



MEDICAL SCHOOL FEASIBILITY STUDY

FINAL REPORT

September 11, 2014



WASHINGTON STATE UNIVERSITY
MEDICAL SCHOOL FEASIBILITY STUDY – FINAL REPORT

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EXECUTIVE SUMMARY

Washington State University (WSU) engaged MGT of America, Inc., in February 2014 to conduct a feasibility assessment of the potential for a new medical school to be based on the University's health sciences campus in Spokane. MGT was charged with investigating four specific topics:

- ♦ *Need for Physicians* – What are the State's unmet needs for more physicians in terms of their numbers, geographic distribution, and focus of practice?
- ♦ *Educational Model* – What models for delivering medical education best respond to the State's unmet needs for physicians?
- ♦ *WSU Readiness* – How do existing WSU resources contribute to establishing a new medical education program that meets accreditation standards?
- ♦ *Required Time and Resources* – How long might it take to develop a new medical school and how much funding would be required?

BACKGROUND

WSU is a land-grant university with a statewide mission to serve the needs of Washington residents. Its public service mission not only encompasses agricultural programs, but also addresses issues related to the health and well-being of the State through pharmacy, nursing and medical education. WSU has over four decades of experience in training medical students through its participation in the WWAMI (Washington, Wyoming, Alaska, Montana, Idaho) medical education program. Hospitals and physicians in Spokane have also been WWAMI participants throughout this period. Over the past 25 years, WSU has developed a significant health sciences campus in Spokane and has relocated most of its human health professions training and research programs to Spokane. WSU and community leaders have expressed interest in a new medical school for more than a decade.

NEED FOR PHYSICIANS

It is well documented that lack of or limited access to a physician can lead to poorer health outcomes for an individual. Furthermore, without such access unattended or unmanaged ailments may eventually require far more complex and expensive medical care. Washington faces a shortage of physicians and a lack of medical education training opportunities based on our analysis across a variety of performance measures. Both the Association of American Medical Colleges (AAMC) and the U.S. Bureau of Labor Statistics project a nationwide shortage over the next 15 years in the range of 150,000. In Washington, 1,700 additional primary care physicians and 4,000 total physicians will be needed beyond current levels by 2030 based on projections by the Robert Graham Center and state-sponsored analyses. Also, upwards of 300 physicians leave the state workforce annually and must be replaced. (Throughout this report, "physician" refers to someone involved in the care of individual patients, unless stated otherwise. National data bases often refer to this group as "active patient care physicians").

Equally concerning is the current maldistribution of the state's active physicians that has resulted in their disproportionate concentration in the metro Seattle area. Nearly half of physicians are located in King County alone, greatly exceeding its 29 percent population share. In contrast, 18 of 39 counties in Washington have 10 or fewer physicians per 10,000 population, while King has over four times as many. Maintaining a low physician per capita ratio limits access, extends patient wait time to see a doctor, and may diminish opportunities for early attention to health issues. In addition, the state's 18,000 plus physician population is older than that found in two-thirds of all other states, and recent surveys indicate upwards of 20 percent of these physicians anticipate retiring or reducing their workload within the next five years.

Access to undergraduate medical education in Washington has not kept pace with the population growth in the last 40-plus years. Public medical school seats per class in Washington available to state residents have increased by only 48 percent (currently 120 seats) since 1971, while the state's population has more than doubled during that same time frame. Washington's population is projected to grow more than 20 percent through 2030, and many counties outside the metro area are expecting growth rates greater than the statewide rate. At the same time, the State's 65-plus age cohort, which requires physician services at a disproportionately high rate, is predicted to more than double from 2010 to 2030 to 1.7 million residents. This will place even greater demands on the already burdened and maldistributed physician workforce, particularly in underserved and rural areas of the state.

Compared to the 25 most populous states with an average of 4.4 allopathic medical schools each, Washington (which ranks in the middle of this group as the 13th most populous) has only one medical school with only 120 seats per class available to residents. Less than 15 percent of the state's applicants to U.S. medical schools in 2012-13 were able to enroll in an in-state program, ranking Washington at 42nd among the 45 states with an accredited medical school. Merely adding seats to the University of Washington's class will not address the severe maldistribution problem of Washington's physicians. Additionally, growing the UWSOM class size cannot create enough growth in medical education capacity to address the issue. Training physicians outside of the traditional academic health center in diverse clinical settings in the state, including residency training opportunities outside of Seattle, is needed to address this issue.

EDUCATIONAL MODEL

The trend in medical education over the past several decades has been to train students mostly in community settings rather than in the university's academic medical center. This approach exposes students to the full spectrum of health care. This educational model is proving to be significantly more flexible and responsive than the traditional model focused entirely on a single, insular academic medical center. A central premise is that new physicians should be trained in the types of environments in which they will practice. In addition to a superior learning environment, this emerging model for medical education is much more efficient in terms of both capital and operating costs. New medical schools in other states that employ this educational model have had greater success than their traditional counterparts in placing graduates in primary care residency programs and underserved settings. This model aligns well with the goal of WSU to respond to the state's unmet needs for more physicians, especially in primary care, who will eventually practice in underserved areas of Washington.

WSU READINESS

A key issue in the feasibility assessment was whether WSU is ready to initiate the process for gaining accreditation of a new medical education program from the Liaison Committee on Medical Education (LCME), required for membership in the American Association of Medical Colleges. Standards used in the LCME accreditation review provided a framework for assessing available assets at WSU. Recent construction of a new biomedical sciences building on WSU's Spokane health sciences campus and the existence of other closely related health professions programs already established by WSU on this campus provide many of the assets needed for a successful medical school. WSU has a much higher state of readiness to begin the accreditation process than most of the new medical schools that have been accredited over the past decade.

REQUIRED TIME AND RESOURCES

WSU cannot admit students to a new medical education program until it receives preliminary accreditation. If planning begins in the near future, preliminary accreditation could be earned in early 2016 with the charter class beginning in fall 2017. A central requirement for new medical schools seeking initial accreditation is submission of a realistic five-year budget plan. Other accreditation standards discuss expectations for the breadth and depth of faculty resources, administrative staffing, library and technology resources, and student services and each of these components must be appropriately funded. While it was premature to develop a detailed expenditure plan at this stage of planning, a projection of how much the state, students, and others will be expected to contribute toward the development and operations of the new medical school was developed. The requirement for additional state funds to establish a new medical school at WSU are projected to be approximately \$1-3 million annually over the next few years while planning takes place and the first cohorts of students enroll. The total funding requirement would increase gradually up to \$47 million annually (of which \$24 million would be in state funds above existing levels) when the school reaches an enrollment of 480 students in 2024-25. No additional capital funding requirement is projected for the foreseeable future.

CONCLUSIONS

WSU leaders have recognized a significant and growing statewide need for more physicians, especially outside the Seattle metropolitan area. Innovative, 21st century models of medical education have been successfully implemented in other states that faced similar needs, and could be adapted to the unique circumstances of eastern and rural Washington. Due to the establishment of its health sciences campus in Spokane and its long experience in training medical students, WSU is well positioned to develop an accredited medical education program in the near future. A modest state investment to support operations of a new medical education program could double the number of in-state students graduating from Washington medical schools over the next decade. No capital expenditure will be needed in the foreseeable future.

I.0 BACKGROUND

The growing shortage of physicians has been the topic of considerable discussion and analysis in both Washington and the nation for the past decade or more. WSU has joined with community leaders to establish a major health sciences campus in Spokane that serves as the home of the University's colleges of pharmacy and nursing and its WWAMI-affiliated medical education program. In February 2014, WSU commissioned a feasibility study of the potential to transform its medical education program into a four-year medical school.

I.1 PHYSICIAN WORKFORCE ISSUES

Our country faces a myriad of health issues. Primary among them is the fact that direct access to primary care physicians is still unavailable to many of our citizens, especially those in rural areas and among underserved populations. Though this recognized national need is acute and growing, it is clearly evident in Washington State.

Pressure on the existing health care delivery system continues to mount resulting in a widening gap in access, affordability and quality. Several factors contribute to this scenario:

- ♦ Population growth, among other factors, continues to drive the need for more physicians in Washington State. Existing medical education capacity cannot meet current or projected workforce needs, thus requiring additional opportunities for state residents to pursue medical education in state.
- ♦ America is getting older and so too is Washington's population. The boomer and post-boomer generations are aging and, as a result, more health care services will be in demand, and more frequent visits will be the norm.
- ♦ As our country ages, so too does its physician workforce. A significant number of active doctors age 60 and older will either retire from practice or dramatically reduce their workload in the next 5 to 10 years. This reduction in manpower will outpace the current production of new physicians if access to medical education does not increase in Washington and nationwide.
- ♦ There continues to be a disparate distribution of primary care physicians that diminishes the availability of providers to serve the needs of the underserved and rural locations across our country. This is particularly problematic in Washington where the majority of the state's physician workforce is centered around metropolitan Seattle.
- ♦ The Affordable Care Act will permit significant numbers of previously uninsured individuals and families to afford health care. The sheer magnitude of new patients in the system is predicted to greatly over-extend the existing health practitioner workforce.

1.2 WASHINGTON STATE UNIVERSITY HEALTH SCIENCES

Washington State University (WSU) seeks to build on its 124-year commitment to serving the state's needs and to capitalize on its recognized strengths in the health sciences. As Washington's land-grant institution, WSU takes that obligation and commitment to serve all residents of the state very seriously in all of its endeavors. Through its associated extension offices and research centers, WSU is active in every county of the state.

WSU has worked closely with Spokane's business, health care, and nonprofit leaders for 25 years to establish its Spokane campus as the center of health sciences education, research and outreach in eastern Washington. WSU has a unique opportunity to leverage these investments and infrastructure to meet the health care needs of the state. Spokane already is the premier health care center between Seattle and Minneapolis.

The campus in downtown Spokane's University District is home to the WSU Colleges of Medical Sciences, Pharmacy, and Nursing with their nationally respected degree programs. Within these colleges the University also offers programs in sleep and performance research, speech and hearing sciences, nutrition and exercise physiology, and health policy and administration.

Beginning in 1971, WSU trained first-year medical students on its Pullman campus as part of the WWAMI (Washington, Wyoming, Alaska, Montana, Idaho) medical education program. The WWAMI program is part of an outreach medical education program accredited through the University of Washington's School of Medicine (UWSOM). Students also have the opportunity to pursue a portion of the second half of their medical education in Spokane through clinical clerkships at local hospitals.

In 2008, WSU began teaching first-year medical students on its Spokane campus. Five years later, with the persistent urging and financial support of the Spokane community, UWSOM acquiesced to the delivery of second-year medical education in Spokane as well, making it possible for a student to complete all four years of medical education in Spokane, the first two on the WSU Spokane campus and the last two in clinical settings.

Besides sponsoring the present study into the costs and benefits of a full-fledged, independently-accredited medical school based in Spokane, WSU has also moved ahead with two other medical initiatives:

- ♦ The creation of a Teaching Health Center clinic on the WSU-Spokane campus. Medical, nursing, and pharmacy students, as well as students from the campus's allied health programs, will collaborate at the clinic to serve area residents' health care needs. Providence Health Care and the Empire Health Foundation are also partners in this venture, which recently received \$900,000 from the federal Health Resources and Services Administration to fund six new medical residents on campus. That number could grow to 18 if additional funding is approved.
- ♦ The WSU Faculty Senate recently voted to bestow college status on the University's Medical Sciences program. The Board of Regents approved the proposal and authorized the newest WSU College at its meeting in May, 2014. The College of Medical Sciences includes not only WSU's WWAMI medical education program, but also a growing research portfolio and the University's Department of Speech and Hearing Sciences.

A medical school will enhance WSU's team approach to the health sciences. To be successful today, health care practitioners must collaborate with professionals from a variety of health sciences disciplines. A new medical school in Spokane will allow future physicians, nurses, pharmacists, dietitians, speech pathologists, exercise specialists, and others to work and learn side by side on campus.

WSU is a major research university with scientists engaged in meaningful health sciences research in Spokane as well as in Pullman. Researchers are leading studies in genetics and genomics, cancer, kidney disease, diabetes, drug addictions, neuropharmacology, fatigue and sleep, and exercise physiology, among other topics.

In addition, WSU fosters interactions among the health science related research programs conducted across all its campuses. For example, the Paul G. Allen School for Global Animal Health on the WSU Pullman campus focuses on delivering innovative solutions and preventative health care for animals and humans. The efforts are concentrated on disease originating in animals that pose a threat to humans such as avian flu, West Nile virus, and HIV. The School of Molecular Biosciences and the Department of Integrative Physiology and Neuroscience, in the College of Veterinary Medicine, have strong health science related research programs in chromatin structure and function, reproductive sciences, infectious diseases and cancer. The College of Agriculture, Human and Natural Resources Sciences and the College of Arts and Sciences both have strong programs in health and wellness. The Sustaining Health Initiative was recently launched at WSU to unite academic units from across the university in an effort aimed at "...equitably and holistically advancing the health of people around the state, nation and world." A medical school at WSU will integrate with these existing efforts.

1.3 SCOPE OF THE STUDY

Washington State University (WSU) is exploring whether to expand its medical education program into a comprehensive, autonomous, research-intensive medical school accredited by the Liaison Committee on Medical Education (LCME).

As a critical first step to this end, this feasibility study was initiated to:

1. Document statewide need.
2. Forecast the costs and benefits of this undertaking.
3. Determine the resources and revenues needed to build an LCME-accredited program.
4. Delineate the key milestones and a realistic time line for the path to accreditation.

This report addresses the following specific questions:

1. What is the status of the physician work force across the state and is there a need for training of additional physicians?
2. What type of medical school would best meet the expanding needs of the state of Washington?
3. What are the unique attributes or areas of specialization that a WSU medical school could bring to the state and region?
4. What clinical partnerships would add the most value to a WSU medical school?
5. How long would it take to obtain preliminary accreditation (which is a prerequisite to soliciting applications from students)?
6. What would be the range of start-up costs for WSU to achieve LCME accreditation with an initial class size of 40 students and what might be the planned growth in subsequent years?

The five chapters that follow are focused on this defined study scope and provide data and detail in response to the above questions.

2.0 NEED FOR EXPANDED MEDICAL EDUCATION

Washington faces a shortage of physicians and a lack of medical education training opportunities on a variety of measures, and a new medical school at Washington State University would respond to a critical state need. There is a recognized physician shortage nationwide. Over the next 15 years, national estimates of need are on the order of 150,000 new physicians. In Washington, an additional 1,700 primary care physicians and 4,000 total physicians will be needed beyond current levels by 2030 based on projections by the Robert Graham Center, and Washington state-sponsored analyses.¹ Also, upwards of 300 physicians leave the state workforce annually and must be replaced. Continued shortages of physicians will likely result in poorer health outcomes and greater medical costs for Washington residents.

Equally concerning is the current maldistribution of the state's active physicians that has resulted in their disproportionate concentration in the metro Seattle area. Nearly 5 in 10 physicians are located in King County alone, greatly exceeding its 29 percent population share. In contrast, 18 of 39 counties in Washington have 10 or fewer physicians per 10,000 population, while King County has over four times as many. In addition, physicians in Washington tend to be older than those in other states; and recent surveys indicate upwards of 20 percent of these physicians anticipate retiring or reducing their workload within the next five years.

Access to undergraduate medical education in Washington has not kept pace with the population growth in the last 40 plus years. Public medical school seats per class in Washington available to state residents have increased by only 48 percent since 1971 (currently 120 seats), while the state's population has more than doubled during that same time frame. Washington's population is projected to grow more than 20 percent through 2030, and many counties outside the metro area are expecting growth rates greater than the statewide rate. Simultaneously, the state's 65-plus age cohort, which requires physician services at a disproportionately high rate, is predicted to more than double from 2010 to 2030 to 1.7 million residents. This will place even greater demands on the already burdened and maldistributed physician workforce, particularly in underserved and rural areas.

Compared to the 25 most populous states with an average of 4.4 allopathic medical schools each, Washington (which ranks in the middle of this group as 13th most populous) has only one medical school with only 120 seats per class available to residents. Less than 15 percent of the state's applicants to U.S. medical schools in 2012-13 were able to enroll in-state, ranking Washington at 42nd among the 45 states with an accredited medical school. Merely adding seats to the University of Washington's class will not address the severe maldistribution problem of Washington's physician workforce.

2.1 BACKGROUND

Two major factors are driving efforts across the nation to expand access to medical education: (1) The growing problems faced by many Americans seeking medical services due to a shortage of physicians, and (2) the lack of opportunity for highly qualified and motivated students to enroll in medical school due to limited capacity.

¹ For ease of presentation, analyses in this chapter use the term “physician” when referring to data in AAMC reports that are identified as “patient care physicians”, unless otherwise denoted.

A national physician shortage has been debated, examined, and diagnosed by many experts, regulators, health care professionals, and advocacy groups for more than two decades. With the establishment of 16 new U.S. medical schools since early 2002, the prognosis for the physician workforce supply is improving in some states, but remains a serious concern in many others. The estimated magnitude of the shortage varies dramatically by location, practice focus, and prediction methodology; but majority opinion concurs that there is currently a national shortage. Furthermore, the shortage will persist well into the future, despite recent efforts to increase the number of seats per class in U.S. medical schools.

At the crux of this dilemma are a set of critical factors that pressure the equilibrium of physician workforce supply and demand nationally. More importantly to this analysis, they have impacted health care access in Washington and will continue to do so in the future unless the dynamics of the situation change. These factors include:

- ♦ Population Growth
- ♦ Aging Baby Boomer Generation
- ♦ Currently Underserved Areas of the State
- ♦ Increased Access to Health Insurance Coverage
- ♦ Aging Physician Workforce
- ♦ Maldistribution of the Physician Workforce
- ♦ Limited Access and Capacity of Undergraduate Medical Education
- ♦ Insufficient Graduate Medical Education Opportunities
- ♦ Clustering of Residency Positions In Limited Areas of the State

The remainder of this chapter will address these factors as they impact access to physician patient care, as well as access to medical education for the citizens of the State of Washington.

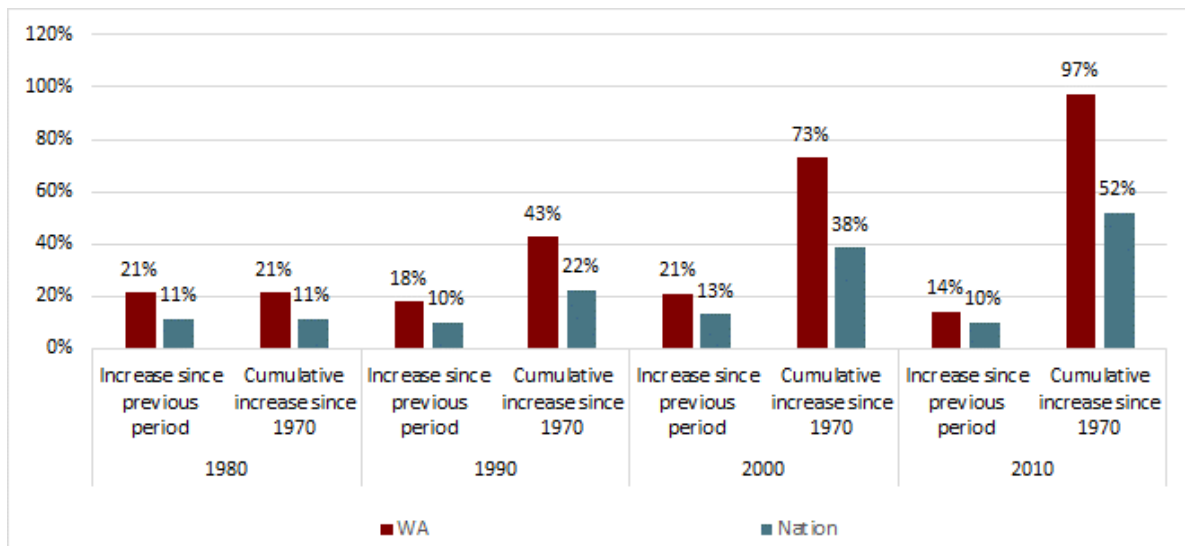
2.2 ACCESS TO PHYSICIAN CARE

The continuing need to replace and expand the physician workforce throughout Washington, in response to a confluence of demands, is a key catalyst for the current exploration by Washington State University into expanding access to medical education in the state beyond current capacity. In this section, we review several of the critical data points related to these factors.

