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Washington State's Practicing Physician Workforce – Capacity and Characteristics

By Wei Yen
The Health Care Research Group

An adequate capacity of physician workforce is essential to ensuring quality of and access to medical care. The newly enacted national Patient Protection and Affordable Care Act (i.e., the Affordable Care Act) will extend health coverage to an estimated 32 million additional Americans.¹ This expansion is expected to result in increased demand for physician services. An understanding of the current physician workforce and its capacity is important for Washington State's implementation of the Affordable Care Act. This research brief provides an overview of the capacity and characteristics of Washington State's current practicing physician workforce using data from the 2008 Washington State Health Professions Workforce Survey – Physician Survey².

Current Capacity of Washington's Practicing Physicians

In 2008, slightly more than 23,000 physicians were licensed with the Washington State Department of Health. Not all these licensed physicians were practicing in Washington or practicing at all. According to the 2008 Physician Survey, approximately 72 percent (16,531) of these physicians were practicing in Washington (Figure 1).³

The number of currently practicing physicians means that in Washington, there were 251 practicing physicians for every 100,000 population in 2008.⁴ This physician-to-population rate is comparable to the national rate of 250 physicians per 100,000 population.⁵ The remainder of this research brief is based on the practicing physicians, unless noted otherwise.

Physician Demographic Characteristics and Medical Training

The average practicing physician in Washington is middle-aged with the majority being male, non-Hispanic, and White. The average age is 49 years. Males account for 71 percent of the physicians. Physicians self-identifying as White make up 83.8 percent of the total. The other race/ethnicity groups are represented as follows: Asian, 11.9 percent; Black/African American, 1.0 percent; American Indian/Alaska Native, 0.7 percent; Native Hawaiian/Pacific Islander, 0.4 percent; and Other Race/Ethnicity, 4.0 percent. Physicians of Hispanic origin constitute 2.6 percent (Table 1).

Ninety-three percent of the physicians received a degree in Doctor of Medicine (MD) and 8.4 percent received other degrees that include Doctor of Osteopathic Medicine (DO) and medical degrees awarded in other countries. Also, approximately 89 percent of these physicians obtained their medical degrees from institutions in U.S.; 2 percent in Canada; and 9 percent in other countries. Eighteen percent attended Washington State's educational programs. Nearly twice as many physicians (33 percent), though, completed residency training in Washington at some time in their early careers.

Highlights:

According to Washington State Department of Health DOH's 2008 Physician Survey

- 16,500 licensed physicians practiced in Washington in 2008
- 89% were trained in U.S.; 18% in Washington
- 43% were in primary care
- 49% worked in outpatient clinics; another 37% in hospitals
- 43% planned to retire within 10 years

Figure 1. Practicing Status of Licensed Physicians, Washington State, 2008
(Total licensed = 23,013)



Source: DOH 2008 Health Professions Workforce Survey – Physician Survey. Analysis by OFM.

Table 1. Demographics and Medical Training

Average Age (Years)	49
Male	70.8%
Spanish/Hispanic/Latino	2.6%
Race/Ethnicity*	
White	83.8%
Asian	11.9%
Black/African American	1.0%
American Indian/Alaska Native	0.7%
Native Hawaiian/Pacific Islander	0.4%
Other	4.0%
Medical Degree*	
M.D.	93.3%
D.O.	4.5%
Other	3.9%
Country of Medical Degree	
U.S.	88.8%
Canada	2.1%
Other Countries	9.1%
Medical Degree from Washington's Educational Programs	17.5%
Did Residency Training in Washington State	33.2%
*Subcategories under Race/Ethnicity and Medical Degrees are not necessarily mutually exclusive.	
Source: DOH 2008 Health Professions Workforce Survey - Physician Survey. Analysis by OFM.	

Physicians in Primary Care

Availability of primary care physicians has been perceived as one of the main challenges the Affordable Care Act would face. For the purpose of this research brief, a primary care physician is defined as one with training in family/general practice, internal medicine, pediatrics, or OB/GYN. According to this definition, 43 percent of the physicians practicing in Washington are in the primary care field (Figure 2).⁶ The largest group in primary care is family/general practice (19 percent), followed by internal medicine (11 percent), pediatrics (8 percent), and OB/GYN (4 percent). The 43 percent of primary care physicians translates into 109 physicians per 100,000 population. If OB/GYN physicians are excluded from being considered as primary care physicians, as preferred by some analysts, then the rate of primary care physicians to population in Washington would be 98, compared to a rate of 90 per 100,000 nationally that is measured somewhat comparably.⁷

