians are in the younger age ranges. Among Oregon’s rural physician workforce licensed in Oregon for five years or less in 2012, 44% were 45 years of age or older (see Table 5).

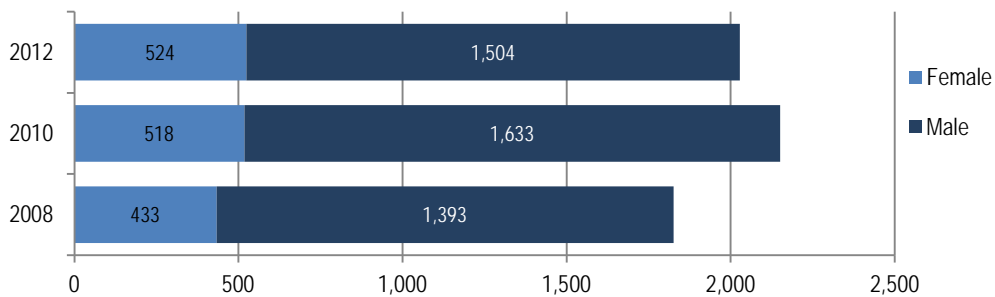
Table 5: Count of Rural Physician Workforce Licensed in Oregon for Five Years or Less by Age Range (2012)

Age Range	Count of Rural Physicians Licensed in Oregon 0-5 Years: 2012	% of Rural Physicians Licensed 0-5 Years: 2012
25-34 years	46	7%
35-44 years	303	49%
45-54 years	128	21%
55-64 years	101	16%
65+ years	46	7%
<b>Total</b>	<b>624</b>	<b>100%</b>

### Gender

The increasing number of women in medicine is reflected in Oregon’s rural physician workforce. Since 2008, the number of female rural physicians increased by 91 and the percentage of female rural physicians rose from 24% in 2008 to 26% in 2012 (see Figure 4). Gender data for two rural physicians was missing in the 2012 database.

Figure 4: Gender of Oregon's Rural Physician Workforce: 2008-2012



The statewide retention rate for rural female physicians was 75%, below the statewide average retention rate for all rural physicians, despite the overall number of female rural physicians increasing slightly (6) between 2010 and 2012, (see Table 6). The statewide retention rate for male rural physicians between 2010 and 2012 was 78%.

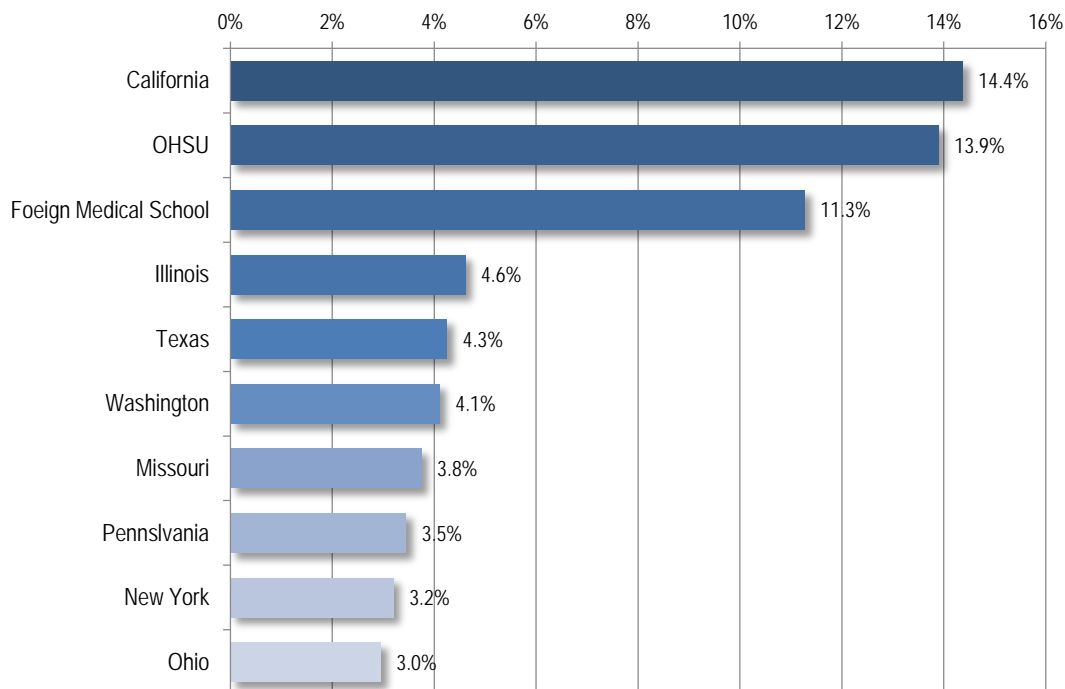
Table 6: : Count and Retention Rates of Oregon’s Rural Physician Workforce by Gender