2.2.1 WASHINGTON POPULATION CHANGE

Washington's population growth rate (**Exhibit 2-1**) has outpaced the national rate for decades, increasing nearly twice as fast. Washington's growth rate is slowing over the next 15-20 years, but will still exceed that of the nation as a whole by nearly 10 percentage points. One major component of physician shortage projection models is population growth. A recent model advocated by the Robert Graham Center and applied to Washington State indicates population growth drives 65 percent of the projected need for more primary care physicians.

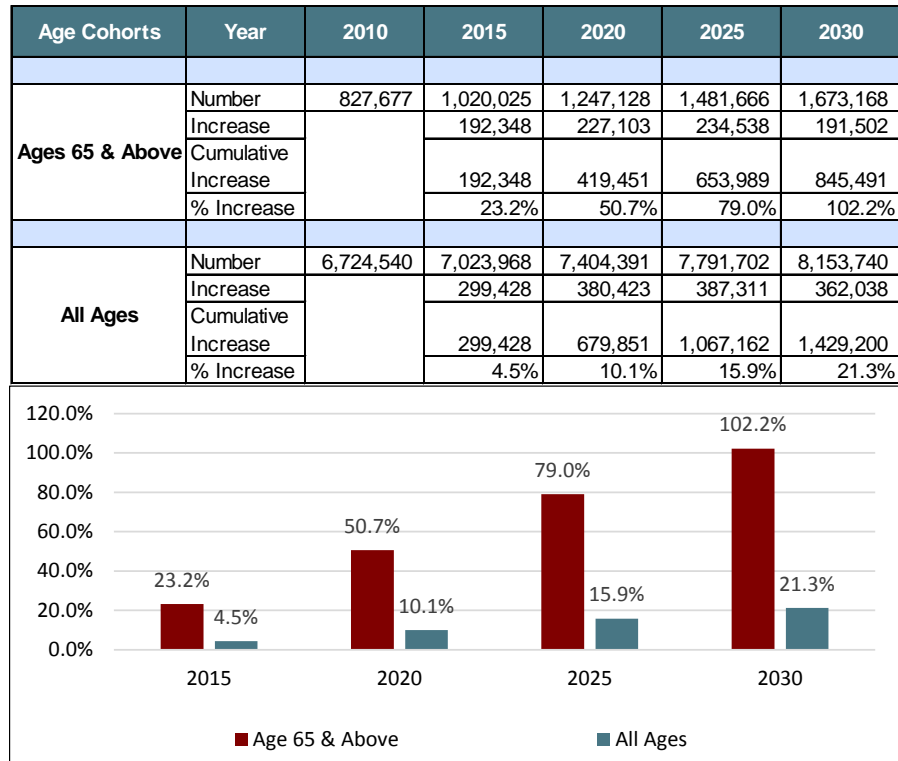
EXHIBIT 2-1
HISTORICAL TRENDS IN POPULATION GROWTH
WASHINGTON AND THE NATION



Source: U.S. population counts and projections, U.S. Census Bureau.

As with the country, [Exhibit 2-2](#) shows that the Washington population is growing older as the “baby boomer” generation reaches retirement age. Due to the greater health care needs of older individuals, this will continue to add significantly to the growing demand for access to more medical services and greater levels of patient care, particularly directed to an already overloaded physician workforce. Further complicating this situation is the delayed retirement bubble due to the economic downturn. Many impacted workers (health care professionals included) are planning to exit the workforce in the near term.

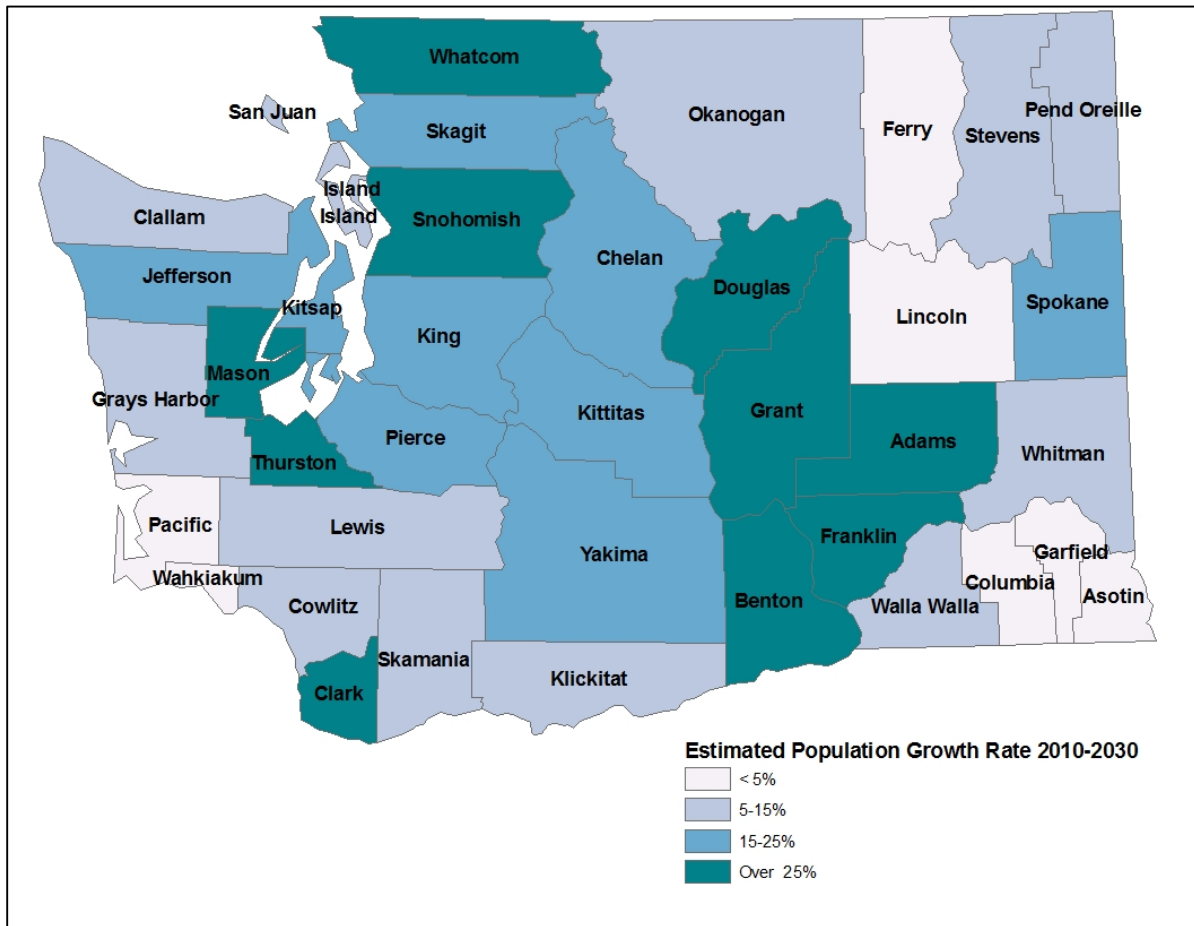
EXHIBIT 2-2
WASHINGTON POPULATION PROJECTIONS



Source: Washington population counts, U.S. Census Bureau.
Washington population projections, OFM Division of Forecasting, Medium Series, November 2013.

More than a dozen Washington counties are predicted to grow by double-digit rates, outpacing the state rate of 21 percent between 2010 and 2030 (see [Exhibits 2-3](#) and [2-4](#)). State officials predict another six counties will grow 15 percent to 21 percent during that same time frame. Five of the 10 fastest growing counties are located within the Central or Eastern regions of the state. As can be seen in the map, pockets of growth (counties) exceeding the state rate are spread across Washington.

EXHIBIT 2-3
PROJECTED POPULATION GROWTH BY COUNTY



Data Source: OFM Forecasting Division, May 2012 Projections of Population, Medium Series.

Map produced by MGT.

EXHIBIT 2-4
WASHINGTON POPULATION TRENDS AND PROJECTIONS BY COUNTY

County	WA DOH Region**	2010 Census	2013 Population Estimate	Projections*		
				2020	2030	2010-2030
State		6,724,540	6,882,400	7,404,391	8,153,740	21.3%
Adams	East	18,728	19,200	21,640	24,289	29.7%
Asotin	East	21,623	21,800	22,033	22,313	3.2%
Benton	Central	175,177	183,400	197,806	223,689	27.7%
Chelan	Central	72,453	73,600	78,586	84,778	17.0%
Clallam	SW	71,404	72,350	73,616	76,112	6.6%
Clark	SW	425,363	435,500	477,884	536,717	26.2%
Columbia	East	4,078	4,100	4,013	3,895	-4.5%
Cowlitz	SW	102,410	103,300	108,588	114,158	11.5%
Douglas	Central	38,431	39,280	43,619	49,583	29.0%
Ferry	East	7,551	7,650	7,706	7,754	2.7%
Franklin	East	78,163	84,800	100,926	130,284	66.7%
Garfield	East	2,266	2,250	2,220	2,202	-2.8%
Grant	Central	89,120	91,800	104,078	121,204	36.0%
Grays Harbor	SW	72,797	73,200	74,408	76,428	5.0%
Island	NW	78,506	79,700	82,735	87,621	11.6%
Jefferson	SW	29,872	30,275	32,017	35,657	19.4%
King	NW	1,931,249	1,981,900	2,108,814	2,277,160	17.9%
Kitsap	SW	251,133	254,000	275,546	301,642	20.1%
Kittitas	Central	40,915	41,900	45,255	50,567	23.6%
Klickitat	Central	20,318	20,700	20,943	21,430	5.5%
Lewis	SW	75,455	76,200	80,385	85,165	12.9%
Lincoln	East	10,570	10,675	10,707	10,865	2.8%
Mason	SW	60,699	61,800	67,545	76,401	25.9%
Okanogan	Central	41,120	41,500	43,163	44,619	8.5%
Pacific	SW	20,920	21,000	20,990	21,495	2.7%
Pend Oreille	East	13,001	13,150	13,692	14,129	8.7%
Pierce	NW	795,225	814,500	876,565	967,601	21.7%
San Juan	NW	15,769	16,000	16,256	16,939	7.4%
Skagit	NW	116,901	118,600	128,249	144,953	24.0%
Skamania	SW	11,066	11,300	11,548	12,447	12.5%
Snohomish	NW	713,335	730,500	805,015	908,807	27.4%
Spokane	East	471,221	480,000	513,910	558,614	18.5%
Stevens	East	43,531	43,800	45,212	47,834	9.9%
Thurston	SW	252,264	260,100	288,265	326,426	29.4%
Wahkiakum	SW	3,978	4,020	3,877	3,772	-5.2%
Walla Walla	East	58,781	59,500	61,685	64,978	10.5%
Whatcom	NW	201,140	205,800	225,307	256,643	27.6%
Whitman	East	44,776	46,000	47,826	50,577	13.0%
Yakima	Central	243,231	247,250	269,347	294,445	21.1%

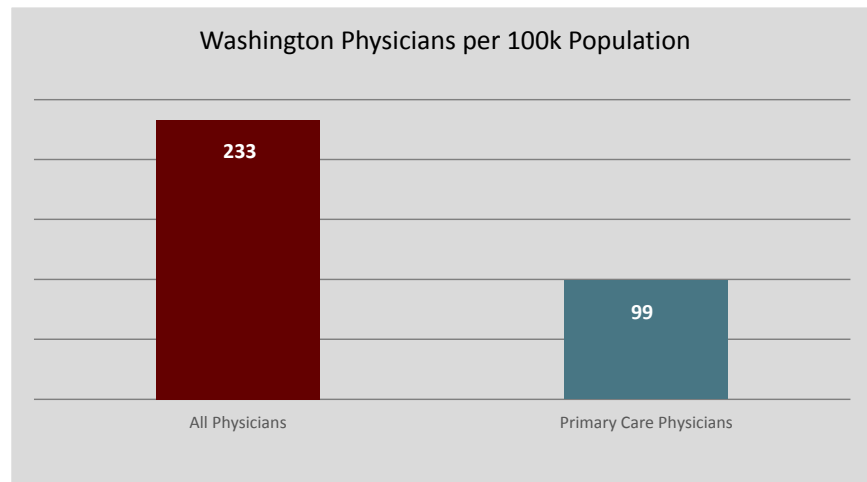
Source: *OFM Forecasting Division, May 2012 Projections of Population, Medium Series.

**Regional designations utilized by Washington Department of Health, 2013 Physicians Demographic Census Survey.

2.2.2 PHYSICIAN POPULATION

There are over 18,000 physicians practicing in Washington. **Exhibit 2-5** illustrates the number of physicians and primary care physicians (PCP) per population in the state (*see AAMC practice definitions at the end of this chapter*) and the relative magnitude of the PCP subset. Just over four of every ten physicians in Washington are in a primary care practice. All physician per population figures on a state-wide basis are slightly better than the national average. (*See Data Table 2-1 in the chapter appendix for more detail.*)

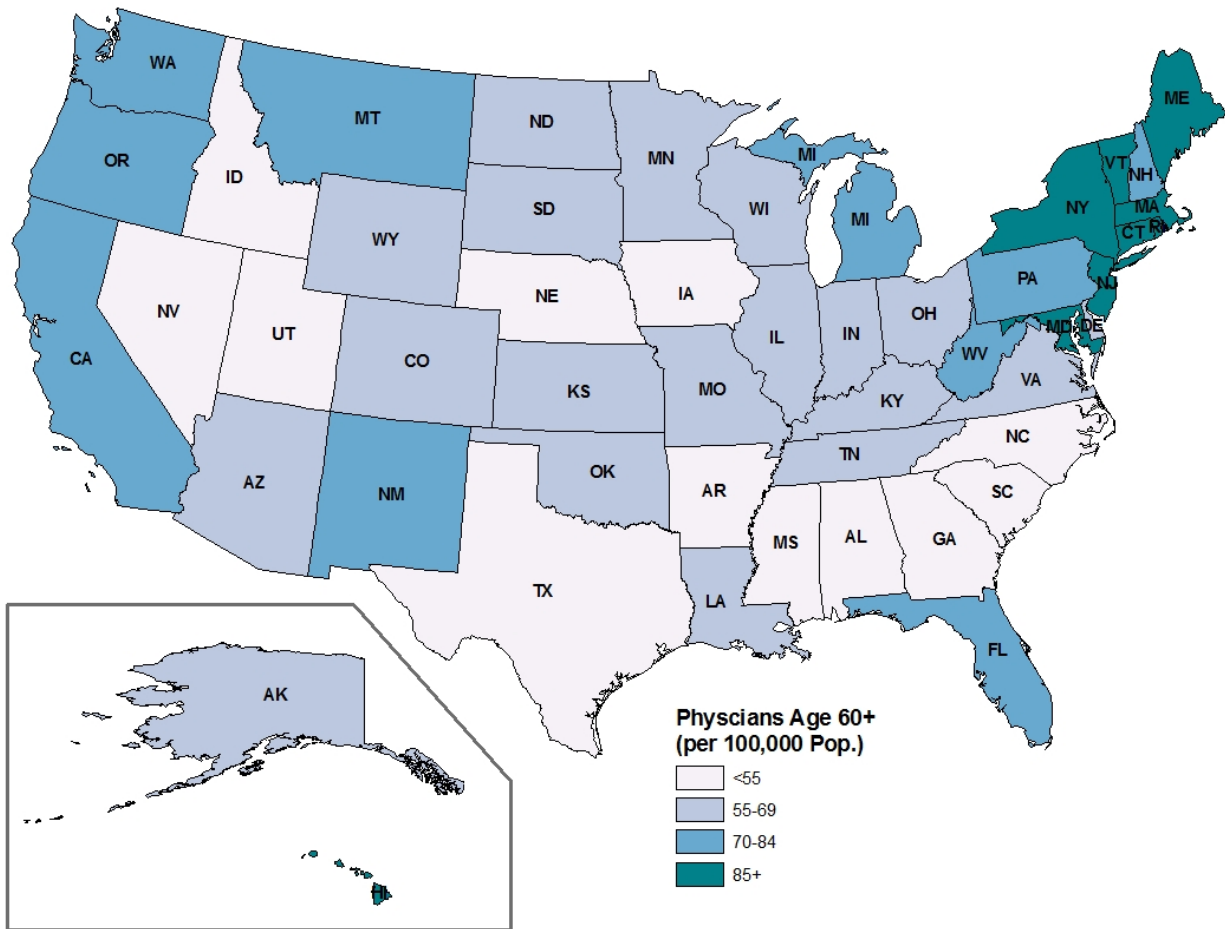
EXHIBIT 2-5
NUMBER OF WASHINGTON PHYSICIANS PER 100,000 POPULATION



Source: 2013 State Physician Workforce Data Book, AAMC based on 2013 AMA Physician Masterfile (Dec. 2012). Includes counts of both M.D.'s and D.O.'s

Along with the general population, the national physician workforce is aging as well. **Exhibit 2-6** illustrates the comparison of physicians age 60+ per 100,000 population across states. Washington is in the second highest category with 74 physicians age 60 and older per 100,000 population placing it in the top third of all states, an indicator of an aging physician workforce.

EXHIBIT 2-6
NATIONAL COMPARISONS AMONG STATES
NUMBER OF PHYSICIANS AGE 60 OR OLDER



Source: 2013 State Physician Workforce Data Book, AAMC based on 2013 AMA Physician Masterfile (Dec. 2012). Includes counts of both M.D. and D.O. Map produced by MGT.

Likewise, Washington has 1.75 physicians older than 60 for each one younger than 40, which is a higher ratio than in two-thirds of the states (*see Data Table 2-2 in the chapter appendix for more detail*). This old-to-young ratio is another indicator of an aging physician workforce. It illustrates that given current circumstances in Washington, the replenishment of that workforce with new physicians is not keeping pace with departures and that gap could widen. For the near future, the retirement bubble will likely grow larger as many physicians who delayed retirement or workload reductions due to the economic downturn, now reconsider. Recent surveys of primary care physicians by the Washington State Office of Financial Management (OFM) and the University of Washington Center for Health Workforce Studies indicate that upwards of 20 percent plan to retire in the next five years.

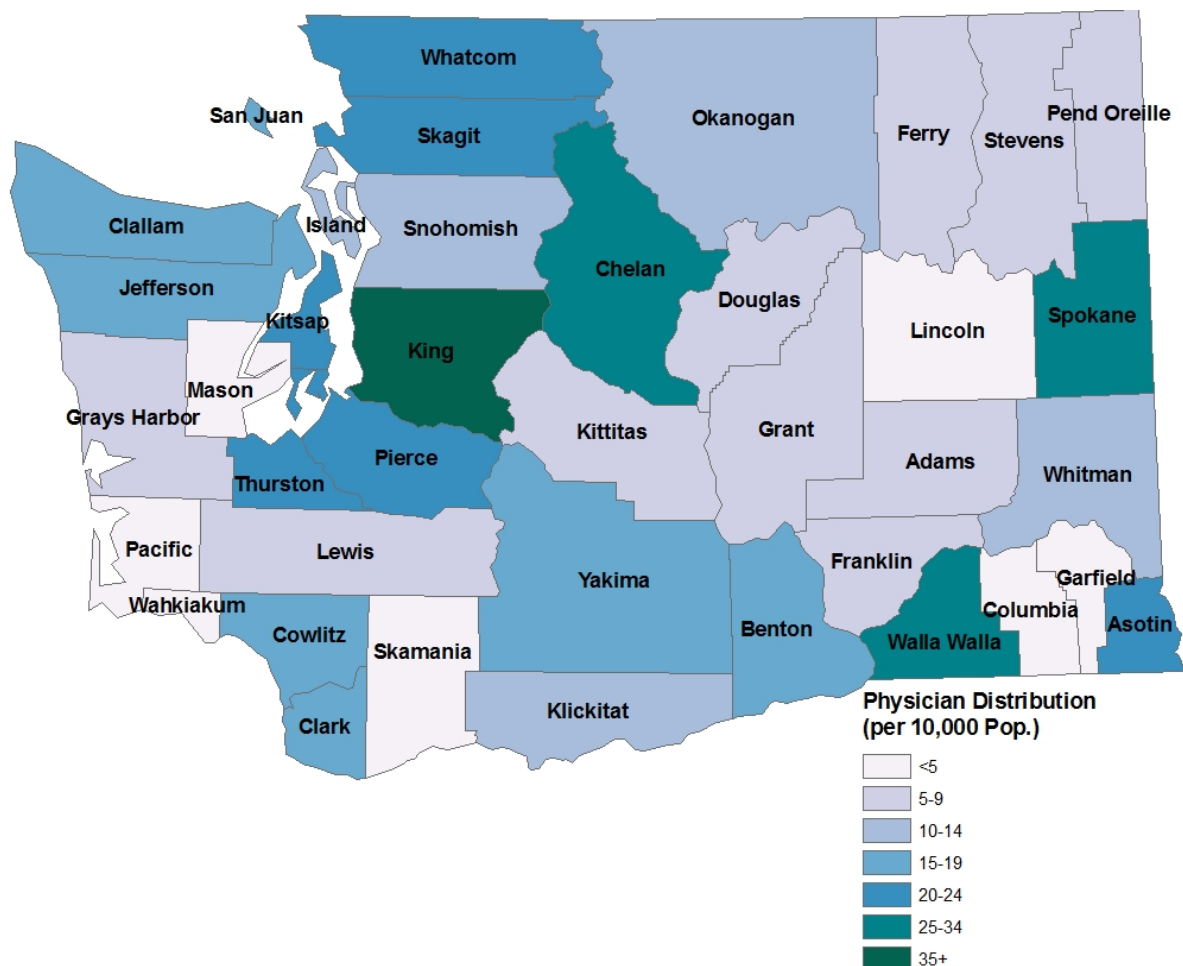
Taking into account population growth, aging, and increased demand for physician access due to implementation of the Affordable Care Act, while maintaining current physician utilization rates, the Robert Graham Center workforce projection model estimated Washington will need an additional 1,695 primary care physicians alone between 2010 and 2030 or 85 more each year. Given the current ratio of

primary care to all physicians, that would equate to roughly 200 additional physicians needed annually beyond current levels or approximately 4,000 new physicians added to the Washington workforce by 2030. Simultaneously, beyond those figures it is estimated that upwards of 300 physicians retire or leave the state workforce annually and must also be replaced. The current capacity of public in-state medical education cannot meet this projected need.