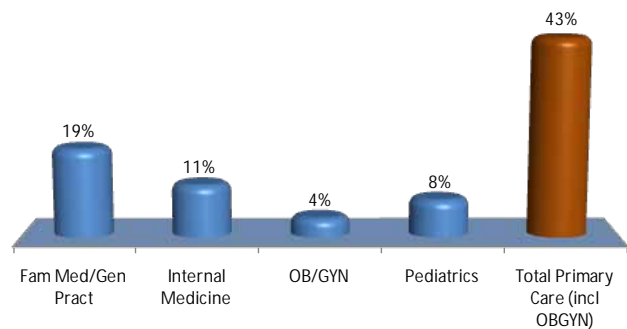
About the 2008 Physician Survey

The 2006 Washington State Legislature directed the Department of Health (DOH), in collaboration with the Workforce Training and Education Coordinating Board, to conduct a survey of health professionals licensed by the department.¹ The Health Professions Workforce Survey, as the survey is called, was intended to be a census every two years for each health profession. The survey was discontinued before the first cycle of all professions was completed due to state budget cuts.

The survey of physicians (MDs and DOs) was conducted and completed in 2008. In early 2008, DOH sent an invitation letter to all individuals identified as having presently active physician licenses in Washington (over 23,000). The letter invited physicians to complete a web survey. The survey included a follow-up contact with a paper version of the questionnaire. However, for budgetary reasons, only one third of the physicians were randomly selected to receive the follow-up. The survey yielded an overall response rate of 22.7 percent (5,199 physician respondents). The response rate among the group randomly selected to receive a follow-up contact was higher, at 45.7 percent, suggesting that expansion of the follow-up to all physicians could have improved the overall response rate.

In using the survey data for this study, characteristics of the 5,199 physician responders were compared with those of all licensed physicians. Differences found in age, sex, and state of contact address were adjusted in the weights assigned to the 5,199 physician responders so that they would represent all licensed physicians. (See Appendix A for a comparison of these characteristics.)

Figure 2. Primary Care Physicians



Note: Component categories of primary care fields may not add up to the total primary care count due to rounding.
Source: DOH 2008 Health Professions Workforce Survey - Physician Survey. Analysis

Work Settings and Direct Patient Care

Approximately half (49 percent) of the practicing physicians worked in an ambulatory/outpatient clinic setting. An additional three percent worked in free-standing ambulatory/outpatient surgery centers. Hospital settings, including both emergency and non-emergency, accounted for 37 percent of all practicing physicians. The remainder worked in a variety of other settings, e.g., education/research, institutions, mental health clinics, and some unspecified settings (Figure 3).

Ninety-three percent of the physicians reported providing direct patient care. Furthermore, 28 percent of the physicians reported that they provided direct patient care in more than two locations (Figure 4).

Years in Practice and Work Time

Table 2 shows that the physicians have, on average, practiced medicine for 19 years, with most of these years (14) spent in Washington. In the 12 months prior to the survey month, these physicians worked an average of 45 out of the maximum 52 weeks. Of those who worked in the week prior to the survey, they reported an average of 47 hours in all professional activities. Nearly three fourths (73 percent) of their professional time was for direct patient care. Another 11 percent was for administration of clinical practice. The remaining 16 percent was spent in teaching, research, and other professional activities.

Regional Distribution of Practicing Physicians

The public-use data file of the 2008 Physician Survey contains identifiers of Washington State’s twelve Workforce Development Areas (WDAs)⁸ for the physicians’ principal and secondary practices. Each WDA is either a single county or a group of counties that share similar characteristics and are in close proximity. These WDA identifiers allow analysis of regional distribution of physician practice. For the purpose of this research brief, the location of the principal practice is used to designate a physician’s region. Among physicians reporting direct patient care, 96 percent (14,804) reported a principal practice site in Washington.⁹ The remainder of this section is an analysis of regional distribution of the physicians *who reported both direct patient care and principal practice sites in Washington*.

Statewide, there are 225 physicians that provide direct care at a principal practice in Washington for every 100,000 people. The rate for primary care physicians (including OB/GYN) is less than half of that, at 101 physicians per 100,000 people. The rates of total physicians and primary care physicians vary considerably among the WDAs.