Gender	Count of 2010 Rural Physicians	Count of 2012 Rural Physicians	Total New Rural Licensees 2010-2012	Total Retained Rural Licensees 2010-2012	Rural Physician Workforce Retention Rate 2010-2012
Female	518	524	136	388	75%
Male	1,633	1,504	230	1,274	78%
Missing	0	2	2	-	-
<b>Total</b>	<b>2,151</b>	<b>2,030</b>	<b>368</b>	<b>1,662</b>	<b>77%</b>

### Medical Schools

California, Oregon Health & Science University, and foreign medical schools were the top three most frequently reported medical school locations of Oregon’s rural physician workforce (see Figure 5). In 2012, 14.4% (or 306) of Oregon’s rural physicians were graduates of medical schools located in California, 13.9% graduated from Oregon Health & Science University (or 296), while 11.3% (or 240) graduated from medical schools located outside of the United States.

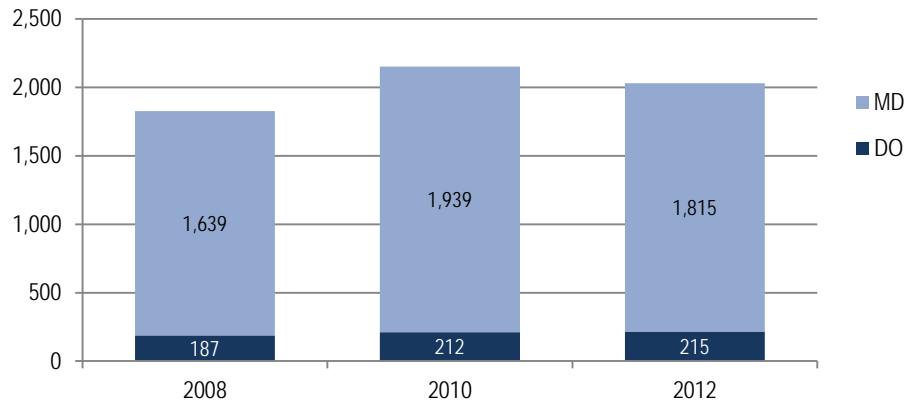
Figure 5: Ten Most Frequently Reported Medical School Locations of Oregon's Rural Physician Workforce (2012)



## Medical Degree

The number of osteopathic physicians (DO) practicing in rural Oregon increased 15% between 2008 and 2012, rising from 187 to 215, and the number of rural allopathic (MD) physicians increased by 11% (see Figure 6).

Figure 6: Medical Degree of Oregon's Rural Physician Workforce: 2008-2012



There were 215 DOs who identified a rural practice address in Oregon in 2012, of which 44 were newly licensed physicians (see Table 7). The retention rate for rural DOs between 2010 and 2012 was 81%, slightly higher than the 77% retention rate for rural MDs.