2.2.3 PHYSICIAN DISTRIBUTION ACROSS WASHINGTON

The underlying problem in Washington is not just a shortage of physicians, it is the maldistribution of existing physicians across the state. The national average of physicians per 10,000 population is 22.6. The map in [Exhibit 2-7](#) provides a visual depiction of the state's physician distribution inequities. Expanding the physician workforce to many of these rural and underserved counties is a key driver behind efforts to increase access to medical education in Washington.

EXHIBIT 2-7
WASHINGTON PHYSICIANS PER 10,000 POPULATION BY COUNTY



Source: *AMA 2014 Physician Characteristics and Distribution in the U.S., Table 3.9. Map produced by MGT.

When counties are grouped into one of four Washington Department of Health regions utilized on the State's ongoing Physician Demographic Census survey ([Exhibit 2-8](#)), only the Northwest region (includes the Seattle metro area) shows a disproportionately higher number of physicians than expected (based

on state population distribution). When King and Pierce Counties are examined together, the resulting physician count per capita far exceeds those of the Eastern, Central, and Southwest regions. It is yet another indicator of the physician workforce disparity found across Washington.

EXHIBIT 2-8
COMPARISON OF PHYSICIAN TO POPULATION DISTRIBUTION
REGIONAL SUMMARY

WA Region**	Population		Physician Distribution*		
	2013 Population Estimate	2013 Share of State Total Population	Physicians	Physicians per 100k Population	% of State Total
Statewide	6,882,400	100%	16,796	244	100%
Central	739,430	10.7%	1,155	156	6.9%
Eastern	792,925	11.5%	1,639	207	9.8%
Northwest	3,947,000	57.3%	11,656	295	69.4%
Southwest	1,403,045	20.4%	2,346	167	14.0%
Metro***	2,796,400	40.6%	9,906	354	59.0%

Source: *AMA 2014 Physician Characteristics and Distribution in the U.S., Table 3.9 (patient care physicians).

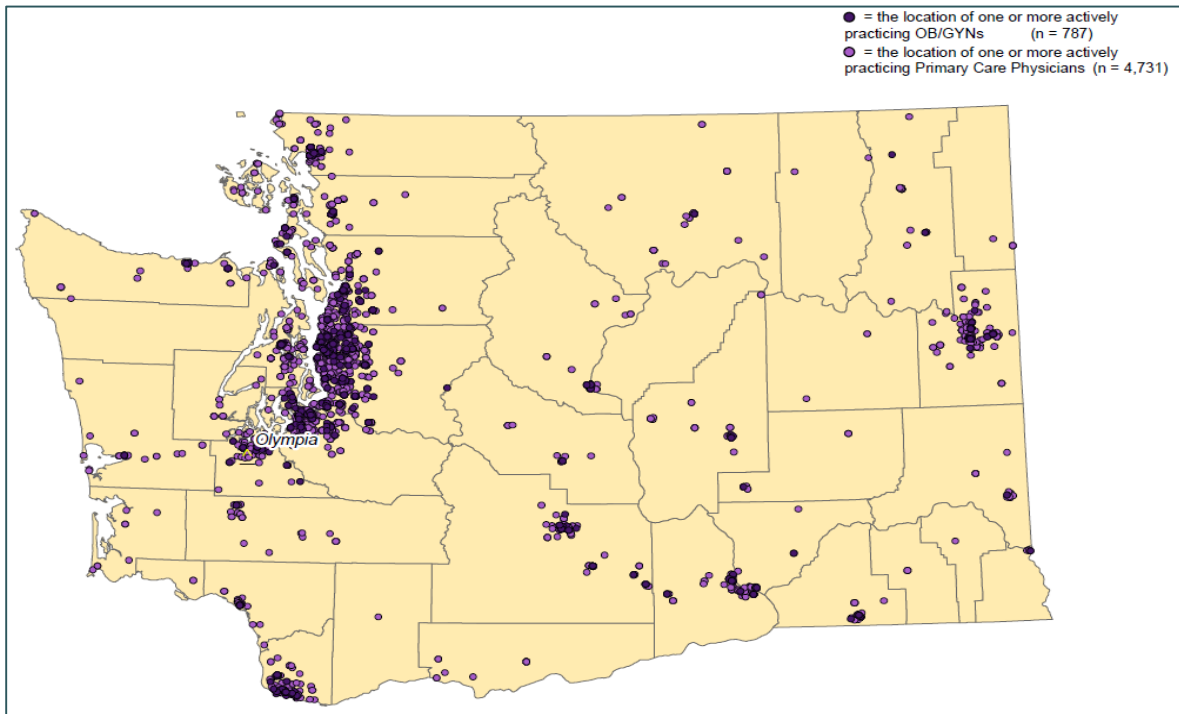
**Regional designations utilized by Washington Department of Health, 2013 Physicians Demographic Census Survey.

***Metro = King and Pierce counties.

A closer look at physician location data (*see Data Table 2-3 in the chapter appendix*) reveals a disproportionate distribution of the physician workforce per 10,000 population across counties when compared to the general population distribution. King County alone accounts for 29 percent of the state's total population, but has nearly half (49%) of the state's physician workforce. Only four counties in Washington have a physician workforce share that exceeds their respective percent of the state's population. These are, in descending order; King, Chelan, Walla Walla, and Spokane.

Based on prior data analysis independent of this study, utilizing the AMA Physician master file for Washington, the location of all active primary care and OB/GYN physicians throughout the state as of 2008 is depicted in [Exhibit 2-9](#). The map provides a compelling picture as the distribution of primary care physicians is clearly centered on the Seattle metro area, while the physician workforce in most areas of Southwestern, Central, and Eastern Washington is sparse.

EXHIBIT 2-9
2008 DISTRIBUTION OF WASHINGTON PRIMARY CARE PHYSICIANS



Source: Provided by Washington State University from the American Medical Association.

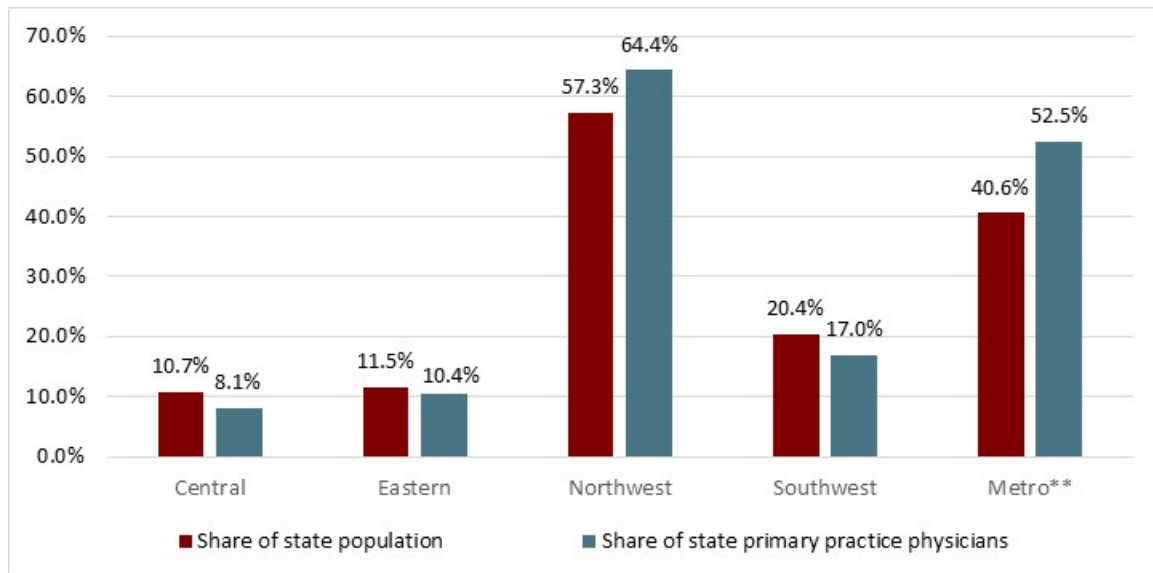
The concentration of physicians in the metro is not just the result of specialists locating in major markets. An examination of the distribution of six primary practice categories ([Exhibit 2-10](#)) reveals a disproportionate distribution across the four regions of Washington (Central, Eastern, Northwest, and Southwest) as well, when compared to its population share. The Central, Eastern, and Southwestern regions each have a lower proportion of the state's physicians in the primary practice categories when compared to their respective share of Washington's total population.

The physician shortage and current maldistribution patterns found in Washington combined with a growing and aging population, expanded health care coverage, and accelerated workforce retirements will most likely have significant consequences on health care access and outcomes for its citizens. Together, these factors will produce more demands on the existing physician workforce. Various research, publications and news articles provide insight into the potential impacts of these circumstances.

Older individuals (65+) tend to visit their doctors twice as often as younger patients, have more ailments, and more chronic health care issues. Nearly half of the annual visits for the most common chronic diseases were found to utilize primary care physicians. Limited access to physicians, particularly those in primary care practices, will be hard felt by those who live in rural and underserved areas. Those areas are also more prone to have higher proportions of uninsured individuals who either do not seek medical care or tend to utilize larger, more costly emergency service providers. Unattended medical conditions lead to more complex and costly health issues.

In a 2008 “white paper” the American College of Physicians (ACP) concluded that availability of primary care physicians is associated with improved health outcomes, reduced mortality, lower utilization, and lower costs of care. States with higher ratios of physicians to population tend to be healthier.

EXHIBIT 2-10
PRIMARY PRACTICE DISTRIBUTION*



Source: Washington State Department of Health (DOH) 2014 Physician Demographics Census Survey Regional Designation.

* Based on responses to WDOH Physicians Demographic Census, 2014 Report.

**Metro = King and Pierce counties. Primary practice categories include: Family Medicine, Internal Medicine, OB/GYN, Pediatrics, Psychiatry, and General Surgery. The latter includes only reported general surgery practice and not specialty surgery practices.

2.3 ACCESS TO MEDICAL EDUCATION

Medicine is one of the most desired future professions among those entering college and contemplating a career. However, admission to medical school has long remained a distant dream for many of our nation’s most talented youth due to artificial limits on medical school enrollments. Some students have the financial resources to go to other countries for their medical education, but most must choose another career to pursue.

Recognizing a pending national physician shortage, the Association of American Medical Colleges (AAMC) in 2006 recommended a 30 percent increase in first-year medical school enrollments over 2002 figures to be achieved by the year 2015. This goal called for an increase of nearly 5,000 additional first-year medical students through a combination of expanding current programs and developing new medical schools. Since 2002, a number of new allopathic U.S. medical schools were established and recognized or accredited by the Liaison Committee on Medical Education (LCME). As of March 2014:

- ♦ Four schools achieved LCME full accreditation.
- ♦ Five schools hold provisional accreditation.
- ♦ Seven schools hold preliminary accreditation.
- ♦ Seven schools have received LCME applicant status.

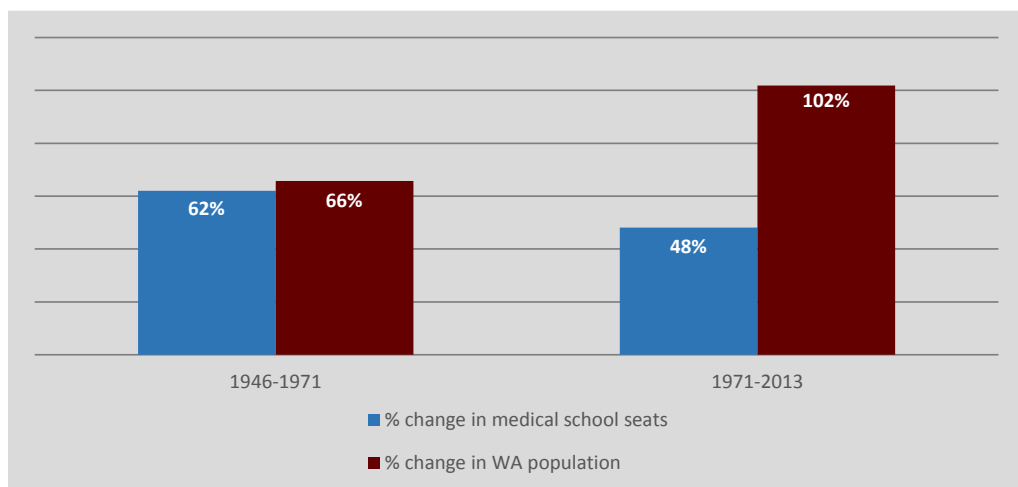
Only two of the 16 recently accredited schools (Arizona and California) are located in the Western U.S., as are two of the seven applicant schools (California and Nevada). None are in the Northwest.

The remainder of this section focuses on data related to the existing medical education opportunities within the state of Washington.

2.3.1 MEDICAL SCHOOL ENROLLMENT

The University of Washington School of Medicine (UWSOM) has been the primary source of medical education in the state for over six decades. Beginning with an inaugural class of 50 in 1946, it grew to include 81 seats per class by 1965. In the 25 years before the WWAMI program inception in 1971, first-year enrollment capacity increased by 62 percent (**Exhibit 2-11**). By the mid-1970s seats per class allocation for Washington residents reached 100 with the inclusion of WWAMI students in Pullman. Capacity remained at that level for nearly 30 years until 2008 with the addition of 20 students in Spokane. Since 1971, WWAMI seats per class allocated for Washington residents have increased by roughly 48 percent to 120. Yet during this same time period, the state's population has doubled. Expansion of public medical education in Washington has not kept pace with population growth.

EXHIBIT 2-11
EXPANSION OF UNIVERSITY OF WASHINGTON SCHOOL OF MEDICINE
SEATS PER CLASS ALLOCATED FOR WASHINGTON RESIDENTS
COMPARED TO STATE POPULATION



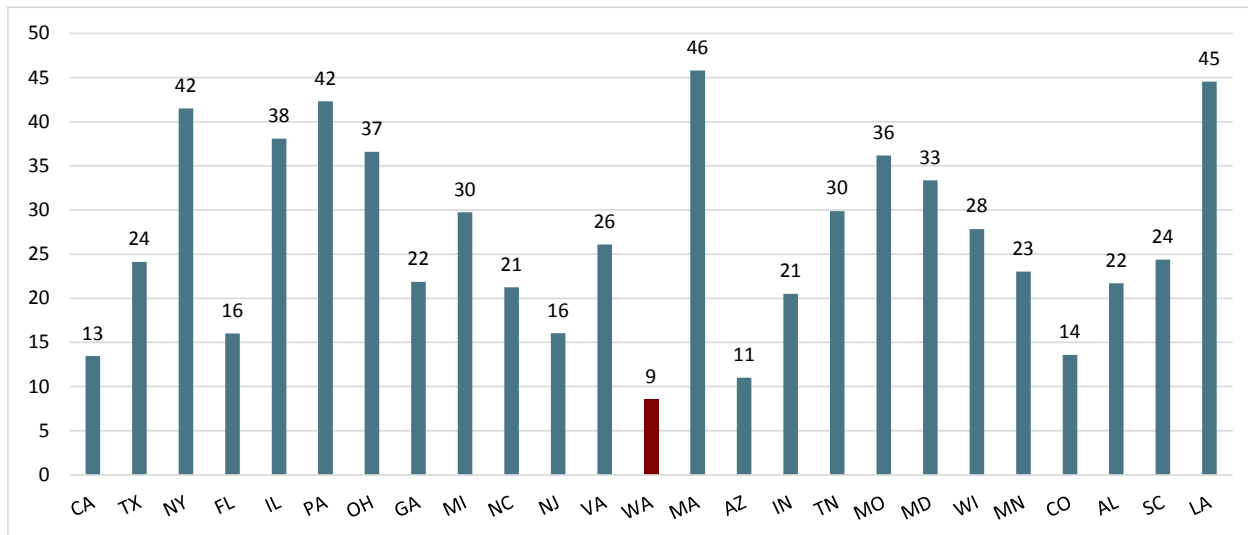
Source: *Regional Solutions to the Physician Workforce Shortage: The WWAMI Experience. Academic Medicine, Vol. 81, No. 10 / October 2006.*

A closer look at overall medical education capacity in Washington in comparison to other states is helpful in understanding the magnitude of current opportunities and limitations that impact the physician workforce pipeline.

Exhibit 2-12 depicts medical school enrollment per 100,000 population for the 25 most populous states. Taking into account the WWAMI program seats reserved for the other four participating states, when comparing Undergraduate Medical Education (UME) enrollments per 100,000 residents, Washington is ranked last with only nine enrollments per 100,000 population. Among the 25 most populous states, the average is 27 and the U.S. average is 26. Even if the osteopathic schools are included, Washington remains near the bottom of all states in terms of the total UME enrollment capacity to population ratio.

Looking only at LCME accredited medical school total enrollments as of 2012-13 academic year, twenty-one states with a population smaller than Washington's have more medical school capacity (see *Data Table 2-4 in the chapter appendix for more detail*).

EXHIBIT 2-12
ACADEMIC YEAR 2012-13 MEDICAL SCHOOL ENROLLMENT
PER 100,000 POPULATION IN THE 25 MOST POPULOUS STATES

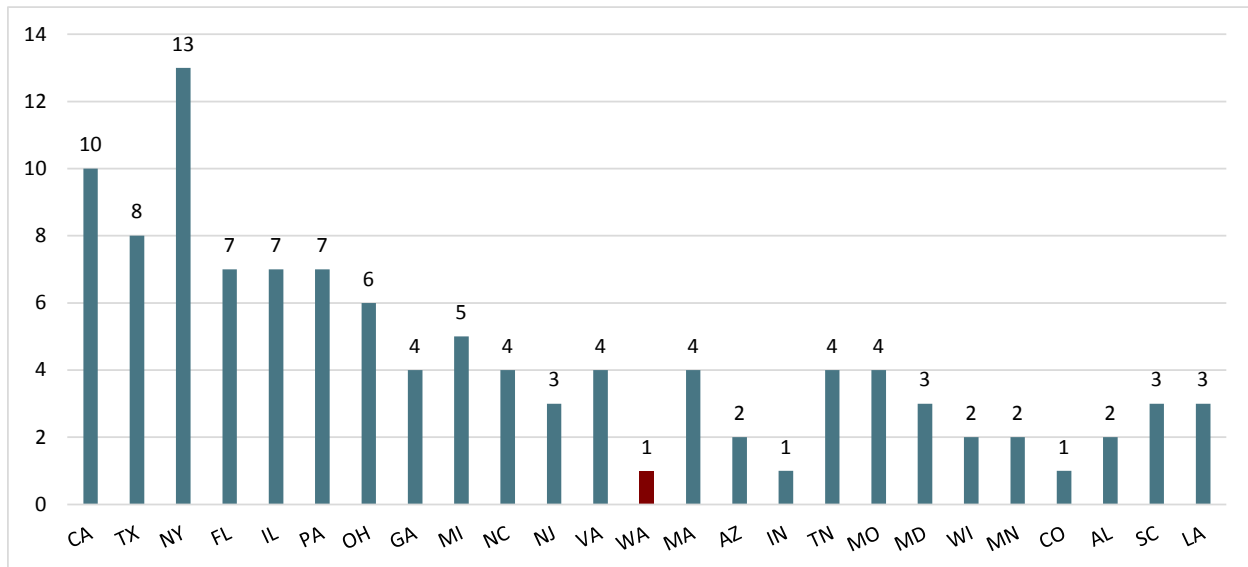


Source: AAMC 2013 Physician Workforce Data Book. Enrollment data from AAMC as of August 2013.