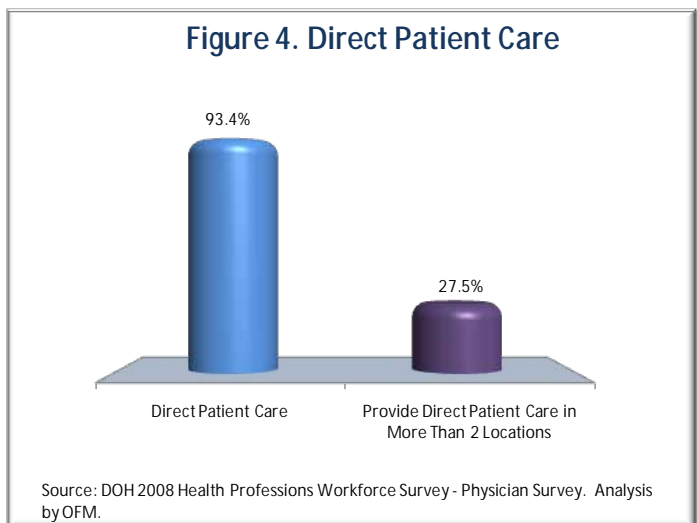
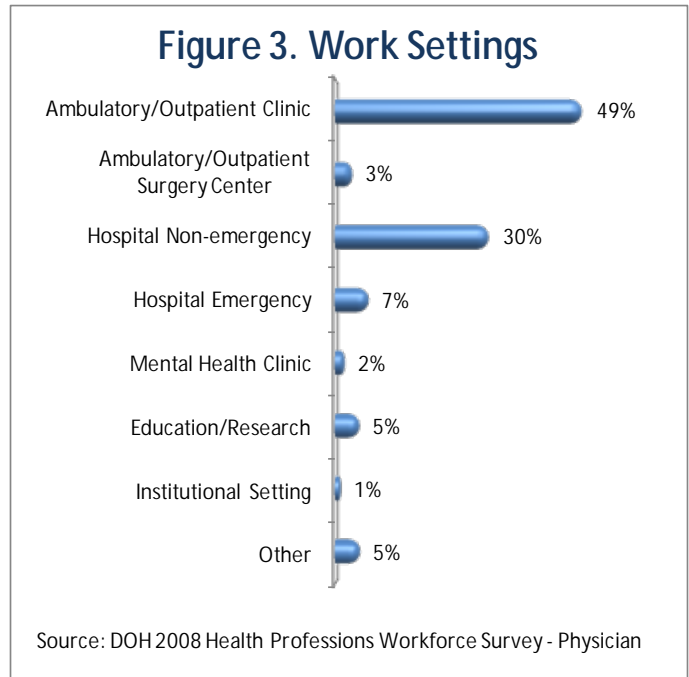


Table 2. Years in Practice and Work Time

Average Years in Practice	19
Average Years Practicing in Washington	14
Average Weeks Worked in Past 12 Months	45
Hours Last Week in All Professional Activities	47
Percent of Hours Last Week in Professional Activities:	
Direct Patient Care	73%
Administration of Clinical Practice	11%
Teaching	4%
Research	5%
Other Professional Activities	7%

Source: DOH 2008 Health Professions Workforce Survey - Physician Survey. Analysis by OFM.

Figure 5 shows a map of the twelve WDAs in Washington and the associated rates of *total practicing physicians* per 100,000 population. The Seattle/King WDA leads all other WDAs with 320 physicians per 100,000 population, more than 40 percent above the state average of 225 physicians per 100,000 population. Only two other WDAs have higher than state-average physician-to-population rates: Northwest is barely above the state average at 229 physicians per 100,000 population and Spokane at 273. The remaining nine WDAs all have physician-to-population rates that are lower than the state average. It is worth noting that while most of the WDAs with rates below state average are rural regions, two of them are urban regions (Snohomish and Tacoma/Pierce WDAs) and are adjacent to the Seattle/King WDA. Despite (or maybe because of) their close proximity to the WDA with the highest rate, Snohomish and Tacoma/Pierce WDA's rates are among the lowest. While additional data is needed to explain the low rates in Snohomish and Tacoma/Pierce WDAs, one likely hypothesis is that some patients in those two WDAs may opt to visit providers located in the Seattle/King WDA, thus reducing the need for physicians in their own WDAs.