Table 7: Count and Retention Rates of Oregon's Rural Physician Workforce by Medical Degree

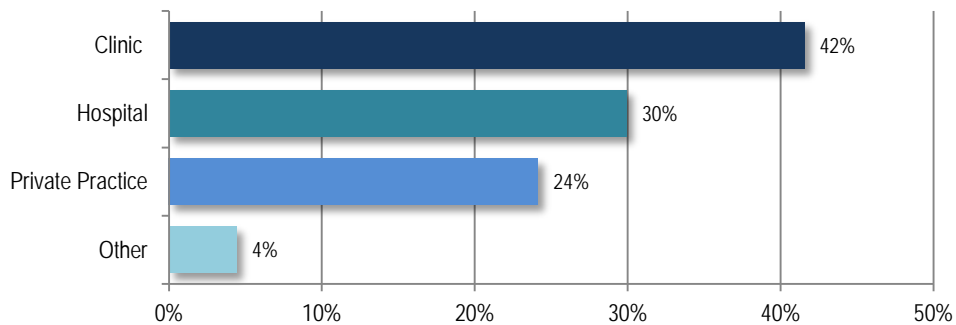
Degree	Count of Rural Physicians 2010	Count of Rural Physicians 2012	Total New Rural Licensees 2010-2012	Total Retained Licensees 2010-2012	Rural Physician Workforce Retention Rate 2010-2012
DO	212	215	44	171	81%
MD	1,939	1,815	324	1,491	77%
<b>Total</b>	<b>2,151</b>	<b>2,030</b>	<b>368</b>	<b>1,662</b>	<b>77%</b>

## Characteristics of Oregon's Rural Physician Workforce

Additional workforce-related data collected via the licensing process in 2012 for inclusion in the Oregon Health Care Workforce Licensing Database provide points of reference to inform recruitment and retention strategies and plans. These features include information on practice setting, employment status, average hours spent in direct patient care activities, race, and languages spoken.

**Practice Settings:** In 2012, most of Oregon’s rural physicians reported working in clinic settings (42%), followed by hospitals (30%), and private practices (24%) (see Figure 7).

**Figure 7: Self-Reported Practice Setting of Oregon's Rural Physician Workforce (2012)**



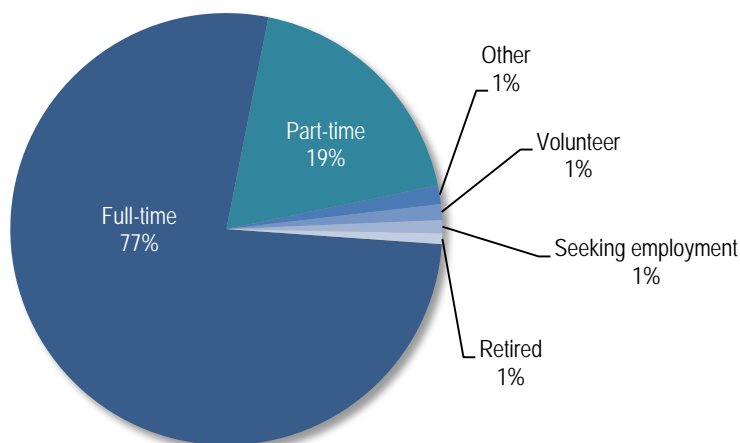
Of rural physicians 55 years of age or older, 38% work in clinics, 28% work in private practice settings, and 28% work in hospital settings (see Table 8). Among rural physicians 44 years of age or younger, 49% work in clinic settings, 34% work in hospital settings, and only 15% work in private practice settings.

**Table 8: Practice Setting by Age Range of Oregon's Rural Physician Workforce (2012)**

Age Range	Clinic	Hospital	Private Practice	Other Practice Setting	Total
25-34 years	27	14	6	1	48
35-44 years	213	151	70	9	443
45-54 years	213	162	114	16	505
55-64 years	242	184	169	15	610
65+ years	155	102	119	48	424
<b>Total</b>	<b>850</b>	<b>613</b>	<b>478</b>	<b>89</b>	<b>2,030</b>