Medical school enrollment for WA has been adjusted to more accurately reflect dedicated seat allocations per the other four WWAMI participating states. Chart produced by MGT.

Access to UME is a recognized factor in addressing the physician shortage and their imbalanced geographic distribution. Doctors often return to practice in the region where they attended medical school. Compared to the 25 most populous states with an average of 4.4 allopathic medical schools each, Washington (which ranks in the middle of this group as 13th most populous) has only one medical school with 120 seats per class available to residents (see [Exhibit 2-13](#)). Twenty-six states and the District of Columbia each have more than one LCME accredited medical school. Of those, 15 have a smaller population than Washington. Furthermore, 20 of these (including DC) are home to three or more medical schools.

EXHIBIT 2-13
LCME ACCREDITED MEDICAL SCHOOL DISTRIBUTION ACROSS THE 25 MOST POPULOUS STATES



Source: AAMC 2013 Physician Workforce Data Book August 2013. Chart produced by MGT.

Further complicating in-state access, less than 15 percent of Washington's 814 applicants (year 2012-13) gained entry to UWSOM to fill the 120 seats allotted for Washington residents. That percent of in-state matriculation once again places Washington far down the list, ranked 42nd of 45 states among those with medical schools. The rate of matriculation to out-of-state schools (27%) by Washington residents is nearly double the in-state rate, as 220 new medical students went elsewhere (*see Data Table 2-6 in the chapter appendix for additional detail*).

When one considers the percentage of medical students matriculating in-state, further analysis shows that Washington ranks 39th among the 45 states hosting an LCME-accredited medical school, with only 35 percent (120 out of 340 matriculants) receiving the opportunity to stay in Washington to attend UWSOM. For the six states that fare worse than Washington with high out-of-state matriculation rates, private medical schools account for most, if not all enrollment capacity located within their respective boundaries, and competition for those seats is not as geographically focused as those in many public medical schools.

Access to a public in-state medical school for Washington residents is much harder to achieve compared to nearly all other states. Annually, there are only two in-state seats available per 100,000 Washington population. This compares poorly to the national average of 6.4 per 100,000 population. To meet today's national average, Washington would need to accommodate 440 new medical students per year instead of 120. With the estimated state population growth to 8.1 million by 2030, the medical school class size would have to rise to 520 to hold steady at the current national average.

The significant allocation of seats per class to WWAMI partner states most certainly constrains the number of seats currently made available to Washington residents seeking to attend medical school at home. Furthermore, other participating WWAMI states continue to express interest in expanding access to medical education for their residents as well. Consequently, the limited opportunities (capacity) for Washington residents to attend medical school in their own state may increase the probability of them

leaving the state for a medical education and decrease the likelihood that they will return to practice medicine in Washington.

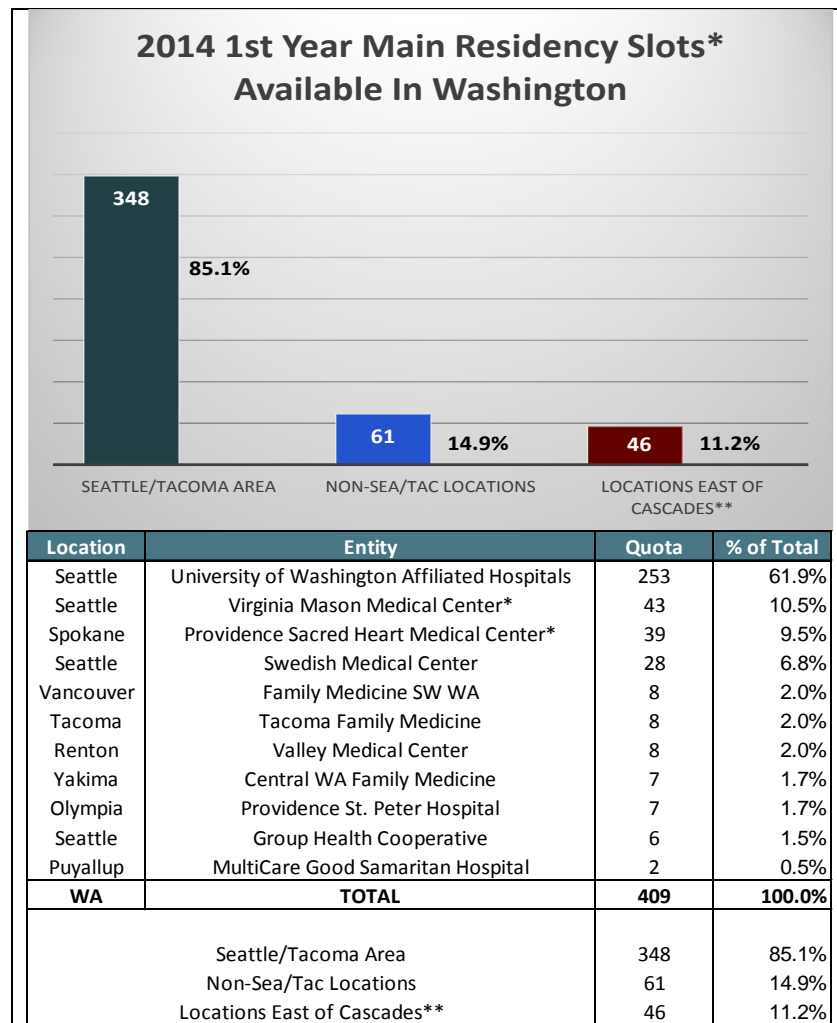
2.3.2 GRADUATE MEDICAL EDUCATION IN WASHINGTON

Access to medical school (UME) is only one half of the medical education opportunity issue and the ongoing physician shortage facing Washington State. In a June 2014 article on the digital media site *Morning Consult*, Shawn Martin, Vice President of the American Academy of Family Physicians, points out several compelling facts regarding graduate medical education (GME) physician training versus subsequent practice location from a 2013 study conducted by the Robert Graham Center. Paraphrased below, several key findings regarding this issue follow.

According to the AAMC Center for Workforce Studies, nearly two-thirds (65%) of physicians are trained in just 12 states. U.S. graduate medical education opportunities are East coast centric. Only 22 percent of new physicians receive GME training west of the Mississippi. A disproportionate number of GME medical residents in those 12 states train in large Academic Health Centers. Data indicate that nationwide, 56 percent of all family physicians practice within 100 miles of where they trained, four in 10 will locate within 25 miles of their residency program, and two in 10 will locate within five miles.

Clearly, location of GME training sites is a key factor impacting physician practice location decisions. As noted in [Exhibit 2-14](#), the majority of residency locations available in Washington are concentrated in the Seattle metro area. Geographic disparity of GME residency slots likely contributes to the current inequitable distribution of total physicians and primary care practitioners across the State. Only 11 percent of the residency positions are located in Central or Eastern Washington areas where rural and underserved communities are more prevalent. Furthermore, in-state medical school graduates must compete with other medical students from across the country as well as international medical education completers for these Washington-based residency positions.

EXHIBIT 2-14
WASHINGTON FIRST-YEAR RESIDENCY LOCATION AND
NRMP 2014 MAIN RESIDENCY MATCH
COUNTS BY WASHINGTON LOCATION



Source: National Resident Matching Program (NRMP), Results and Data: 2014 Main Residency Match®. National Resident Matching Program, Washington, DC. 2014.

* Includes transitional residency slots.

** Only sites are Spokane & Yakima.

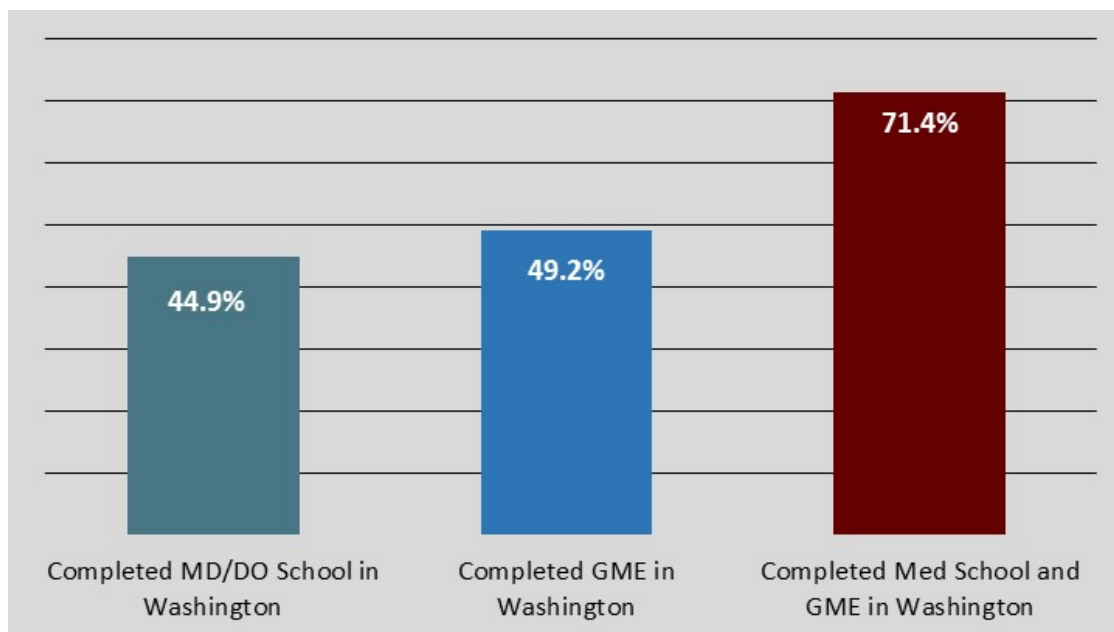
A variety of AAMC data provides further evidence that where one attends medical school or completes one's residency has an impact on eventual practice location. Several key observations are offered in regards to medical education capacity in Washington, competition for UME and GME available slots, and the need to import physicians to balance supply and demand.

As of 2012, only 14 percent of the 18,000 plus physicians practicing in Washington graduated from medical school in the state. That figure is a direct result of the small in-state enrollment capacity for UME and the historical pattern of importing a majority of physicians educated elsewhere (86%) to meet Washington's growing health care needs. Additionally, only 30% of active physicians now practicing in Washington completed their residency work in the state.

Exhibit 2-15 illustrates retention rates of active physicians who did complete all or part of their medical education in Washington.

- ♦ For those physicians who attended only UME in Washington, 45 percent have located their practice there.
- ♦ Slightly less than half (49%) of active physicians who only completed their GME in Washington, remain there in practice.
- ♦ When physicians completed both UME and GME in Washington, more than 70 percent established a practice in the state

EXHIBIT 2-15
PERCENT OF U.S. PHYSICIANS
COMPLETING MEDICAL EDUCATION IN WASHINGTON AND NOW PRACTICING IN-STATE



Source: AAMC 2013 State Physician Workforce Data Book.

2.4 AAMC PHYSICIAN DATA DEFINITIONS

For purposes of analysis and reporting, we have relied heavily on AAMC data tables and reports. Therefore, the applicable AAMC definitions are listed below.

Active physicians: Physicians who report working in administration, direct patient care, medical research, medical teaching, or other non-patient care activities are considered active. Physicians whose major professional activity is unclassified also are considered active. Physicians who are classified as retired, semi-retired, temporarily not in practice, not active for other reasons, residents, or fellows are excluded.

These data refer to physicians who are active in the 50 states of the United States, the District of Columbia, and Puerto Rico—regardless of where they attended medical or osteopathic school. Physicians active in other U.S. territories are excluded. To determine whether or not an active physician is in the United States, the location of the physician's office was used. In cases where the physician's

office location was missing, the state from the preferred mailing address was used. This substitution occurred for approximately nine percent of cases among all active physicians.

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. *The feasibility study refers to this group as “physicians” for ease of presentation unless otherwise noted.*

Primary care physicians: Physicians are counted as primary care physicians if their self-designated primary specialty is one of the following: adolescent medicine, family medicine, general practice, geriatric 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, geriatric medicine (family medicine), 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 at any level of training in an ACGME- or AOA-accredited training program.

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

2.5 SUPPORTING DATA TABLES

DATA TABLE 2-1
COMPARISONS AMONG STATES
NUMBER OF PHYSICIANS*

State	2012 Population Estimates		Total Active Physicians per 100k Population		Patient Care Physicians per 100k Population		Primary Care Physicians per 100k Population	
	#	Rank	Ratio	Rank	Ratio	Rank	Ratio	Rank
U.S.	313,873,685	NA	261	NA	226	NA	90	NA
Alabama	4,817,528	23	201	45	181	45	73	46
Alaska	730,307	47	248	26	224	23	103	13
Arizona	6,551,149	15	231	33	207	32	79	37
Arkansas	2,949,828	32	191	49	174	49	76	43
California	37,999,878	1	258	21	225	22	91	26
Colorado	5,189,458	22	267	17	237	15	95	20
Connecticut	3,591,765	29	333	7	281	5	104	12
Delaware	917,053	45	266	19	232	18	94	21
District of Columbia	633,427	49	878	1	631	1	245	1
Florida	19,320,749	4	253	24	226	21	85	31
Georgia	9,915,646	8	215	40	189	41	76	42
Hawai'i	1,390,090	40	290	11	251	12	111	7
Idaho	1,595,590	39	184	50	173	50	70	47
Illinois	12,868,192	5	263	20	224	24	96	18
Indiana	6,537,782	16	219	38	200	36	78	39
Iowa	3,075,039	30	209	42	182	43	84	34
Kansas	2,885,398	33	213	41	191	40	84	33
Kentucky	4,379,730	26	221	36	196	38	78	40
Louisiana	4,602,134	25	236	30	210	31	78	38
Maine	1,328,501	41	307	8	276	8	124	4
Maryland	5,884,868	19	365	3	285	4	114	6
Massachusetts	6,645,303	14	422	2	324	2	132	2
Michigan	9,882,519	9	268	16	234	16	96	16
Minnesota	5,379,646	21	275	14	243	14	104	11
Mississippi	2,986,450	31	181	51	164	51	63	51
Missouri	6,024,522	18	254	23	219	26	86	30
Montana	1,005,494	44	228	34	213	29	86	29
Nebraska	1,855,350	38	220	37	194	39	83	35
Nevada	2,754,354	35	195	47	176	48	70	49
New Hampshire	1,321,617	42	298	10	266	9	109	8
New Jersey	8,867,749	11	289	12	255	10	96	17
New Mexico	2,083,540	36	232	32	202	35	91	25
New York	19,576,125	3	349	4	288	3	109	9
North Carolina	9,748,364	10	236	29	205	33	83	36
North Dakota	701,345	48	235	31	216	27	92	23
Ohio	11,553,031	7	270	15	228	20	92	24
Oklahoma	3,815,780	28	198	46	182	44	75	45
Oregon	3,899,801	27	282	13	249	13	106	10
Pennsylvania	12,764,475	6	302	9	253	11	99	15
Rhode Island	1,050,304	43	338	5	279	7	114	5
South Carolina	4,723,417	24	217	39	197	37	77	41
South Dakota	834,047	46	221	35	203	34	89	28
Tennessee	6,454,914	17	241	27	215	28	85	32
Texas	26,060,796	2	208	43	183	42	70	48
Utah	2,854,871	34	203	44	180	46	65	50
Vermont	625,953	50	333	6	279	6	129	3
Virginia	8,186,628	12	252	25	222	25	90	27
Washington	6,895,318	13	267	18	233	17	99	14
West Virginia	1,856,680	37	241	28	211	30	94	22
Wisconsin	5,724,554	20	255	22	232	19	95	19
Wyoming	576,626	51	191	48	179	47	76	44

Source: *2013 State Physician Workforce Data Book, AAMC based on 2013 AMA Physician Masterfile (Dec. 2012).
Includes counts of both M.D. and D.O. 2012 State Population Estimates, U.S. Census Bureau, July 1, 2012.

DATA TABLE 2-2
NATIONAL COMPARISONS AMONG STATES
NUMBER OF PHYSICIANS AGE 60 OR OLDER*

State	2012 Physicians Age 60+					Age Ratio: Old to Young MDs**
	Count	%	Rank	Per 100k	Rank	
U.S.	224,861	27.5%	NA	71.6	NA	1.61
Alabama	2,612	27.0%	23	54.2	42	1.72
Alaska	477	26.3%	28	65.3	27	1.79
Arizona	3,988	26.4%	27	60.9	32	1.69
Arkansas	1,609	28.6%	16	54.5	41	1.75
California	30,835	31.5%	2	81.1	12	1.96
Colorado	3,548	25.6%	36	68.4	23	1.58
Connecticut	3,442	28.8%	15	95.8	5	1.75
Delaware	590	24.2%	47	64.3	29	1.44
District of Columbia	1,653	29.7%	9	261.0	1	1.24
Florida	14,318	29.3%	12	74.1	18	2.19
Georgia	5,266	24.7%	44	53.1	45	1.48
Hawai'i	1,229	30.4%	4	88.4	8	1.92
Idaho	721	24.5%	45	45.2	50	1.74
Illinois	8,865	26.2%	29	68.9	21	1.33
Indiana	3,625	25.4%	37	55.4	39	1.51
Iowa	1,608	25.1%	41	52.3	46	1.34
Kansas	1,716	27.9%	19	59.5	33	1.48
Kentucky	2,499	25.8%	33	57.1	36	1.41
Louisiana	3,161	29.1%	13	68.7	22	1.58
Maine	1,243	30.4%	5	93.6	7	2.35
Maryland	6,307	29.4%	11	107.2	3	1.73
Massachusetts	7,516	26.8%	24	113.1	2	1.41
Michigan	7,352	27.8%	21	74.4	16	1.59
Minnesota	3,516	23.7%	48	65.4	26	1.30
Mississippi	1,511	28.0%	18	50.6	48	1.79
Missouri	3,996	26.1%	30	66.3	25	1.34
Montana	716	31.2%	3	71.2	20	2.75
Nebraska	991	24.3%	46	53.4	44	1.23
Nevada	1,332	24.8%	42	48.4	49	1.77
New Hampshire	997	25.3%	38	75.4	14	1.76
New Jersey	7,682	30.0%	6	86.6	10	2.07
New Mexico	1,610	33.3%	1	77.3	13	2.43
New York	20,474	30.0%	7	104.6	4	1.71
North Carolina	5,214	22.6%	50	53.5	43	1.25
North Dakota	427	25.9%	32	60.9	31	1.25
Ohio	7,742	24.8%	43	67.0	24	1.29
Oklahoma	2,237	29.6%	10	58.6	35	1.79
Oregon	2,932	26.7%	25	75.2	15	1.61
Pennsylvania	10,478	27.2%	22	82.1	11	1.47
Rhode Island	923	26.0%	31	87.9	9	1.43
South Carolina	2,586	25.2%	39	54.7	40	1.48
South Dakota	473	25.6%	35	56.7	37	1.39
Tennessee	4,119	26.5%	26	63.8	30	1.67
Texas	13,599	25.1%	40	52.2	47	1.30
Utah	1,043	18.0%	51	36.5	51	1.01
Vermont	589	28.3%	17	94.1	6	2.16
Virginia	5,322	25.8%	34	65.0	28	1.53
Washington	5,119	27.8%	20	74.2	17	1.75
West Virginia	1,337	29.9%	8	72.0	19	1.68
Wisconsin	3,395	23.3%	49	59.3	34	1.35
Wyoming	321	29.1%	14	55.7	38	2.02

Source: *2013 State Physician Workforce Data Book, AAMC based on 2013 AMA Physician Masterfile (Dec. 2012). Includes counts of both M.D. and D.O.