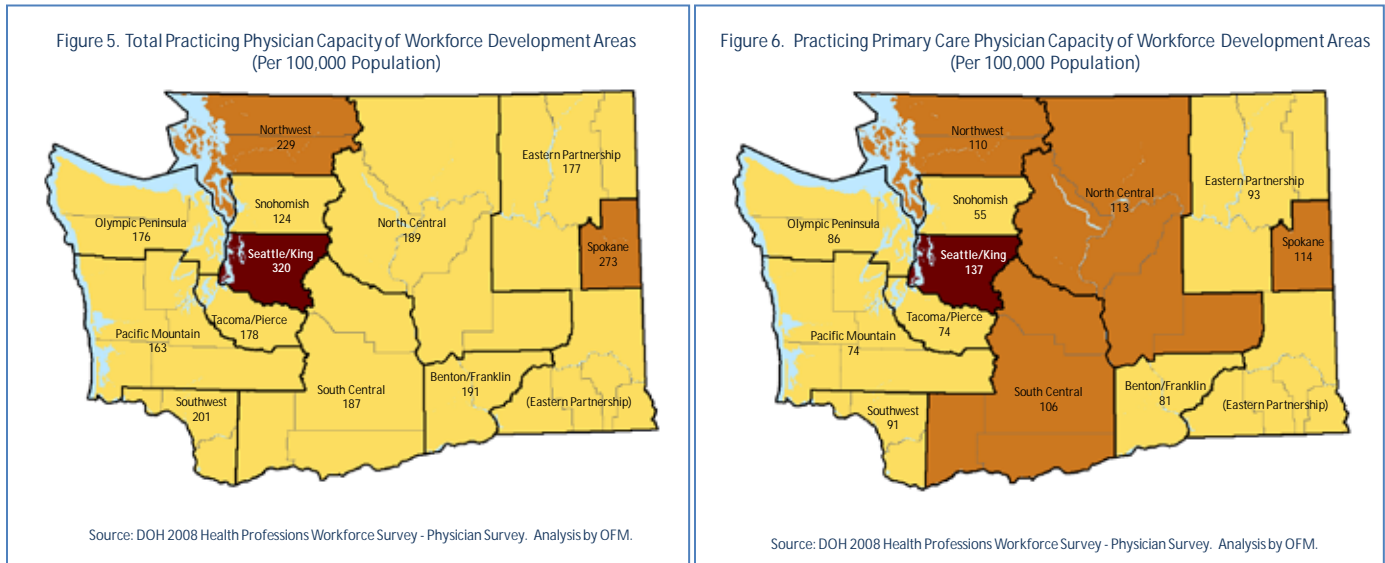


Figure 6 shows rates of *primary care physicians* for each of the twelve WDAs. Similarly, the Seattle/King WDA leads other WDAs with a rate of 137 primary care physicians per 100,000 population. This rate is about 36 percent above the state average of 101 physicians per 100,000 population. The Northwest and Spokane WDAs again also show rates (110 and 114, respectively) above the state average. Two additional and rural WDAs, North Central and South Central, now show rates above the state average, at 113 and 106, respectively. That leaves seven WDAs with rates of primary care physicians below the state average and, again, with Snohomish and Tacoma/Pierce WDAs among those with the lowest rates (55 and 74, respectively).

Appendix B provides a tabular display of population, counts of physicians (total and primary care), and rates of physicians for each of the twelve WDAs.

Time Planned To Retire

When asked when they planned to retire, 16 percent of the practicing physicians reported that they planned to retire within five years (from 2008), another 18 percent within next 6-10 years, and 52 percent to retire more than 10 years later. Of the remaining 13 percent, 2 percent reported having already retired¹⁰ and 11 percent were not sure or did not respond. A statistical procedure was used to impute retirement plan answers for the 11 percent. When the imputed answers are combined with answers by physicians who are certain of their plans, the proportion of currently practicing physicians planning to retire by 2018 (10 years from 2008) is 43 percent (Table 3).

**Table 3. Time Planned to Retire - Practicing Physicians
(Survey Year: 2008)**

Retirement Plan	Physicians Who Provided Answer		Imputed Answers for Physicians Who Did Not Provide an Answer		Total	
	N	%	N	%	N	%
Retire within 10 years (by 2018)	6,049	41.2%	1,050	56.5%	7,099	42.9%
Already Retired	361	2.5%	68	3.7%	429	2.6%
Within Next 5 Years	2,697	18.4%	267	14.4%	2,964	17.9%
Within Next 6-10 Years	2,991	20.4%	715	38.5%	3,706	22.4%
More Than 10 Years From Now	8,624	58.8%	808	43.5%	9,432	57.1%
Total	14,673	100.0%	1,858	100.0%	16,531	100%

Source: DOH 2008 Health Professions Workforce Survey - Physician Survey. Analysis by OFM.