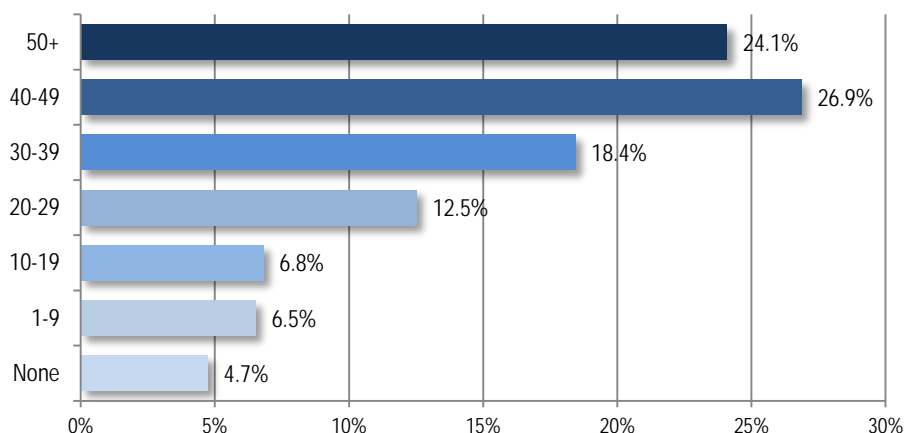
**Employment Status:** In 2012, 77% of Oregon’s rural physician workforce reported that they worked full-time, while 19% worked part-time (see Figure 8). Of those rural physicians (378) who reported that they work part-time, 48% (or 185) identified a primary care practice. Twenty-seven percent of Oregon’s female rural physician workforce (or 140) reported working part-time.

Figure 8: Employment Status of Oregon's Rural Physician Workforce (2012)



**Average Hours in Direct Patient Care:** Most of Oregon’s rural physician workforce (51%) spent on average 40 or more hours per week in direct patient care activities in 2012 (see Figure 9). Of those rural physicians working 40 or more hours per week, 44% are 55 years of age or older. Nearly 5% of rural physicians reported that they were not engaged in direct patient care activities.

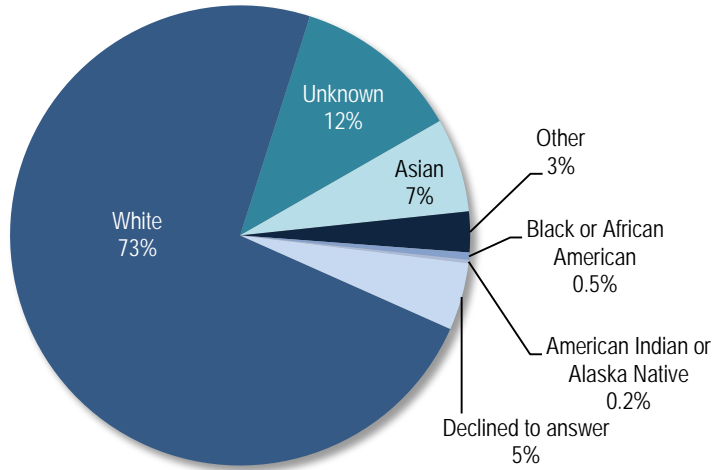
Figure 9: Average Weekly Hours Spent in Direct Patient Care Activities by Oregon's Rural Physician Workforce (2012)



**Race:** In 2012, nearly three-quarters of Oregon’s rural physician workforce reported their race as White and 7% were Asian (see Figure 10). Less than 1% reported their race as Black or African American or American Indian or Alaska Native. Data was missing for 17% of Oregon’s rural physicians. By comparison, the U.S. Census Bureau population estimates Oregon’s population at 88.8% White, 4% Asian, 2% Black or African American, 1.8% American Indian or Alaska Native, and 0.4% Native Hawaiian or other Pacific Islander.<sup>9</sup> Benchmarking the diversity of

Oregon's rural physician workforce will inform future retention analyses as efforts to increase the diversity of the health care workforce move forward.