**Age ratio is number of active physicians age 60+ to those under age 40.

DATA TABLE 2-3
WASHINGTON PHYSICIAN POPULATION
BY COUNTY, 2013

County	WA DOH Region**	2013 Population*		# of Physicians		Physician Per 10k Population		# of Patient Care Physicians		Patient Care Physicians per 10K Population	
		Count	%	Count	%	Count	Rank	Count	%	Count	Rank
WASHINGTON		6,882,400	100.0%	22,661	100.0%	32.9	NA	16,796	100.0%	24.4	NA
Adams	East	19,200	0.3%	15	0.1%	7.8	35	14	0.1%	7.3	29
Asotin	East	21,800	0.3%	60	0.3%	27.5	13	47	0.3%	21.6	7
Benton	Central	183,400	2.7%	427	1.9%	23.3	14	350	2.1%	19.1	11
Chelan	Central	73,600	1.1%	294	1.3%	39.9	3	232	1.4%	31.5	2
Clallam	SW	72,350	1.1%	219	1.0%	30.3	9	138	0.8%	19.1	12
Clark	SW	435,500	6.3%	880	3.9%	20.2	17	689	4.1%	15.8	15
Columbia	East	4,100	0.1%	3	0.0%	7.3	37	1	0.0%	2.4	38
Cowlitz	SW	103,300	1.5%	221	1.0%	21.4	16	162	1.0%	15.7	16
Douglas	Central	39,280	0.6%	37	0.2%	9.4	27	24	0.1%	6.1	30
Ferry	East	7,650	0.1%	6	0.0%	7.8	34	4	0.0%	5.2	32
Franklin	East	84,800	1.2%	73	0.3%	8.6	31	67	0.4%	7.9	26
Garfield	East	2,250	0.0%	2	0.0%	8.9	29	1	0.0%	4.4	35
Grant	Central	91,800	1.3%	81	0.4%	8.8	30	68	0.4%	7.4	28
Grays Harbor	SW	73,200	1.1%	75	0.3%	10.2	26	58	0.3%	7.9	25
Island	NW	79,700	1.2%	172	0.8%	21.6	15	98	0.6%	12.3	19
Jefferson	SW	30,275	0.4%	94	0.4%	31.0	7	51	0.3%	16.8	13
King	NW	1,981,900	28.8%	11,059	48.8%	55.8	1	8,157	48.6%	41.2	1
Kitsap	SW	254,000	3.7%	713	3.1%	28.1	11	513	3.1%	20.2	10
Kittitas	Central	41,900	0.6%	48	0.2%	11.5	24	33	0.2%	7.9	27
Klickitat	Central	20,700	0.3%	39	0.2%	18.8	19	24	0.1%	11.6	21
Lewis	SW	76,200	1.1%	104	0.5%	13.6	22	75	0.4%	9.8	23
Lincoln	East	10,675	0.2%	7	0.0%	6.6	38	5	0.0%	4.7	34
Mason	SW	61,800	0.9%	51	0.2%	8.3	33	29	0.2%	4.7	33
Okanogan	Central	41,500	0.6%	64	0.3%	15.4	21	50	0.3%	12.0	20
Pacific	SW	21,000	0.3%	18	0.1%	8.6	32	9	0.1%	4.3	36
Pend Oreille	East	13,150	0.2%	12	0.1%	9.1	28	8	0.0%	6.1	31
Pierce	NW	814,500	11.8%	2,282	10.1%	28.0	12	1,749	10.4%	21.5	8
San Juan	NW	16,000	0.2%	62	0.3%	38.8	4	26	0.2%	16.3	14
Skagit	NW	118,600	1.7%	347	1.5%	29.3	10	250	1.5%	21.1	9
Skamania	SW	11,300	0.2%	7	0.0%	6.2	39	3	0.0%	2.7	37
Snohomish	NW	730,500	10.6%	1,238	5.5%	16.9	20	921	5.5%	12.6	18
Spokane	East	480,000	7.0%	1,635	7.2%	34.1	5	1,236	7.4%	25.8	4
Stevens	East	43,800	0.6%	47	0.2%	10.7	25	35	0.2%	8.0	24
Thurston	SW	260,100	3.8%	832	3.7%	32.0	6	619	3.7%	23.8	5
Wahkiakum	SW	4,020	0.1%	3	0.0%	7.5	36	0	0.0%	0.0	39
Walla Walla	East	59,500	0.9%	261	1.2%	43.9	2	175	1.0%	29.4	3
Whatcom	NW	205,800	3.0%	630	2.8%	30.6	8	455	2.7%	22.1	6
Whitman	East	46,000	0.7%	62	0.3%	13.5	23	46	0.3%	10.0	22
Yakima	Central	247,250	3.6%	481	2.1%	19.5	18	374	2.2%	15.1	17

Source: AMA 2014 Physician Characteristics and Distribution in the U.S., Table 3.9.

* Postcensal estimates of April 1 population: 2010-2013, OFM Forecasting Division.

**Washington DOH 2014 Physician Demographics Census Survey Regional Designation.

DATA TABLE 2-4
ACADEMIC YEAR 2012-13 MEDICAL AND OSTEOPATHIC SCHOOL ENROLLMENT

STATE	U.S. Medical Schools						Osteopathic Schools			All U.S. Schools					
	2012 Total Population	2012-13 Total Enrollment ¹	Rank		Enrollment ¹ per 100,000 Population	Number of Schools ¹	2012-13 Total Enrollment ¹	Enrollment ¹ per 100,000 Population	Number of Schools ¹	2012-13 Total Enrollment ¹	Rank		Enrollment ¹ per 100,000 Population	Number of Schools ¹	
US	313,873,685	80,757	NA		25.7	NA	137	21,741	6.9	30	102,498	NA	32.7	NA	167
Alabama	4,817,528	1,046	25		21.7	29	2	-	0.0		1,046	30	21.7	38	2
Alaska	730,307	80	48		11.0	46		-	0.0		80	50	11.0	49	
Arizona	6,551,149	721	29		11.0	45	2	1,449	22.1	2	2,170	14	33.1	21	4
Arkansas	2,949,828	687	31		23.3	26	1	-	0.0		687	36	23.3	35	1
California	37,999,878	5,111	4		13.5	42	10	1,669	4.4	2	6,780	4	17.8	43	12
Colorado	5,189,458	705	30		13.6	41	1	631	12.2	1	1,336	26	25.7	32	2
Connecticut	3,591,765	905	26		25.2	23	3	-	0.0		905	31	25.2	33	3
Delaware	917,053	-	51		-	50		-	0.0		0	51	0.0	51	
District of Columbia	633,427	2,038	15		321.7	1	3	-	0.0		2,038	17	321.7	1	3
Florida	19,320,749	3,097	7		16.0	38	7	1,684	8.7	2	4,781	6	24.7	34	9
Georgia	9,915,646	2,169	11		21.9	28	4	435	4.4	1	2,604	13	26.3	31	5
Hawaii	1,390,090	258	44		18.6	34	1	-	0.0		258	45	18.6	42	1
Idaho	1,595,590	132	46		8.3	49		-	0.0		132	47	8.3	50	
Illinois	12,868,192	4,899	5		38.1	10	7	797	6.2	1	5,696	5	44.3	12	8
Indiana	6,537,782	1,341	20		20.5	32	1	-	0.0		1,341	25	20.5	40	1
Iowa	3,075,039	654	33		21.3	30	1	892	29.0	1	1,546	22	50.3	8	2
Kansas	2,885,398	792	27		27.4	20	1	-	0.0		792	35	27.4	29	1
Kentucky	4,379,730	1,162	22		26.5	21	2	373	8.5	1	1,535	23	35.0	19	3
Louisiana	4,602,134	2,050	14		44.5	6	3	-	0.0		2,050	16	44.5	11	3
Maine	1,328,501	-	50		-	51		500	37.6	1	500	38	37.6	16	1
Maryland	5,884,868	1,964	16		33.4	14	3	-	0.0		1,964	19	33.4	20	3
Massachusetts	6,645,303	3,043	8		45.8	4	4	-	0.0		3,043	10	45.8	9	4
Michigan	9,882,519	2,941	9		29.8	17	5	1,256	12.7	1	4,197	8	42.5	13	6
Minnesota	5,379,646	1,239	21		23.0	27	2	-	0.0		1,239	27	23.0	36	2
Mississippi	2,986,450	527	36		17.6	35	1	317	10.6	1	844	33	28.3	25	2
Missouri	6,024,522	2,179	10		36.2	13	4	1,667	27.7	2	3,846	9	63.8	4	6
Montana	1,005,494	120	47		11.9	43		-	0.0		120	48	11.9	47	
Nebraska	1,855,350	1,120	24		60.4	3	2	-	0.0		1,120	28	60.4	6	2
Nevada	2,754,354	262	42		9.5	47	1	541	19.6	1	803	34	29.2	24	2
New Hampshire	1,321,617	413	39		31.2	15	1	-	0.0		413	41	31.2	22	1
New Jersey	8,867,749	1,423	19		16.0	37	3	597	6.7	1	2,020	18	22.8	37	4
New Mexico	2,083,540	393	40		18.9	33	1	-	0.0		393	42	18.9	41	1
New York	19,576,125	8,126	1		41.5	8	13	1,727	8.8	2	9,853	1	50.3	7	15
North Carolina	9,748,364	2,070	13		21.2	31	4	-	0.0		2,070	15	21.2	39	4
North Dakota	701,345	261	43		37.2	11	1	-	0.0		261	44	37.2	17	1
Ohio	11,553,031	4,227	6		36.6	12	6	513	4.4	1	4,740	7	41.0	14	7
Oklahoma	3,815,780	665	32		17.4	36	1	385	10.1	1	1,050	29	27.5	28	2
Oregon	3,899,801	551	35		14.1	39	1	-			551	37	14.1	44	1
Pennsylvania	12,764,475	5,401	3		42.3	7	7	2,548	20.0	2	7,949	2	62.3	5	9
Rhode Island	1,050,304	471	37		44.8	5	1	-	0.0		471	39	44.8	10	1
South Carolina	4,723,417	1,151	23		24.4	24	3	321	6.8	1	1,472	24	31.2	23	4
South Dakota	834,047	234	45		28.1	18	1	-	0.0		234	46	28.1	26	1
Tennessee	6,454,914	1,929	17		29.9	16	4	697	10.8	1	2,626	12	40.7	15	5
Texas	26,060,796	6,286	2		24.1	25	8	849	3.3	1	7,135	3	27.4	30	9
Utah	2,854,871	316	41		11.1	44	1	-	0.0		316	43	11.1	48	1
Vermont	625,953	463	38		74.0	2	1	-	0.0		463	40	74.0	3	1
Virginia	8,186,628	2,137	12		26.1	22	4	756	9.2	1	2,893	11	35.3	18	5
Washington	6,895,318	592	34		8.6	48	1	300	4.4	1	892	32	12.9	46	2
West Virginia	1,856,680	732	28		39.4	9	2	837	45.1	1	1,569	21	84.5	2	3
Wisconsin	5,724,554	1,594	18		27.8	19	2	-	0.0		1,594	20	27.8	27	2
Wyoming	576,626	80	49		13.9	40		-	0.0		80	49	13.9	45	

¹ AAMC 2013 Physician Workforce Data Book. Enrollment data from AAMC or AACOM as of August 2013.

Medical school enrollments for WA, AK, ID, MT, and WY have been adjusted to more accurately reflect dedicated seat allocations per WWAMI participation.

Medical school enrollments for ID and UT have been adjusted to accurately reflect dedicated space at University of Utah SOM. Chart does not include data for Puerto Rico.

DATA TABLE 2-5
PERCENT OF 2012 IN-STATE APPLICANTS
MATRICULATING TO MEDICAL SCHOOL

State	U.S. Region	2012 Applicants ¹	Applicants per 100,000 Population	Number Matriculated ²	% Matriculated	Rank	Rate per 100,000 Population	Number of Medical Schools ³
US	NA	43,298	13.8	19,059	44.0%	NA	6.1	137
Alabama	South	454	9.4	247	54.4%	3	5.1	2
Alaska	West	70	9.6	37	52.9%	4	5.1	NA
Arizona	West	776	11.8	282	36.3%	50	4.3	2
Arkansas	South	326	11.1	162	49.7%	8	5.5	1
California	West	5,326	14.0	2,268	42.6%	35	6.0	10
Colorado	West	729	14.0	276	37.9%	49	5.3	1
Connecticut	Northeast	516	14.4	218	42.2%	39	6.1	3
Delaware	Northeast	65	7.1	32	49.2%	9	3.5	NA
District of Columbia	Northeast	88	13.9	41	46.6%	15	6.5	3
Florida	South	2,618	13.6	1,088	41.6%	44	5.6	7
Georgia	South	1,281	12.9	549	42.9%	34	5.5	4
Hawaii	West	182	13.1	74	40.7%	46	5.3	1
Idaho	West	160	10.0	65	40.6%	47	4.1	NA
Illinois	Central	1,972	15.3	893	45.3%	22	6.9	7
Indiana	Central	743	11.4	357	48.0%	13	5.5	1
Iowa	Central	353	11.5	150	42.5%	36	4.9	1
Kansas	Central	479	16.6	220	45.9%	19	7.6	1
Kentucky	South	494	11.3	241	48.8%	11	5.5	2
Louisiana	South	798	17.3	348	43.6%	31	7.6	3
Maine	Northeast	107	8.1	47	43.9%	29	3.5	NA
Maryland	Northeast	1,036	17.6	504	48.6%	12	8.6	3
Massachusetts	Northeast	1,152	17.3	573	49.7%	7	8.6	4
Michigan	Central	1,712	17.3	726	42.4%	38	7.3	5
Minnesota	Central	848	15.8	368	43.4%	32	6.8	2
Mississippi	South	394	13.2	170	43.1%	33	5.7	1
Missouri	Central	664	11.0	331	49.8%	6	5.5	4
Montana	West	125	12.4	55	44.0%	28	5.5	NA
Nebraska	Central	281	15.1	129	45.9%	20	7.0	2
Nevada	West	233	8.5	78	33.5%	51	2.8	1
New Hampshire	Northeast	105	7.9	46	43.8%	30	3.5	1
New Jersey	Northeast	1,676	18.9	757	45.2%	24	8.5	3
New Mexico	West	286	13.7	126	44.1%	27	6.0	1
New York	Northeast	3,098	15.8	1,443	46.6%	16	7.4	13
North Carolina	South	1,062	10.9	445	41.9%	41	4.6	4
North Dakota	Central	133	19.0	60	45.1%	25	8.6	1
Ohio	Central	1,626	14.1	748	46.0%	18	6.5	6
Oklahoma	South	384	10.1	176	45.8%	21	4.6	1
Oregon	West	456	11.7	206	45.2%	23	5.3	1
Pennsylvania	Northeast	1,547	12.1	730	47.2%	14	5.7	7
Rhode Island	Northeast	70	6.7	35	50.0%	5	3.3	1
South Carolina	South	655	13.9	290	44.3%	26	6.1	3
South Dakota	Central	142	17.0	66	46.5%	17	7.9	1
Tennessee	South	774	12.0	315	40.7%	45	4.9	4
Texas	South	3,733	14.3	1,560	41.8%	42	6.0	8
Utah	West	541	19.0	206	38.1%	48	7.2	1
Vermont	Northeast	92	14.7	54	58.7%	1	8.6	1
Virginia	South	1,125	13.7	475	42.2%	40	5.8	4
Washington	West	814	11.8	340	41.8%	43	4.9	1
West Virginia	South	186	10.0	104	55.9%	2	5.6	2
Wisconsin	Central	754	13.2	320	42.4%	37	5.6	2
Wyoming	West	57	1.0	28	49.1%	10	4.9	NA

#1 AAMC 2013 Website Facts: Table 3: Applicants to U.S. Medical Schools by State of Legal Residence, 2001-2012.

#2 AAMC 2013 Website Facts: Table 4: Matriculants to U.S. Medical Schools by State of Legal Residence, 2001-2012.

#3 AAMC 2013 Website Facts: Applicant & Matriculant Data Table 1. Excludes osteopathic schools. The chart above does not include data for Puerto Rico.

DATA TABLE 2-6
PERCENT OF 2012-13 IN-STATE APPLICANTS MATRICULATING
TO IN-STATE VS. OUT-OF-STATE MEDICAL SCHOOL

State	U.S. Region	2012 Applicants ¹	Number Matriculated In-State ²	% Matriculated In-State	Rank	Number Matriculated Out-of-State	% Matriculated Out-of-State	Number of Medical Schools ³
US	NA	43,298	11,691	27.0%	NA	7,368	17.0%	137
Alabama	South	454	219	48.2%	2	28	6.2%	2
Alaska	West	70	0	0.0%	48	37	52.9%	NA
Arizona	West	776	141	18.2%	36	141	18.2%	2
Arkansas	South	326	144	44.2%	3	18	5.5%	1
California	West	5,326	841	15.8%	39	1,427	26.8%	10
Colorado	West	729	90	12.3%	43	186	25.5%	1
Connecticut	Northeast	516	84	16.3%	38	134	26.0%	3
Delaware	Northeast	65	0	0.0%	46	32	49.2%	NA
District of Columbia	Northeast	88	13	14.8%	41	28	31.8%	3
Florida	South	2,618	704	26.9%	29	384	14.7%	7
Georgia	South	1,281	408	31.9%	18	141	11.0%	4
Hawaii	West	182	51	28.0%	26	23	12.6%	1
Idaho	West	160	0	0.0%	49	65	40.6%	NA
Illinois	Central	1,972	582	29.5%	25	311	15.8%	7
Indiana	Central	743	270	36.3%	13	87	11.7%	1
Iowa	Central	353	97	27.5%	28	53	15.0%	1
Kansas	Central	479	181	37.8%	8	39	8.1%	1
Kentucky	South	494	203	41.1%	4	38	7.7%	2
Louisiana	South	798	308	38.6%	7	40	5.0%	3
Maine	Northeast	107	0	0.0%	47	47	43.9%	NA
Maryland	Northeast	1,036	161	15.5%	40	343	33.1%	3
Massachusetts	Northeast	1,152	238	20.7%	33	335	29.1%	4
Michigan	Central	1,712	516	30.1%	24	210	12.3%	5
Minnesota	Central	848	197	23.2%	31	171	20.2%	2
Mississippi	South	394	135	34.3%	17	35	8.9%	1
Missouri	Central	664	204	30.7%	20	127	19.1%	4
Montana	West	125	0	0.0%	50	55	44.0%	NA
Nebraska	Central	281	114	40.6%	5	15	5.3%	2
Nevada	West	233	54	23.2%	32	24	10.3%	1
New Hampshire	Northeast	105	7	6.7%	45	39	37.1%	1
New Jersey	Northeast	1,676	331	19.7%	34	426	25.4%	3
New Mexico	West	286	98	34.3%	16	28	9.8%	1
New York	Northeast	3,098	938	30.3%	23	505	16.3%	13
North Carolina	South	1,062	296	27.9%	27	149	14.0%	4
North Dakota	Central	133	50	37.6%	9	10	7.5%	1
Ohio	Central	1,626	575	35.4%	14	173	10.6%	6
Oklahoma	South	384	141	36.7%	11	35	9.1%	1
Oregon	West	456	85	18.6%	35	121	26.5%	1
Pennsylvania	Northeast	1,547	470	30.4%	22	260	16.8%	7
Rhode Island	Northeast	70	12	17.1%	37	23	32.9%	1
South Carolina	South	655	265	40.5%	6	25	3.8%	3
South Dakota	Central	142	50	35.2%	15	16	11.3%	1
Tennessee	South	774	245	31.7%	19	70	9.0%	4
Texas	South	3,733	1,368	36.6%	12	192	5.1%	8
Utah	West	541	61	11.3%	44	145	26.8%	1
Vermont	Northeast	92	34	37.0%	10	20	21.7%	1
Virginia	South	1,125	263	23.4%	30	212	18.8%	4
Washington	West	814	120	14.7%	42	220	27.0%	1
West Virginia	South	186	97	52.2%	1	7	3.8%	2
Wisconsin	Central	754	230	30.5%	21	90	11.9%	2
Wyoming	West	57	0	0.0%	51	28	49.1%	NA

#1 AAMC 2013 Website Facts: Table 3: Applicants to U.S. Medical Schools by State of Legal Residence, 2001-2012.

#2 AAMC 2013 State Physician Workforce Data Book, Table 11. Excludes osteopathic schools.