Summary

The national Affordable Care Act enacted earlier this year is expected to extend health insurance coverage to some 32 million Americans currently uninsured and, as consequence, to result in increased demand for physician services. Understanding of the current physician capacity and characteristics in Washington State can better inform the implementation of this law in the state. To provide that understanding, data from the Washington State Department of Health's 2008 Physician Survey were analyzed.

The 2008 Physician Survey shows that Washington State had approximately 16,500 practicing physicians in that year with a physician-to-population rate comparable to the national average. U.S. medical training institutions are responsible for nearly 90 percent of physicians practicing in Washington. The state's own medical training institutions have contributed 18 percent of these physicians. Approximately 40 percent of the physicians are working in the primary care field. More than 90 percent provide direct patient care and nearly half work in ambulatory/outpatient clinics. Washington's physicians have an average career history of 19 years with 14 of those years in Washington. They work more than 40 hours a week in all their professional activities and about three fourths of these hours are in direct patient care. The state's physician workforce is near 50 years old on average and over 40 percent are considering retirement by 2018.

Although the survey data suggest that statewide the physician-to-population rate is comparable to the national average, sub-state regional distribution shows large differences. Among the twelve Washington State Workforce Development Areas, the Seattle/King WDA has the highest rates in both total physicians and primary care physicians. WDAs with low rates tend to be rural regions with the exceptions of Snohomish and Tacoma/Pierce WDAs. Although adjacent to the Seattle/King WDA that has the highest physician rates, these two WDAs have physician rates that are among the lowest. Further research is needed to understand the geographic variation in physician distribution and particularly what has caused Snohomish and Tacoma/Pierce WDAs to differ so much from the Seattle/King WDA.

If the current level and pattern of health service utilization continue, the next 10 years will see an increased demand for physicians, especially primary care physicians, due to population growth, aging of the population, and the implementation of the Affordable Care Act. At the same time, it is expected that supply for physicians may become limited due to aging of the physician workforce.

Appendix A. Characteristics of 2008 Physician Survey Respondents and All Licensed Physicians

A public-use file containing selected information of all licensed physicians and survey responses is available on Department of Health website where it was downloaded and analyzed for this study. A set of common data fields showing characteristics of the survey respondents and all physician licensees was identified in the download file. These characteristics include age, sex, and mailing state of the licensee. An analysis of these characteristics (see Table below) shows that the survey respondents tend to be older than the overall licensed physician population. They also tend to be more likely to have a Washington contact address. They are slightly more likely to be male. Adjustment for these differences was incorporated in the weight for these responding physicians so that they represent all physicians licensed in Washington. Despite this adjustment, response bias may still remain, particularly in the estimates of number of physicians practicing in Washington because it is possible that physicians who are practicing are more likely to respond and, conversely, those not responding are more likely to be not practicing. This particular bias may remain even after adjusting for bias observed in age, sex, and mailing state and result in over-estimate of practicing physicians.

Age, Sex, and Mailing State of Physician Survey Respondents and All Licensed Physicians

	All Licensees (N = 23,013)	Respondents (N = 5,199) (Unweighted)	Difference
Age			
26-35	10.0%	8.1%	-1.9%
36-40	14.0%	10.1%	-3.9%
41-45	12.6%	10.7%	-2.0%
46-50	13.9%	13.6%	-0.3%
51-55	16.1%	17.5%	1.4%
56-60	13.9%	16.5%	2.6%
61-65	9.7%	11.4%	1.7%
66-70	4.8%	6.0%	1.2%
71 and Older	4.6%	6.2%	1.6%
Gender			
Male	72.3%	73.2%	0.9%
Female	27.7%	26.8%	-0.9%
State (in Mailing Address)			
Washington	73.6%	77.6%	4.0%
Other States	26.4%	22.4%	-4.0%

Source: DOH 2008 Health Professions Workforce Survey - Physician Survey. Analysis by OFM.