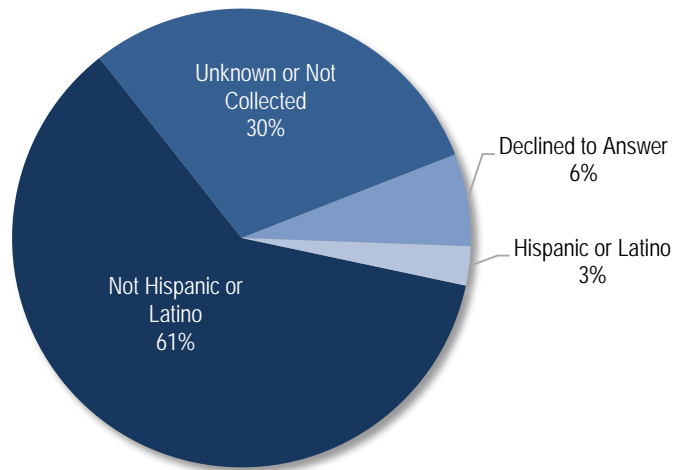
Figure 10: Self-Reported Race of Oregon's Rural Physician Workforce (2012)



### Ethnicity

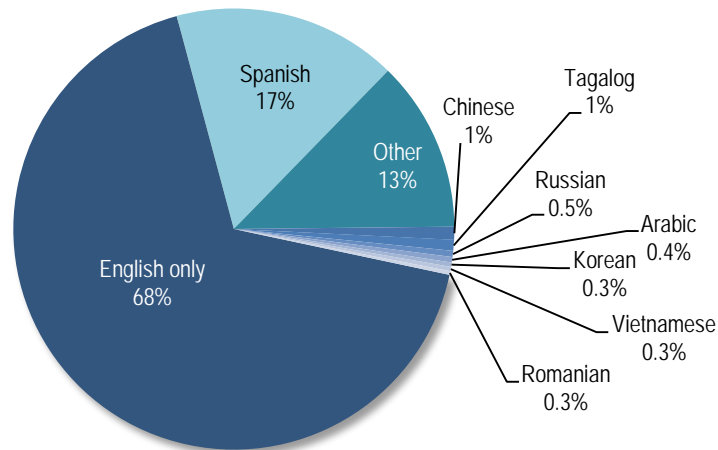
Less than two-thirds of Oregon's licensed rural physicians in 2012 reported as being either Hispanic or Non-Hispanic (see Figure 11). Of the 1,295 rural physicians with a reported ethnicity type, only 56 (3%) identified as being of Hispanic or Latino heritage.

Figure 11: Ethnicity of Oregon's Rural Physician Workforce: 2012



**Languages Spoken:** Languages spoken in addition to English provides another perspective on the diversity of the workforce. In 2012, 32% of Oregon’s rural physicians reported speaking a language in addition to English (see Figure 12).

Figure 12: Languages Spoken by Oregon’s Rural Physician Workforce (2012)



### Conclusion

While the number of Oregon’s rural physicians has grown since 2008, eight of Oregon’s 36 counties experienced a reduction in the rural physician workforce. The growing number of retirement-aged rural physicians and the lower retention rates for rural primary care physicians, general surgeons, OB-GYNs, and female physicians is of significant concern.

The ability to retain physicians in Oregon’s rural and frontier counties is imperative to address access needs created by health insurance coverage expansion and a growing and aging population. The data presented here show the continued need for investments in rural medical education, rural practice supports, and in the recruitment and retention of rural physicians.

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<sup>6</sup> Oregon Office for Health Policy and Research (2013). *Oregon Health Professions: Occupational and County Profiles (February 2013)*. Available at <http://oregonhwi.org/documents/2012ProfilesReportFINAL1.pdf>

<sup>7</sup> Oregon Office of Rural Health. *Rural/Urban Designation*. Available at <http://www.ohsu.edu/xd/outreach/oregon-rural-health/data/rural-definitions/index.cfm>

<sup>8</sup> Oregon Office of Rural Health. *Rural Definitions*. Available at <http://www.ohsu.edu/xd/outreach/oregon-rural-health/data/rural-definitions/index.cfm>

<sup>9</sup> U.S. Census Bureau. Quick Facts: Oregon (2012). Available at <http://quickfacts.census.gov/qfd/states/41000.html>.