#3 AAMC 2013 Website Facts: Applicant & Matriculant Data Table 1. Excludes osteopathic schools.

The chart above does not include data for Puerto Rico.

3.0 CONCEPT FOR THE WSU COLLEGE OF MEDICINE: 21ST CENTURY PHYSICIANS FOR PRACTICE IN DIVERSE SETTINGS

The trend in medical education over the past several decades has been to train students in community settings rather than university teaching hospitals. This approach exposes students to the full spectrum of health issues. This educational model is proving to be significantly more flexible and responsive than the traditional model focused entirely on a single, insular academic medical center. A central premise is that new physicians should be trained in the types of environments in which they will practice. In addition to a superior learning environment, this emerging model for medical education is much more efficient in terms of both capital and operating costs. Based on its successes elsewhere, this model aligns well with the goal of WSU to respond to the state's unmet needs for more physicians, especially in primary care, who will eventually practice in underserved areas of Washington.

3.1 RATIONALE FOR A DISTRIBUTED/COMMUNITY-BASED/AMBULATORY TRAINING MODEL

The *New England Journal of Medicine* published a study in 2001 that analyzed the settings where health care takes place. That study found that of 1,000 people who have medical symptoms in a month, only one reaches the academic health center for health care (*NEJM* 2001, 344:2021-2025). Only the most serious and rare cases reach the academic health center while most medical care is delivered in the community. The implication of the study is that students in traditional models of medical education, which have been based in academic health centers, are not being exposed to settings where they are most needed and most likely to practice. As Michael Whitcomb, then the senior vice president for medical education at the AAMC, noted in his 2006 editorial in *Academic Medicine*, “clerkships based on the inpatient services of major teaching hospitals no longer provide the optimal range of experiences for students to learn clinical medicine.”

In response to the changes in health care delivery over the last few decades, innovative approaches to medical education have been developed that are:

- ♦ Distributed – where students are dispersed across multiple locations for extended periods during their medical education program. Some aspects of the current WWAMI program could be considered distributed, along with programs offered by University of Indiana and Michigan State University. A growing number of medical schools have regional campuses where some students get part of their training, and the AAMC has a Group on Regional Medical Campuses.
- ♦ Community-based – where the medical school uses existing community hospitals for clinical training. The medical school's clinical faculty are typically located there, perhaps along with community faculty. The ownership of the hospital is not under the control of the school. Increasingly, community-based medical education programs are using community physicians as faculty.

- ♦ Ambulatory – where the medical students and their mentors work in an outpatient environment. This can include patients in the hospital who do not stay overnight, ambulatory clinics, and doctor's offices.

Delivery of clinical training at distributed, community, rural, and other ambulatory sites around a state or region have been developed and validated by fully accredited medical schools in the U. S. and Canada. In the fully distributed, community-based, and ambulatory model, medical students are assigned to community physicians in a one-on-one clinical training model in all of the settings in which physicians practice today, and where the patients are. In this model, the majority of student clinical training, 60 to 70 percent or more, is in ambulatory settings.

Early concerns about the quality and effectiveness of these training models proved to be unfounded. In today's world of digital technology, LCME accreditation requirements for curricular oversight which ensure quality and equivalence of the educational experience at all sites is straight-forward and readily achievable. In fact, LCME leaders noted in a recent accreditation report for one of the 21st century schools that "the community faculty apprenticeship model of clinical education provides students with the opportunity to see large numbers of patients, to be involved in all aspects of their care, and to be closely observed for development of competence in their roles as physicians."

In addition to its programmatic advantages, the community-based medical education model also has significant cost advantages. Using data from Texas where several new teaching hospitals are being built, a ballpark estimate for a new teaching hospital in Washington State could cost upwards of \$1 billion. A new medical school that relies on existing community hospitals avoids such sizable investments as well as higher operating costs in the future.

WSU plans for its main medical school campus to be located in Spokane, and medical school regional campuses or other chosen community locations over the State of Washington can serve as the clinical training sites for core clerkships and clinical electives. Ongoing required faculty development for community clinical clerkship faculty will guarantee the success of the M.D. program. Tracking of each individual student contact with patients at all clinical sites through an online clinical data collection system is easily implemented for evaluation of the clerkship experiences as well as for research.

Evidence of the growing support and acceptance of these innovative distributed, community-based, and ambulatory training models is provided by LCME accreditation activity over the past several decades:

- ♦ Both long-standing and newly created programs have incorporated elements of a distributed model in their curriculum.
- ♦ A majority of the wave of new medical education programs accredited in the 1970s and 1980s were (and continue to be) community-based.
- ♦ Two of the five fully accredited medical schools created in the 21st century (no new medical schools were accredited between 1985 and 2002) are primarily ambulatory.

The first of the new 21st century medical schools were the Florida State University College of Medicine (FSU), which admitted its first medical students in 2001, and the Northern Ontario School of Medicine, with its first students admitted in 2005. Both use a fully distributed community-based clinical training model primarily in ambulatory settings, covering a state in the first case and the entire northern region of Ontario in the other.

The third new 21st century school, the Florida International University College of Medicine, operates community-based clinical training sites across the Miami area. The fourth, the University of Central Florida College of Medicine, does not own a teaching hospital but uses community hospitals in the Orlando area for clinical training in mostly hospital-based settings. Finally, students at the Texas Tech University Paul Foster School of Medicine in El Paso receive clinical training at community sites in the region as well as in its teaching hospital. All five of these medical schools are fully accredited members of the AAMC. There are 12 other partially accredited AAMC medical schools still under development that use a variety of approaches for clinical training, but all rely on some variation of the ones above.

3.2 HISTORY OF MEDICAL EDUCATION AT WASHINGTON STATE UNIVERSITY

Education of medical students has been occurring at WSU for more than 40 years. Medical education at Washington State University (WSU) was initiated in 1971 when the WWAMI program was created by the University of Washington School of Medicine (UWSOM) with operations that now extend across five northwestern states. WWAMI incorporates elements of both the distributed and community-based models. Ten medical students arrived at WSU in 1971 for their first year of medical education in the national wave of medical school expansion occurring in the United States (U.S.) in the 1970s and early 1980s to meet physician workforce needs. Initial funding of such programs was available by grants from the National Institutes of Health. The WSU Spokane campus welcomed 20 WWAMI students in 2008 and in recent years all WSU health professions students, including the 20 WWAMI Pullman students, are assigned to Spokane. Since 1971 WSU has heavily invested in infrastructure and in human capital for medical education; and it now possesses medical education resources that far exceed those of most universities that are taking their first steps toward forming a medical school.

3.3 UNINTENDED CONSEQUENCES OF WASHINGTON'S CURRENT MODEL OF MEDICAL EDUCATION

While the UW/WWAMI program has delivered medical education in Washington outside of Seattle for four decades (first in Pullman, then in Spokane), the combination of the state's relatively small production of new physicians and their high density in the Seattle area have created access problems for many patients across the state. Furthermore, the severe limitation in the number of seats offered to Washington students by UWSOM drives many aspiring doctors to pursue their medical education and careers in other states, or to pursue different careers.

The previous chapter documented that most communities in Washington need more physicians, and the problem is acute in the small communities and in rural areas that make up much of the state outside of the Seattle area. As noted, residents of King County make up only 29 percent of Washington's population, yet nearly half of all of Washington's physicians practice in the county. As was discussed in that chapter, King County has 41 physicians delivering patient care per 10,000 population while, at the other end of the spectrum, Columbia County in southeastern Washington has only one practicing physician for its 4,100 citizens. Meanwhile, Washington ranks 48th among the states in medical school enrollment per capita. Almost twice as many well-qualified Washington residents attend an out-of-state medical school as are admitted to the University of Washington School of Medicine.

The geographic maldistribution of physicians is not unique to Washington, but it is exacerbated by the fact that most of the state's future physicians receive their clinical training in hospital settings, and primarily in Seattle. This is true in both medical school (also known as undergraduate medical

education, or UME) and in residency training (also known as graduate medical education, or GME). In fact, 85 percent of all of the first year residency seats in Washington regardless of specialty are located in Seattle, which directly leads to the high density of physicians practicing in King County. Simply increasing the number of Washington students admitted to UWSOM under its current model will not rebalance the maldistribution of physicians.

3.4 MOVING MEDICAL EDUCATION OUT OF THE MEDICAL CENTER

The traditional model of medical education since the time of Flexner’s influential report on the status of medical education in the early 20th century has been academic health center-based. However, studies on the “ecology of medicine” reported as early as 1961, and repeated in 2001, found that only one of 1,000 American patients experiencing health problems in a month reach academic medical centers where most medical students and residents train. Instead, most of those seeking health care find it in ambulatory settings.

The interest of medical educators in ambulatory training experiences for medical students in the U.S. has grown steadily over the past years. This method of training medical students primarily with physicians in remote settings has been in practice in Minnesota since 1971 in the University of Minnesota’s Rural Physician Associate Program (RPAP). Also, schools outside of the U.S., including those in Australia and Canada, have been training students in nontraditional settings outside the academic health center or hospitals for decades. These served as models for the 21st century wave of new medical schools for basing the clerkship training of medical students with physicians in community settings where they practice rather than in academic teaching hospitals. The use of developing online technologies were already important for this model of medical education.

Today these new medical schools are successfully training students in diverse community settings, where most of the patients are. The students see patients all along the continuum of health to disease in doctors’ offices, clinics, hospitals, and in all the settings where health care takes place. Research has shown that these students are much more likely to practice in settings outside of the academic health center than students trained in the high tech settings of tertiary and quaternary care.

A side-by-side comparison of the traditional approach to training physicians and that taken in a community-based distributed approach is shown in [Exhibit 3-1](#).

EXHIBIT 3-1
COMPARISON OF TRADITIONAL AND COMMUNITY-BASED MEDICAL SCHOOLS

Topic	Traditional Medical School	Community-Based Medical School
Focus of curriculum	Focused on 20 th century medical care	Focused on the evolving 21 st century health care system
Hospital relationships	Owns and operates hospitals/clinics	Partners with existing community hospitals and other health care providers
Focus of leadership	Focused on the clinical enterprise	Focused on training physicians
Setting of training	Training primarily in tertiary/quaternary hospital settings	Training in all of the settings where patients are—doctors’ offices, clinics, hospitals, etc.
Range of patients	Focused on the most serious and sickest patients	Focused on all levels of patient care across the life continuum for all kinds of patients

CONCEPT FOR THE WSU COLLEGE OF MEDICINE:
21ST CENTURY PHYSICIANS FOR PRACTICE IN DIVERSE SETTINGS

Location of training	Majority of clinical training occurs in academic medical center	Clinical training is distributed across multiple communities/geographic sites
Source of faculty	Academic physician clinical faculty	Community physician clinical faculty
Source of students	Recruits homogeneous medical student classes based primarily on academic credentials	Recruits diverse medical student classes by building academic pipeline programs from targeted populations in addition to traditional and nontraditional applicants
Student outcomes	Specialty-focused urban-based physician outcomes	Diverse practice outcomes for MD graduates

The innovative approach to medical education envisioned for Washington State University draws from current best practice and is ideally suited to address high priority state needs. Development of pipeline programs in underserved communities reaching into middle schools and high schools, along with colleges and premed programs, will assure an applicant pool of qualified students likely to return to these underserved communities to practice. Population-based and patient outcomes research will develop as a consequence of the community based, distributed clinical training model.

For more information on trends in medical education models, a list of selected readings is provided at the end of this chapter. Selected reading #4 is a published case study of Florida State University's new community-based distributed training model, written 12 years after its creation. An abstract of the case study is provided below.

3.5 CASE STUDY - THE FIRST LCME-ACCREDITED MEDICAL SCHOOL OF THE 21ST CENTURY: THE FLORIDA STATE UNIVERSITY COLLEGE OF MEDICINE

The Florida State University College of Medicine (FSU COM), located in Tallahassee in the Florida Panhandle, was created in 2000 by the Florida Legislature to meet the need for physicians in the state. In spite of the several very large cities in Florida, most of Florida is rural and the physician workforce was both small for the state's size and located mainly in urban areas. At that time, there were three LCME-accredited medical schools in a state of almost 16,000,000 residents, with FSU COM becoming the fourth. Today, the state's population is estimated to be around 19,000,000 with a growing number of citizens over 65, and there are seven LCME-accredited medical schools.

FSU COM became the first new LCME- accredited medical school in the United States in over 20 years and the first of the 21st century, admitting the first 30 students in 2001 and growing to 120 students per entering class at full enrollment. The new medical school was mandated by law to use community-based clinical training for the education of its students, and to address primary care health needs of Florida's citizens, especially the elderly, rural, minorities, and underserved. The new medical school received initial full accreditation by the LCME in 2005 and was reaccredited for the maximum eight years in 2011 by the LCME, which noted a number of strengths, including the FSU COM's apprenticeship model of clinical training of future physicians "where students have the opportunity to see large numbers of patients, to be involved in all aspects of their care, and to be closely observed for development of competence in their roles as physicians."

To meet the state's mandate, the new school has created a unique distributed clinical training model—with clinical campuses in Daytona, Fort Pierce, Orlando, Pensacola, Sarasota and Tallahassee, and two rural sites, one in the Panhandle of Florida and another in a migrant worker village on the edge of the Everglades in Southwest Florida. FSU COM has a facility or clinical campus with dedicated staff at each

of these geographic sites, and is connected by 21st century digital technology. Over 2,300 community physicians serve as clinical faculty across the state. Robust faculty development of community physicians is delivered regularly in live work sessions at the regional clinical campuses and in web-based content. These clinical faculty members report extremely high levels of satisfaction in their roles, and faculty retention rates are very strong. These community faculty report that engagement in the training of medical students has enhanced the quality of care in their communities. They also say that their involvement as medical school faculty is very helpful in recruitment of new physicians, and that there is a greater sense of community and communication among the physicians.

The first two years of preclinical training occurs primarily on the main Florida State University campus in Tallahassee. The preclinical curriculum contains traditional basic science content delivered in lecture, labs, and small group case studies; intensive training in the basic doctoring skills in the clinical learning center and in the simulation laboratory; and early clinical experiences in the Tallahassee community.

The clinical clerkship training of medical students occurs on one of the FSU COM regional clinical campuses, primarily (60%) in ambulatory settings. Students are assigned to community physician clerkship faculty in a one-on-one apprenticeship training model with a physician in his/her office, or at clinics, hospitals, or any setting where the doctor delivers health care. Primary care medicine, including a longitudinal geriatrics medicine community experience, is embedded in the clinical training curriculum.

Other unique features of the medical school are mission-based admission policies; an interdisciplinary departmental structure with only five academic departments; a 21st century all-digital library accessible to all students, staff, and faculty wherever they are; student learning communities; and a very successful pipeline of outreach programs targeting underserved populations which reaches from middle school to medical school. The outreach programs produce about 20% of the medical classes admitted each year. Community-based clinical translational research built on the infrastructure of the geographically distributed clinical campus network is bringing community-based research opportunities to community physicians through their participation as investigators in clinical research projects.

The FSU COM graduated its 10th class of physicians in 2014, bringing the total number of graduates to 680. An analysis of the performance of these initial graduates documents the quality of the program and its success in fulfilling its legislatively mandated mission. FSU COM students perform above the national average on USMLE exams, and they match in excellent residency training programs. The directors of these programs assess the College's graduates as performing better in the clinical arena than their peers. Of the 680 graduates, 193 had entered practice as of June, 2014, while the rest are in residency or fellowship training programs. More than half, (56%) of the graduates are practicing in Florida and 61% of all graduates are practicing primary care, including obstetrics-gynecology. Finally, 22% of all graduates are practicing in rural settings.

Selected Readings on Innovative Models of Medical Education

1. Anderson MB. A snapshot of medical students' education at the beginning of the 21st Century: Report from 130 schools. *Academic Medicine* 2000; 75: (9 suppl.).
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7. Hurt MM, Harris JO. Founding a New College of Medicine at Florida State University. *Academic Medicine*. 2005; 80: 973-979.
8. Ludmerer KM. *Time to Heal, American Medical Education from the Turn of the Century to Era of Managed Care*, Oxford University Press, Inc., 1999.
9. Mallon WT. Medical School Expansion: Déjà Vu All Over Again? *Academic Med*. 2007; 82:1121–1125.
10. Matte MC, Lampher JH, Strasser R. Northern Ontario Medical School. *Academic Medicine* 2010; 85(9 Suppl):S628-632.
11. Rourke JT, Strasser R. Education for rural practice in Canada and Australia. *Academic Medicine* 1996; 71 (5):464-9.
12. Socio-Economic Impact Study: The Florida State University College of Medicine. Prepared by MGT of America, Inc.: 2011.
13. Whitcomb ME. Ambulatory-Based Clinical Education: Flexner Revisited. *Academic Medicine* 2006;81:105-106
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4.0 PROGRAM ACCREDITATION AND AVAILABLE WSU ASSETS

A key issue in the feasibility assessment is whether WSU is ready to initiate the process for gaining accreditation of a new medical education program from the Liaison Committee on Medical Education (LCME). The LCME is a joint accreditation committee of the AMA and AAMC. Standards used in the LCME accreditation review provide a framework for assessing available assets at WSU. With a long history of delivering medical education through the WWAMI program, WSU was included in LCME's most recent site survey of the UWSOM, and helped secure UWSOM's continued accreditation. Further, recent construction and the existence of other closely related health professions programs already established at WSU provide many of the assets needed for a successful medical school. In fact, WSU has a much higher state of readiness to begin the accreditation process than most new medical schools accredited over the past decade had at the outset.






4.1 LCME STANDARDS FOR ACCREDITATION

LCME accreditation is critical for a new medical education program at WSU. According to the LCME, accreditation signifies that national standards for structure, function, and performance are met by a medical school's education program leading to the M.D. degree. LCME accreditation establishes eligibility for selected federal grants and programs, including Title VII funding administered by the Public Health Service. Students and graduates of LCME-accredited medical schools are eligible to take the United States Medical Licensing Examination (USMLE). These graduates also have eligibility to enter residencies approved by the Accreditation Council for Graduate Medical Education (ACGME). Graduating from an LCME-accredited U.S. school and passing the national licensing examinations are accepted as prerequisites for medical licensure in most states. (LCME.org)

Gaining LCME accreditation occurs over a five-step process as shown in [Exhibit 4-1](#). WSU can become an "Applicant" at any time after being granted authorization by its Board of Regents and being able to demonstrate financial ability to develop the school over the next decade and beyond. While in applicant status, WSU will undertake its initial self-study, develop plans, and complete a Data Collection Instrument (DCI) to seek "Candidate" status. Once candidate status is confirmed, the schedule for an on-site survey visit will be developed and, after the survey team confirms readiness, "Preliminary Accreditation" status will be granted by LCME. At that time, WSU can initiate the process for student admissions and announce the starting date for its charter class.

EXHIBIT 4-1
FIVE-STEP PROCESS FOR GAINING LCME ACCREDITATION

Process for Obtaining LCME Accreditation

	 Applicant	 Candidate	 Preliminary	 Provisional	 Full
Status	Not accredited	Not accredited	Accredited, <i>preliminary status</i>	Accredited, <i>provisional status</i>	Accredited
Process	<p>1</p> <ul style="list-style-type: none"> Program submits \$25,000 application fee and application affirming it will be offered in the U.S. or Canada and that the institution will be chartered and located in the U.S. or Canada Applicant submits Preliminary DCI and self-study within 18 months of initial application LCME reviews materials; determines that sufficient progress has been made to warrant an on-site survey visit for preliminary accreditation "Candidate" status granted 	<p>2</p> <ul style="list-style-type: none"> Onsite survey visit conducted LCME reviews survey report; determines sufficient progress has been made toward compliance with <i>those standards deemed to be essential prerequisites to the admission of a charter class</i> Preliminary accreditation granted 	<p>3</p> <ul style="list-style-type: none"> Charter class begins first year Program submits Provisional DCI and self-study Survey visit conducted before charter class reaches midpoint of second year LCME reviews survey report; determines that sufficient progress has been made toward program implementation and compliance with <i>relevant</i> standards Provisional accreditation granted 	<p>4</p> <ul style="list-style-type: none"> Charter class progresses to third year Program submits Full DCI and self-study Survey visit conducted early in fourth year of charter class LCME reviews survey report; determines program is in sufficient compliance with accreditation standards Full accreditation granted for the balance of an eight-year term 	<ul style="list-style-type: none"> Onsite survey visits conducted once every eight years for continued accreditation Eight-year accreditation cycle begins year of initial accreditation (e.g. year preliminary accreditation granted)
Restrictions	Prior to receiving preliminary accreditation, programs MAY NOT : <ul style="list-style-type: none"> recruit or advertise for students; solicit or collect application fees or applicant information; initiate a process for reviewing admissions applications; schedule interviews for potential matriculants issue letters of admission 			Program is now subject to full set of LCME accreditation standards	

*Based on a four-year curriculum. An alternative timetable will be developed for programs of a different duration.
Source: LCME.org.