Appendix B. Regional Distribution of Population, All Physicians, and Primary Care (PC) Physicians

Regional Distribution of Population, All Physicians, and Primary Care (PC) Physicians*

Region (County)	Region Total and Percent of State Total			Physicians Per 100,000 Population		Ratio of Regional Physician Rate to State Average Rate	
	Population	All Physicians	PC Physicians	All Physicians	PC Physicians	All Physicians	PC Physicians
1. Olympic Peninsula (Clallam, Jefferson, Kitsap)	344,800 5%	605 4%	296 4%	176	86	0.78	0.85
2. Pacific Mountain (Grays Harbor, Lewis, Mason, Pacific, Thurston)	469,000 7%	763 5%	348 5%	163	74	0.72	0.74
3. Northwest (Island, San Juan, Skagit, Whatcom)	403,900 6%	927 6%	446 7%	229	110	1.02	1.10
4. Snohomish County	696,600 11%	865 6%	384 6%	124	55	0.55	0.55
5. Seattle/King County	1,884,200 29%	6,038 41%	2,572 39%	320	137	1.43	1.36
6. Tacoma/Pierce County	805,400 12%	1,431 10%	594 9%	178	74	0.79	0.73
7. Southwest (Clark, Cowlitz, Wahkiakum)	527,300 8%	1,062 7%	482 7%	201	91	0.90	0.91
8. North Central (Adams, Chelan, Douglas,	251,600 4%	476 3%	283 4%	189	113	0.84	1.12
9. South Central (Kittitas, Klickitat, Skamania, Yakima)	306,100 5%	573 4%	324 5%	187	106	0.83	1.05
10. Eastern Partnership (Asotin, Columbia, Ferry,	204,000 3%	361 2%	189 3%	177	93	0.79	0.92
11. Benton/Franklin	235,700 4%	450 3%	192 3%	191	81	0.85	0.81
12. Spokane County	459,000 7%	1,254 8%	525 8%	273	114	1.22	1.14
All Regions	6,587,600 100%	14,804 100%	6,634 100%	225	101	1.00	1.00

* Physician counts are based on those who reported direct care and a principal practice site in Washington State.

Sources: 1. DOH 2008 Health Professions Workforce Survey - Physician Survey. Analysis by OFM; 2. OFM Population Projections for 1990-2008.

Notes

- ¹ Congressional Budget Office. 2010. "Cost estimate for the amendment in the nature of a substitute for H.R. 4872, incorporating a proposed manager's amendment made public on March 20, 2010." CBO. Washington, DC. Available at: <http://www.cbo.gov/ftpdocs/113xx/doc11379/AmendReconProp.pdf>.
- ² See textbox "About the 2008 Physician Survey" for a description of the survey.
- ³ The survey did not ask the reasons for not practicing, but being retired or working in another state could be among the most plausible reasons for those who were licensed but did not practice in Washington.
- ⁴ OFM 2010 State Population Estimate for April 1, 2008 is 6,587,600. See: <http://www.ofm.wa.gov/pop/april1/finalpop.pdf>.
- ⁵ AAMC Center for Workforce Studies. *2007 State Physician Workforce Databook*. December 2007. Association of American Medical Colleges. The report is available online at: <http://www.aamc.org/workforce/statedatabookjan2008.pdf>. Similarly, this study shows Washington State's physician-to-population ratio is 254 per 100,000 and ranks Washington the top 16th of all states.
- ⁶ The categories included in this study for primary care are similar to the ones preferred by the American Medical Association. In some analyses elsewhere, e.g. the GAO 2008 report on Primary Care Professionals (<http://www.gao.gov/new.items/d08472t.pdf>), OB/GYN is not considered as a primary care field. In addition, some analysts also exclude certain sub-specialties within the major primary care categories when estimating primary care physician size. Sub-specialties were not asked in the DOH Physician survey. Therefore, all physicians who reported primary area of practice in family/general practice, internal medicine, pediatrics, and OB/GYN are included in this study's count for primary care physicians. A more restrictive definition that excludes OB/GYN and certain sub-specialties of family/general practice, internal medicine, and pediatrics would lower the estimate of primary care physicians.
- ⁷ U.S. Government Accountability Office (GAO). 2008. *Primary Care Professionals: Recent Supply Trends, Projections, and Valuation of Services*. GAO, Washington, DC. The GAO analysis excludes certain sub-specialties of primary care fields whereas this study does not.
- ⁸ WDA is the only available geographic information in the public use file of the physician survey.
- ⁹ In addition to the 96 percent reporting a principal practice site in Washington, another one percent reported only a secondary practice site in Washington.
- ¹⁰ The survey question on practice status considers as practicing if a physician volunteers practice after retirement.

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