The LCME self-study and on-site survey will address twelve “standards” or areas of concern. As a group, the twelve standards are used to assess the readiness and capacity of the host university to offer a medical education program that will produce graduates who are prepared to succeed in residency programs and medical practice. The twelve standards that go into effect in July 2015 are listed in **Exhibit 4-2**. A number of specific concerns are contained within each of the twelve standards.

EXHIBIT 4-2
LCME STANDARDS EFFECTIVE 2015

Standard Number	Topics of Concern
Standard 1	Mission, Planning, Organization, and Integrity
Standard 2	Leadership and Administration
Standard 3	Academic and Learning Environments
Standard 4	Faculty Preparation, Productivity, Participation, and Policies
Standard 5	Educational Resources and Infrastructure
Standard 6	Competencies, Curricular Objectives, and Curricular Design
Standard 7	Curricular Content
Standard 8	Curricular Management, Evaluation, and Enhancement
Standard 9	Teaching, Supervision, Assessment, and Student and Patient Safety
Standard 10	Medical Student Selection, Assignment, and Progress
Standard 11	Medical Student Academic Support, Career Advising, and Educational Records
Standard 12	Medical Student Health Services, Personal Counseling, and Financial Aid Services

Source: LCME.org.

The *LCME Accreditation Guidelines for New and Developing Medical Schools* make clear that new educational programs do not need to comply immediately with all LCME accreditation standards nor have the resources in place for the entire program. For example, a new program preparing to admit its first class would not yet be expected to have all the faculty in place to teach third and fourth year students. Nevertheless, the LCME does expect some elements of institutional organization, operation, and resources to be in place before it will consider the program for preliminary accreditation.

Due to the strength of its health professions programs and its long affiliation with WWAMI since 1971, WSU is in a position to satisfy a number of the LCME standards for candidacy status, while compliance with other standards can only occur after extensive program planning takes place as part of the self-study process after authorization to begin planning is granted. In particular, WSU is already in a strong position with respect to standards related to:

- ♦ Standard 1: Mission, Planning, Organization, and Integrity
- ♦ Standard 2: Leadership and Administration
- ♦ Standard 4: Faculty Preparation, Productivity, Participation, and Policies
- ♦ Standard 5: Educational Resources and Infrastructure
- ♦ Standard 11: Medical Student Academic Support, Career Advising, and Educational Records
- ♦ Standard 12: Medical Student Health Services, Personal Counseling, and Financial Aid Services

The next section of this chapter summarizes our assessment of the assets that WSU already has in place to begin to demonstrate compliance with these six standards.

4.2 CURRENT WSU ASSETS

We have compiled information about organizational, academic and physical resources at WSU related to its ability to offer a medical education program. Our preliminary analysis of this information is reported below for the six standards related to existing capacity.

Standard 1: Mission, Planning, Organization, and Integrity

LCME Expectations:

The manner in which the medical school is organized, including the responsibilities and privileges of administrative officers, faculty members, standing committees, and students must be established, and the relationship of the medical school to the university should be made clear. To have a reasonable likelihood of complying with relevant standards for preliminary accreditation, a new medical school should have accomplished at least the following with regard to the institutional setting of the educational program:

- ♦ For medical schools operating as part of a university, formal delineation of the relationship between the medical school and the parent university
- ♦ Definition of the governance structure of the medical school, including the composition and terms of membership of any governing board
- ♦ Development of a job description for the dean, with approval of the description from appropriate university authorities
- ♦ Appointment of the founding dean
- ♦ Appointment of the senior leadership within the dean's staff, particularly in the areas of academic affairs, student affairs, hospital relationships, and administration and finance
- ♦ Appointment of administrative leadership (e.g., department chairs or their equivalent) for academic units that will have major responsibilities for medical student education, especially in those disciplines to be taught during the two years of the curriculum
- ♦ Chartering of the major standing committees of the medical school, particularly those dealing with the curriculum, student advancement, admissions, and faculty promotion & tenure (*LCME Accreditation Guidelines for New and Developing Medical Schools*)

WSU Current Status and Next Steps:

WSU has well-defined governance models and administrative policies and procedures that have proven successful over the years across the many programs offered by the university. These governance models are based on the College as the central academic unit responsible for developing programs, delivering curriculum, and facilitating research. In May 2014, the Board of Regents established a new College of Medical Sciences which is to be the administrative home of the planned new medical school. The next steps will include the appointment of a founding dean, the appointment of his/her administrative staff, and the chartering of the standing committees.

Standard 2: Leadership and Administration

LCME Expectations:

The LCME considers the development of a concise job description and the appointment of the founding dean as essential starting points for the creation of a medical education program. The

founding dean serves as the focal point for providing leadership in the implementation of the medical school's missions and goals, and acts as the catalyst for securing the resources needed to assure the accomplishment of the school's aims.

Senior leadership in education, student affairs, hospital relationships, and administration & finance is necessary to begin implementation of programs and services in these areas. Corollary appointment of administrative leadership, especially in those academic units that will have substantial involvement in medical student education, creates an infrastructure that should facilitate effective development of the educational program. An appropriate committee structure rounds out the organizational framework for operations and decision-making that has proven successful in existing accredited programs. Standing committees should be chartered in medical school or university bylaws, and should have a clearly delineated charge or terms of reference that will facilitate their effective functioning. (*LCME Accreditation Guidelines for New and Developing Medical Schools*)

WSU Current Status and Next Steps:

Through its participation in the WWAMI medical education program, WSU and its College of Medical Sciences already have in place key members of a leadership team that are familiar with and experienced in the operation of an accredited medical education program. The College has an acting dean leading this unit in advance of hiring the founding dean, and it has associate deans for student affairs, curriculum, and research. Additionally, the Spokane campus has a strong infrastructure to support research and education programs in the health professions, including animal care facilities, health and safety procedures, and grant administration expertise among others.

As it proceeds through the early stages of the accreditation process, WSU will need to appoint the founding dean of its medical school. At the same time, or shortly thereafter, WSU will need to expand staffing for its student affairs function that is specific to the needs of medical students. This work is already underway with an active office of student affairs in the College of Medical Sciences.

Standard 4: Faculty Preparation, Productivity, Participation, and Policies

LCME Expectations:

The school needs enough faculty to deliver the first year of instruction and to make any necessary decisions about student admissions, curriculum design and management, student evaluation and promotion policies, and any other activities that are fundamental to the school's ability to accomplish its mission and goals. Such faculty should have appropriate content expertise for the material to be learned, and be familiar with the school's educational objectives.

While faculty to teach the second year do not need to have been hired before the charter class is admitted, the school should at least have identified the numbers and types of faculty needed for the second year so that hiring can begin before or early during the first year of the educational program. (*LCME Accreditation Guidelines for New and Developing Medical Schools*)

WSU Current Status and Next Steps:

WSU has a significant number of regular and community faculty actively involved in accredited medical education programs. **Exhibit 4-3** lists the faculty resources (LCME Standard 4) that WSU Spokane can

deploy in starting a new medical education program. The number of potential faculty by medical specialty and partner organization are summarized.

EXHIBIT 4-3
PROFILE OF CURRENTLY AVAILABLE FACULTY

Organization	Number of Faculty		SPECIALTIES																												
	1st Year	2nd Year	Anatomy	Biochemistry	Cardiology	Clinical Medicine	Dermatology	Endocrinology	Epidemiology	Family Medicine	Gastroenterology	Genetics	Histology	Immunology	Internal Medicine	Interprofessional Education	Microbiology	Nephrology	Nervous System	Nutrition	OB/GYN	Oncology	Pathology	Pediatrics	Pharmacology	Physiology	Psychiatry	Psychology	Public Health	Pulmonology	Rheumatology
WSU	31		3	2		4			1				3	2		2	1		6	1					1	3		2			
Group Health	1	3				1			2															1							
Sacred Heart	4	4				2			1						2		2							1							
Faculty In Waiting																															
	NA	2nd Year																													
WSU		14							1			2				1			1						5	2	1		1		
Arthritis NW		1																													1
Dermatology Specialists of Spokane		1					1																								
Incyte		10																					10								
Kidney Care Spokane, Deaconess		1																1													
Providence		2			1																									1	
Providence Spokane Cardiology		1			1																										
Rockwood		2						1															1								
Sacred Heart		1													1								1								
Spokane Digestive Health Ctr.		1									1																				
Spokane Critical Care Associates		1																												1	
Spokane Family Practice Residency		1								1																					
Valley Ob/Gyn		1																			1										
Other		1																						1							

Source: WSU College of Medical Sciences.

Standard 5: Educational Resources and Infrastructure

LCME Expectations:

The following resource requirements are considered essential prerequisites for a school seeking preliminary accreditation:

- ♦ Budgets and supporting financial resources for the first five years of operation
- ♦ Classroom space and supporting educational infrastructure for the first year of instruction
- ♦ Plans for providing classroom space and any supporting educational infrastructure for the second year of study
- ♦ Library and information technology services appropriate to the needs of the school for education, research, and patient care
- ♦ Identification of clinical teaching sites

New schools should demonstrate that they have sufficient financial resources to accommodate the development of their educational program and to accomplish any other institutional goals. Operating budgets for the first years should be provided to indicate expected revenue sources and expenditures.

Adequate physical resources for the first year of the educational program need to be in place, including classroom, laboratory, and office space, study space for students, and support services (e.g., room scheduling, exam grading, and security). Planning for second-year resources allows for consideration and identification of potential shared facilities such as classrooms, wet labs, physical examination rooms, etc.

The information needs of students and faculty for teaching, research, and any patient care should be addressed by library and information technology systems as appropriate. The inpatient and ambulatory sites that will be used for medical student education across the entire curriculum should be identified. Affiliation agreements must be negotiated and signed for any clinical facilities used for instruction during the first and second years. (*LCME Accreditation Guidelines for New and Developing Medical Schools*)

WSU Current Status and Next Steps:

Chapter 5 of the feasibility report outlines the financial requirements for developing a new, accredited medical education program. Details about operating budget requirements for further planning stages and initial years of operation are summarized. Adequate funds from a combination of state appropriations, student tuition, and private gifts are expected to be available to support the new school, but further details of funding commitments will be needed.

With recent construction on its Spokane campus, WSU has state of the art medical education facilities that should assure compliance with LCME Standard 5 in the early stages of the accreditation process. **Exhibit 4-4** summarizes the square footage of space by type in the new Pharmaceutical and Biomedical Sciences (PBS) Building and other campus space that will be available for medical education.

EXHIBIT 4-4
WSU FACILITIES

WSU-Spokane Facilities for Medical Education				
Space Type	Square Footage			Comments
	PBS Building Overall	Medicine in PBS Building	Medicine in Other Buildings	
Office	11,832	5,239	7,510	
Research Lab	20,533	8,646	6,227	
Anatomy Labs	5,901	5,901	2000	Total of 42 tables accomodating up to 168 students
Simulation Labs	0	0	2,900	The 2,900 square foot space is in the Nursing building
Other Teaching Labs	5,711	0	7,715	
Classroom	4 classrooms 6,244 sq ft total	4 classrooms 6,244 sq ft total	4 classrooms 3,976 sq ft total	
Library	0	0	0	11,580 square foot library is housed in the Academic Center
Study Rooms	3,905	0	2,000	The 2,000 square feet space is medical student-only lounge space in SAC and HSB buildings
Lounges	10,079	10,079	0	
Vivarium	6,168		2,500	The 2,500 square foot space is in the IW and HSB buildings
NOTES: Space under the heading of "Medicine in other buildings" encompasses the Speech and Hearing Sciences department in HSB, as well as other teaching labs and classrooms.				
The Medical students library resources are housed in their study rooms, and the main library is open to all students on campus.				
New Clinic will open on campus in 2015, comprising 45,000 square feet.				
	Seats			
	PBS Building Overall	Medicine in PBS Building	Medicine in Other Buildings	
Auditorium	156		261	The auditorium in PBS is shared between Pharmacy and Medical Sciences and the auditoriums in SAC are general use auditoriums.

Source: WSU College of Medical Sciences.

Spokane County is the largest medical center in the Pacific Northwest between Minneapolis and Seattle and has an abundance of clinical teaching sites that could become available to a new WSU medical school. State records indicate that more than 1,600 licensed physicians live in the county, and many have experience in teaching medical students and residents. The Washington Alliance of Teaching Physicians has indicated its strong support for development of a new medical school in Spokane. The county is home to four general hospitals with over 1,200 beds as well as to several specialty hospitals (Shriners, Veterans Administration, Air Force and psychiatric) that provide a rich mixture of patients for medical education. Hospital leaders have expressed their interest in pursuing affiliation with a new WSU medical school if established.

As part of its documentation of educational resources for the self-study, WSU will need to address the current and planned capacity of library resources for medical education. Also, as plans develop for a distributed educational model across multiple locations, WSU will need to demonstrate its capacity to provide appropriate telecommunications and IT support for students and faculty away from the Spokane location.

Standard 11: Medical Student Academic Support, Career Advising, and Educational Records**AND****Standard 12: Medical Student Health Services, Personal Counseling, and Financial Aid Services***LCME Expectations:*

The school will need resources in place to provide basic student services in the areas of academic counseling and tutorial services, financial aid services and counseling, preventive and therapeutic health services, and personal counseling. If the school intends to utilize parent university resources for some of these services, it should assure that mechanisms are developed to address any unique needs of medical students. The school should also decide which immunizations it will require, and develop protocols for addressing student exposure to infectious and environmental hazards.

Criteria for reviewing student performance, and for making decisions about advancement or dismissal, need to be elaborated before the charter class is admitted. Policies relating to student advancement, graduation, dismissal, and disciplinary action should be written and available to entering students.

The school should also develop and publicize to the academic community its system for addressing allegations of student mistreatment. Mechanisms for reporting and acting on incidents of mistreatment should assure that they can be registered and investigated without fear of retaliation. (LCME Accreditation Guidelines for New and Developing Medical Schools)

WSU Current Status and Next Steps:

WSU Spokane is the health professions campus of Washington State University. In addition to being the potential site of the new medical school, the campus is the home of accredited programs in pharmacy, nursing, and speech and hearing. The Spokane campus provides academic and student support services that are tailored to the needs of students in the health professions and have already been found by LCME to comply with expectations for a regional medical campus.

In its self-study, WSU will need to provide more details about how medical students will be able to access health services, including any possible role to be played by the new Spokane Teaching Health Center. Also, plans for addressing the specific requirements for medical student admission, career counseling, and financial aid support will need to be described.

4.3 SUMMARY ASSESSMENT OF READINESS OF WSU TO PROCEED

As compared to most of the new medical schools that have become accredited since 2000, WSU has a higher state of readiness to begin the accreditation process. **Exhibit 4-5** is a checklist of our assessment of the readiness of WSU Spokane to proceed with an application for accreditation of a new medical education program and to begin the process of preparing the plans and documentation for candidacy status within the next 12 months. As seen, WSU already measures favorably on six LCME standards that relate to resources that already exist. Upon receipt of authorization to begin the establishment of a new medical school, WSU has a planning team in place to develop the documentation required for candidate status on the remaining six standards.

EXHIBIT 4-5
CHECK LIST OF WSU STATUS ON LCME STANDARDS

Number	Standard Name	Status	Next Steps
Standard 1	Mission, Planning, Organization, and Integrity	Strong governance and administrative models are in place	College by-laws and policies to be developed
Standard 2	Leadership and Administration	Experienced leadership team and support infrastructure are in place	Appointment of founding dean and student affairs key personnel
Standard 3	Academic and Learning Environments	Not currently applicable	To be developed during self-study
Standard 4	Faculty Preparation, Productivity, Participation, and Policies	Experienced medical educators are in place	Confirmation of employment or contractual status of potential faculty
Standard 5	Educational Resources and Infrastructure	New facilities for medical education have just opened	Confirmation of funding; development of library and IT plans
Standard 6	Competencies, Curricular Objectives, and Curricular Design	Not currently applicable	To be developed during self-study
Standard 7	Curricular Content	Not currently applicable	To be developed during self-study
Standard 8	Curricular Management, Evaluation, and Enhancement	Not currently applicable	To be developed during self-study
Standard 9	Teaching, Supervision, Assessment, and Student and Patient Safety	Not currently applicable	To be developed during self-study
Standard 10	Medical Student Selection, Assignment, and Progress	Not currently applicable	To be developed during self-study
Standard 11	Medical Student Academic Support, Career Advising, and Educational Records	Student academic support programs for health professions students are in place	Specific provisions for medical students to be developed
Standard 12	Medical Student Health Services, Personal Counseling, and Financial Aid Services	Student health and counseling programs for health professions students are in place	Specific provisions for medical students to be developed

Source: MGT of America, Inc., 2014.

5.0 TIME AND RESOURCES REQUIRED TO DEVELOP AND OPERATE A POTENTIAL WSU MEDICAL SCHOOL

WSU cannot admit students to a new medical education program until it receives preliminary accreditation. If planning begins in the near future, preliminary accreditation could be earned in early 2016 with the charter class beginning in fall 2017. The accreditation standards used by the LCME, along with their guidelines for new and developing medical schools, outline the types of resources that medical educators believe to be essential for a program in medical education. A central requirement for new medical schools seeking initial accreditation is submission of a realistic five-year budget plan. Various related accreditation standards discuss expectations for the breadth and depth of faculty resources, administrative staffing, library and technology resources, and student services and each of these components must be appropriately funded. Just as the plan for financial resources is essential to gaining LCME accreditation, budget requirements are also a key consideration for state and institutional leaders in deciding whether to start a new medical school.

While it is premature to develop a detailed budget at this stage of planning, the feasibility study reports a reasonable estimate of how much the state, students, and others will be expected to contribute toward the development and operations of the new medical school. This chapter of the feasibility study projects budget requirements for establishing a new medical school at WSU to be \$1 million in FY2015-16 while planning takes place and to increase gradually up to \$47 million when the school reaches an enrollment of 480 students in 2024-25. Due to the current College of Medical Sciences budget, no additional funding for operations will be needed in FY2015-16 and \$24 million in additional state funding will be needed by 2024-25. No additional capital funding requirement is projected for the foreseeable future.

5.1 POTENTIAL TIME LINE FOR DEVELOPMENT OF A NEW MEDICAL SCHOOL

A considerable amount of time will be required to plan and develop a new medical school. **Exhibit 5-1** shows major milestones and times required for progressing through several stages of planning as well as a possible framework for phased growth of medical school enrollment. As shown, it provides for the first class of 40 students to enter in fall 2017 with an initial growth phase up to 120 students per class and 480 total students by 2024.

EXHIBIT 5-1
TIME LINE FOR DEVELOPMENT OF A NEW MEDICAL SCHOOL
CURRENT UNTIL CHARTER CLASS GRADUATES AND TOTAL ENROLLMENT OF 480 IS ACHIEVED
WASHINGTON STATE UNIVERSITY

Major Milestones	2014-2015				2015-2016				2016-2017				2017-2018				2018-2019				2019-2020				2020-2021				2021-2022							
	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun				
STEPS TO ACHIEVE APPLICANT STATUS																																				
Obtain necessary board and state approvals and funding commitments																																				
Make initial contact with LCME																																				
Submit letter of application and pay \$25K fee																																				
STEPS TO ACHIEVE CANDIDATE STATUS																																				
Prepare and submit Preliminary DCI and Self-Study																																				
LCME staff determines readiness for site visit																																				
Receive candidate status																																				
STEPS TO ACHIEVE PRELIMINARY ACCREDITATION																																				
Work with LCME to schedule site visit																																				
Site visit conducted by LCME team																																				
LCME reviews survey report																																				
Receive preliminary accreditation																																				
STEPS TO COMMENCE INSTRUCTION WITH CHARTER CLASS																																				
Register with the American Medical College Application Service																																				
Develop admissions procedures and descriptive materials																																				
Begin to receive applications																																				
Review applications																																				
Interview applicants																																				
Admit charter class																																				
Welcome charter class to first day of instruction																																				
STEPS TO GRADUATE CHARTER CLASS OF WSUCOM																																				
Implement first year of curriculum with charter class																																				
Implement second year of curriculum, welcome second class																																				
Receive provisional accreditation																																				
Implement third year of curriculum, welcome expanded third class																																				
Implement fourth year of curriculum, welcome fourth class																																				
Receive full accreditation																																				
Conduct graduation ceremony for charter class																																				
STEPS TO ACHIEVE INITIAL TARGET OF 120 ENTRANTS PER CLASS																																				
Welcome fifth class (first class of 120 students)																																				

Source: MGT of America, Inc., 2014.

5.2 OVERVIEW OF MEDICAL SCHOOL FUNDING

Proposals for a state to establish a new medical school usually require significant investments of public funds. Two types of financial support—capital and operations—are typically needed to establish a new medical school.

Capital funding is often needed for facilities that are specifically designed to support the unique requirements of medical education. In addition to the classrooms and office space found in most academic buildings, medical schools require such space as special laboratories, simulation centers, a vivarium, and other secure storage facilities. Capital funding can often be considered as a one-time, non-recurring requirement.

Operations funding is needed annually. The funds are used for salaries and benefits of faculty and staff, contractual obligations for preceptors and other partners, purchase of supplies and minor equipment, and travel and other operating expense. Start-up funding is often needed in advance of the arrival of the charter class of students.

5.3 CAPITAL FUNDING REQUIREMENTS FOR NEW MEDICAL SCHOOLS

The funding needed for the capital development of a new medical school is dependent on the amount, types and appropriateness of space the host university already has in place. Due to the specialized requirements for medical education, however, most of the recent new medical schools needed to construct new facilities and/or perform extensive renovations to existing space.

The cost of such new facilities is understandably significant. The wide range of facility budgets for the following new medical schools in Florida are reflective of the different health professions and research programs that can be co-located within a medical school building.

- ♦ Florida State University - \$60 million
- ♦ University of Central Florida - \$65 million
- ♦ Florida International University - \$40 million
- ♦ Florida Atlantic University - \$20 million

The new medical education program at Western Michigan University has just taken occupancy of a new \$68 million instructional facility that is a renovation of a research building donated by heirs of the Upjohn pharmaceutical firm.

As noted in the previous chapter on accreditation and available WSU assets, WSU will not need significant capital funding to establish a new medical school. The \$80 million Pharmaceutical and Biomedical Sciences Building has recently been dedicated and was designed to meet the specific needs of a medical education program.

5.4 OPERATIONS FUNDING REQUIREMENTS FOR MEDICAL SCHOOLS

Traditional medical schools are funded through a complex mix of revenue sources including tuition, state appropriations, research grants, faculty practice plans, and private gifts. In situations where a medical school owns and operates a teaching hospital, clinical revenues are frequently included in its budget as well and can create a greatly overstated impression of medical education costs. Even when efforts are made to isolate costs related to instruction and research, however, medical schools are much more expensive than most other university programs.

An initial approach for projecting a reasonable range of state funding needed for a new medical school at WSU is to consider typical funding levels for medical education programs at established public medical schools across the nation. According to AAMC statistics, in 2012 the 75 accredited public medical schools across the U.S. received \$5,023,000,000 in state support for a total enrollment of 47,830 medical students, amounting to \$105,018 per student. By comparison, in 2011 (the last year for which detailed figures were published online by the university) the University of Washington received \$94,598,483 from the state of Washington for its 440 Washington students and \$12,536,568 from the other four WWAMI states for their approximately 300 students. Therefore, the state of Washington

disbursed \$214,997 per Washington student, while the other four states disbursed an average of \$41,650 per student of their state.

With an enrollment of 480 Washington students, Washington State University's budget forecasts would call for state support on the order of \$28,800,000, amounting to \$60,000 per student ([Exhibit 5-5](#)).

5.5 CURRENT WSU BUDGET FOR MEDICAL EDUCATION

Due to its participation in medical education over the past four decades, WSU already has an ongoing budget for medical education. In the fiscal year just beginning (FY2014-15), WSU budgeted \$6.4 million for its medical sciences program, of which \$1 million is temporary start-up funding. As seen in [Exhibit 5-2](#), the continuation of current salaries, benefits and related expenses is a major component with 29 percent of the total budget, and slightly more is planned for salaries, benefits, and start-up packages for new faculty members needed to expand the medical sciences program.

EXHIBIT 5-2
FY2015 BUDGET FOR CURRENT WSU MEDICAL SCIENCES PROGRAM

Funding Categories	Amounts
<i>Expected Revenue by Source</i>	
State Appropriations (permanent funding)	\$ 4,087,500
State Appropriations (temporary, start-up funding)	\$ 1,000,000
Student Tuition (40 M1, 20 M2 students)	\$ 1,316,460
Total General Support	\$ 6,403,960
<i>Planned Expenditures by Purpose</i>	
Continuation of Current Expenditures	\$ 1,652,320
Salaries for Newly Hired Faculty	\$ 892,860
Expense Related to New Curriculum	\$ 1,000,000
Expense Related to New Obligations	\$ 1,000,000
Start-Up Packages for Faculty Recruits	\$ 1,157,708
Total Planned Expenditures	\$ 5,702,888

Source: WSU College of Medical Sciences.

5.6 COSTS INCURRED AT NEW MEDICAL SCHOOLS ELSEWHERE

The experience of new, recently accredited medical schools across the nation provides further insight into the likely costs of starting a new medical education program at an established state university such as WSU. Since 2001, four new medical schools have been established at state universities in Florida, three in Michigan, and ten others in ten different states. Many of the new medical schools are private, and financial data are not readily available.

Three of the new medical schools in Florida are still growing toward their full planned enrollment. The only school now at full capacity (FSU) has an annual general fund budget of \$45.6 million. The sum of appropriations and tuition for new schools in Florida ranges from \$94K to \$114K per student with the younger schools having higher costs rates during their developmental phases (see [Exhibit 5-3](#)).

EXHIBIT 5-3
REVENUES FOR NEW MEDICAL SCHOOLS IN FLORIDA

Metrics	Florida State University	University of Central Florida	Florida International University	Florida Atlantic University	Total
State Appropriations	34,069,946	24,251,830	30,117,725	14,535,791	102,975,292
Tuition	11,572,716	10,547,071	12,532,971	6,158,280	40,811,038
Total Core Revenue	45,642,662	34,798,901	42,650,696	20,694,071	143,786,330
Students (AAMC reports)	487	359	373	188	1,407
State \$ per Student	69,959	67,554	80,745	77,318	73,188
Tuition \$ per Student	23,763	29,379	33,600	32,757	29,006
Total Core \$ per Student	93,722	96,933	114,345	110,075	102,194
Year of First Enrollment	2001-02	2009-10	2009-10	2011-12	
Start-Up Funding Prior to Opening	\$8 million	\$15 million	\$17 million	\$0	

Source: Board of Governors, State University System of Florida.

More recently, three medical schools have been developed in Michigan, and each is the result of collaboration between a public university and a local not for profit hospital. The new Michigan schools do not receive designated state appropriations, and currently rely heavily on tuition revenue, partner participation, and major gifts to cover operating costs. None of the new Michigan schools has reached the stage of development where it has students in all four years of the program. One school admitted its first class in 2011, another in 2013, and the other plans its first class for 2015. As such, the financial data for these programs is not yet indicative of expected program costs when the schools achieve full operations. To date, the funding for Oakland-Beaumont program, the most developed of the three new Michigan schools, is approximately \$91 thousand per student as seen in [Exhibit 5-4](#).

EXHIBIT 5-4
REVENUES FOR NEW MEDICAL SCHOOLS IN MICHIGAN

Metrics	Oakland University William Beaumont	Central Michigan University Synergy Alliance	Western Michigan University Stryker
State Appropriations/Parent University	-	14,715,609	Not Applicable
Partner Participation/Gifts	10,000,000	1,265,285	Not Applicable
Tuition	10,400,000	2,347,520	Not Applicable
Total Core Revenue	20,400,000	18,328,414	Not Applicable
Students	224	64	Not Applicable
State/Parent University \$ per Student	-	229,931	Not Applicable
Partner/Gift \$ per Student	44,643	19,770	Not Applicable
Tuition \$ per Student	46,429	36,680	Not Applicable
Total Core Revenue per Student	91,071	286,381	Not Applicable
Year of First Enrollment	2011-12	2013-14	2015-16
Average Annual Start-Up Funding Prior to Opening	Not Available	Not Available	\$4.5 million

Source: Created by MGT.

Start-up costs of recently established medical schools are typically incurred for several years prior to their opening and continue for a few more years until a critical mass of students is reached. Start-up funds are needed for initial staffing and professional services to develop program plans, planning for new or expanded facilities, equipping classrooms and labs, and providing start-up packages for relocated faculty researchers. As also displayed in [Exhibits 5-3](#) and [5-4](#), start-up funding from state appropriations and tuition in new medical schools in Florida ranged up to \$17 million, while start-up funding for the new medical school at Western Michigan University was \$4.5 million. The significant variance in start-up costs derives in part from the differences in resources the universities already had in place to support medical education before the medical school was established. Florida Atlantic University, for instance, already operated a four-year regional campus of the University of Miami's medical school (similar to the WSU – WWAMI arrangement) and had a significant infrastructure in place that was able to support its new medical school without designated start-up funding.

5.7 PROJECTION OF EXPECTED RANGE OF REQUIRED RESOURCES FOR A NEW WSU MEDICAL SCHOOL

A detailed expenditure plan cannot be prepared until significantly more information is developed by WSU on its curricular approaches, the number and location of clinical sites, the number of students to be enrolled, and the schedule for enrollment growth. However, the WSU medical school can be expected to have a different cost structure than UWSOM since medical schools that utilize the distributed, community-based, and ambulatory instructional model can be more cost-effective than traditional medical schools due to their utilization of community faculty at multiple existing locations for their programs.

The preliminary projection of required funding for capital expansion and operations for a new medical school at WSU has been developed based on the following assumptions:

Enrollment Levels

- ♦ The size of the charter class will be 40 students, the same number that WSU currently trains as part of the WWAMI program.
- ♦ The size of the student body upon completion of the initial growth phase will be 480 students, or four classes of 120 students.
- ♦ The size of entering classes will increase by 40 students each biennium
 - 40 students per entering class for each of the first two years of operation (2017-18 and 2018-19)
 - 80 students per entering class for each of the next two years of operation (2019-20 and 2020-21)
 - 120 students per entering class beginning in the fifth year of operation (2021-22) and thereafter

Funding Levels for Capital Requirements

- ♦ WSU will not need to submit a capital budget request as part of its proposal for a new medical school since the recently occupied PBS building on the Spokane campus has capacity to serve at least 120 students per class during program years one and two.

- ♦ WSU Spokane is projected to have adequate physical facilities for a medical school through the build-out phase.
- ♦ Provision may need to be made for modest amounts in future capital budgets for community campus administrative and student support facilities if partner hospitals are unable to allocate such space for this purpose. Clinical training during program years three and four will take place in existing community facilities.

Funding Levels for Operations

- ♦ Start-up funding will be identified and requested separately beginning in fiscal year 2015-16 and continue at reduced levels until a sufficient enrollment base exists to support the infrastructure. The need for start-up funds will be partially offset by reallocation of existing permanent funding for the College of Medical Sciences.
- ♦ State appropriations per student will be similar to current support levels for new, recently accredited medical schools at state universities across the nation.
- ♦ Student tuition and fee rates will be competitive with rates charged by the UWSOM and other medical schools in the region.
- ♦ Private giving and in-kind support is assumed to be available to supplement state appropriations and tuition.
- ♦ Sponsored research funding is not specifically projected, but is assumed to be available to provide support for a portion of faculty salaries with the result that overall faculty size will be larger than could be provided from core revenues from appropriations and tuition alone.

Detailed expenditure plans will need to be developed as program plans are further developed during future phases of exploration and planning activity.

Based on the analysis of costs at other medical schools, the projected funding for a new WSU medical school is:

- ♦ \$98 thousand per student for annual operations
 - \$60 thousand per student from state appropriations
 - \$28 thousand per student from student tuition and fees
 - \$10 thousand per student from gifts and miscellaneous sources
- ♦ \$17 million over nine fiscal years for start-up funding from state appropriations to refine plans, develop accreditation materials, and establish an administrative infrastructure
 - \$1 million for FY2015-16
 - \$3.5 million for FY2016-17, with the increment to be needed to establish the student affairs and admissions function and to begin to recruit faculty
 - Additional requirements for faculty recruiting expense prior to increases in the size of the entering classes of 2019 and 2021
 - Lower amounts for start-up expense beginning in FY2017-18 as per-student funding begins to cover overhead costs.

The initial estimate of funding requirements by source by fiscal year start at \$1 million in the initial planning year, increase to \$7 million for the first year of instruction, and to \$47 million per year after the

TIME AND RESOURCES REQUIRED TO DEVELOP AND OPERATE A POTENTIAL WSU MEDICAL SCHOOL

initial growth phase (see [Exhibit 5-5](#)). Overall, additional state funding is projected to be \$2.5 million in 2016-17 and to increase to \$24 million by FY2024-25 with incremental funding in any single fiscal year never exceeding \$5 million. By 2025, WSU will be graduating 120 physicians annually but with a total state appropriation of \$29 million – considerably less than what the UWSOM currently receives for the same number of graduates. Subsequent growth will benefit from an even greater economy of scale.

EXHIBIT 5-5 WASHINGTON STATE UNIVERSITY MEDICAL SCHOOL PRELIMINARY PROJECTION OF REQUIRED RESOURCES FOR OPERATIONS BY SOURCE OF FUNDS AND BY YEAR

Budget Element	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025	2025-2026
Program Development Period											
College Administration	\$ 1,000,000	\$ 1,700,000	\$ 1,558,333	\$ 1,416,667	\$ 1,133,333	\$ 850,000	\$ 566,667	\$ 283,333	\$ 141,667	\$ -	\$ -
Faculty Start-Up		\$ 800,000	\$ 733,333	\$ 666,667	\$ 533,333	\$ 400,000	\$ 266,667	\$ 133,333	\$ 66,667	\$ -	\$ -
Student Services		\$ 1,000,000	\$ 916,667	\$ 833,333	\$ 666,667	\$ 500,000	\$ 333,333	\$ 166,667	\$ 83,333	\$ -	\$ -
Subtotal, Start-Up Funding	\$ 1,000,000	\$ 3,500,000	\$ 3,208,333	\$ 2,916,667	\$ 2,333,333	\$ 1,750,000	\$ 1,166,667	\$ 583,333	\$ 291,667	\$ -	\$ -
Initial Capital Development											
Medical School Building	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Initial Operations Period											
Enrollment Development Schedule											
First Year Class			40	40	80	80	120	120	120	120	120
Second Year Class				40	40	80	80	120	120	120	120
Third Year Class					40	40	80	80	120	120	120
Fourth Year Class						40	40	80	80	120	120
Total Enrollment			40	80	160	240	320	400	440	480	480
Funding Rates per Student											
Tuition			\$ 28,000	\$ 28,000	\$ 28,000	\$ 28,000	\$ 28,000	\$ 28,000	\$ 28,000	\$ 28,000	\$ 28,000
Other Internal Support			10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
State Support			\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000	\$ 60,000
Total Core Support			\$ 98,000	\$ 98,000	\$ 98,000	\$ 98,000	\$ 98,000	\$ 98,000	\$ 98,000	\$ 98,000	\$ 98,000
Funding Requirements by Source											
Tuition			\$ 1,120,000	\$ 2,240,000	\$ 4,480,000	\$ 6,720,000	\$ 8,960,000	\$ 11,200,000	\$ 12,320,000	\$ 13,440,000	\$ 13,440,000
Other Internal Support			400,000	800,000	1,600,000	2,400,000	3,200,000	4,000,000	4,400,000	4,800,000	4,800,000
State Support			2,400,000	4,800,000	9,600,000	14,400,000	19,200,000	24,000,000	26,400,000	28,800,000	28,800,000
Total			\$ 3,920,000	\$ 7,840,000	\$ 15,680,000	\$ 23,520,000	\$ 31,360,000	\$ 39,200,000	\$ 43,120,000	\$ 47,040,000	\$ 47,040,000
Existing Funds											
WSU General Resources	\$ 1,000,000	1,000,000	\$ 3,000,000	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000
Summary of Funding Requirements											
Total Funding Required	\$ 1,000,000	\$ 3,500,000	\$ 7,128,333	\$ 10,756,667	\$ 18,013,333	\$ 25,270,000	\$ 32,526,667	\$ 39,783,333	\$ 43,411,667	\$ 47,040,000	\$ 47,040,000
WSU General Resources	\$ 1,000,000	\$ 1,000,000	\$ 3,000,000	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000	\$ 4,500,000
Internal Funding - Tuition and Gifts	\$ -	\$ -	\$ 1,520,000	\$ 3,040,000	\$ 6,080,000	\$ 9,120,000	\$ 12,160,000	\$ 15,200,000	\$ 16,720,000	\$ 18,240,000	\$ 18,240,000
Additional State Funding	\$ -	\$ 2,500,000	\$ 2,608,333	\$ 3,216,667	\$ 7,433,333	\$ 11,650,000	\$ 15,866,667	\$ 20,083,333	\$ 22,191,667	\$ 24,300,000	\$ 24,300,000
Incremental State Funds by Year	\$ -	\$ 2,500,000	\$ 108,333	\$ 608,333	\$ 4,216,667	\$ 4,216,667	\$ 4,216,667	\$ 4,216,667	\$ 2,108,333	\$ 2,108,333	\$ -
Incremental State Funds by Biennium	\$ -	\$ 2,500,000		\$ 716,667		\$ 8,433,333		\$ 8,433,333		\$ 4,216,667	

Source: MGT of America, Inc., 2014.

6.0 CONCLUSION

During the past five months, the MGT study team has carefully examined a variety of issues related to the feasibility of a new WSU medical education program in Spokane. Our feasibility study has:

- ◆ Confirmed significant unmet needs for health care and for access to medical education in Washington State.
- ◆ Identified an emerging model for medical education that is particularly well-suited to address these unmet needs.
- ◆ Determined that WSU already has significant capacity in place to develop and deliver an accredited medical education program.
- ◆ Developed a multi-year forecast of likely resource requirements that provides a cost-effective approach for WSU to pursue development of a new medical school.

The feasibility study included an assessment of Washington's needs for physicians as well as for training opportunities for students desiring a career as a physician. The analyses of physician workforce supply and demand data document the need for another medical school in the state. Washington is projected to need to replace upwards of 300 retiring physicians per year, and to acquire between 3,000 and 4,000 additional physicians beyond current workforce levels over the next 15 years. Furthermore, the physician shortage is already acute in most counties outside metropolitan Seattle. The opportunity for Washington residents to attend medical school in their home state is among the lowest in the United States. Each year, only 120 Washington students are awarded the opportunity to begin their medical education in their home state. Meanwhile, twice as many highly qualified students are compelled to go out of state for medical training and, as a result, are more likely to end up practicing medicine in other parts of the country.

Evidence from other states demonstrates the benefit of a new model of medical education in Washington that will address a compelling need to train physicians for practice in underserved communities across the state. The concept being considered for a potential WSU medical education program is a community-based, distributed model that would partner with existing community health care resources in various geographic areas of Washington, including underserved and rural areas.

For over 40 years, WSU has trained medical students as a member of Washington's WWAMI medical education program and is well prepared for the development of its own accredited four-year medical training program leading to the M.D. degree. WSU has a high state of readiness in terms of its facilities, faculty, community partners and other necessary resources for delivery of medical training. WSU is well positioned to initiate the accreditation process with the Liaison Committee on Medical Education (LCME), which would lead to membership in the American Association of Medical Colleges.

Our projections of funding requirements indicate that approximately \$47 million in core funding would be needed annually to operate a new WSU medical school once it reaches an enrollment of 480 students in 2024-25. Of this amount, an estimated \$24.3 million might come from additional state appropriations above and beyond current state funding levels in the college of medical sciences. Only

\$1-3 million per year in additional state funding would be needed until the 2019-20 fiscal year when enrollment would surpass 40 students. Due to recent construction of an \$80 million pharmaceutical and biomedical sciences building on its Spokane campus, WSU would not be expected to need further capital funding to pursue development of a new medical school.

We believe that WSU leaders should seek approval of the concept for a new medical school from the University's Board of Regents and begin a process of securing support from state leaders and developing plans and documentation to gain LCME accreditation.