



## Performance Audit

# Determining costs per student for Washington's medical schools

August 24, 2017

At the Legislature's direction, the Office of the State Auditor examined the costs of medical education at the University of Washington (UW) School of Medicine and projected costs at Washington State University's (WSU) Elson S. Floyd College of Medicine. From the mandate, the Office developed the following audit questions, seeking to determine:

1. The cost per student of medical education for the University of Washington medical school by fund source
2. The cost per student for students from WWAMI partner states
3. Whether any Washington state funds or Washington resident student tuition is used to subsidize students from WWAMI partner states
4. The planned per-student cost of medical education by fund source for the Washington State University Elson S. Floyd College of Medicine

This audit does not compare costs between the two medical schools because differences between programs – including the number of students, the length of time the school has been operational, and other considerations – all affect the cost of medical education.

The Office of the State Auditor determined that educational costs per student at the UW medical school, for students from Washington and WWAMI partner states, were about \$90,640 in fiscal year 2015. Washington state funds and tuition subsidized less than 2 percent of costs for students from the four partner states: Wyoming, Alaska, Montana and Idaho.

Planned medical education costs at WSU are \$125,960 per student in fiscal year 2023, when staffing and enrollment are expected to stabilize and start-up costs begin phasing out. This projected cost includes growth and inflation of between 1.8 percent and 5 percent depending on the type of the expense.



# Table of Contents

---

Executive Summary .....	3
Introduction .....	6
Background .....	8
Scope & Methodology .....	12
Audit Results .....	15
Agency Responses .....	19
Appendix A: Initiative 900 .....	24
Appendix B: Medical Education Cost Studies .....	25

## ***The mission of the Washington State Auditor’s Office***

The State Auditor’s Office holds state and local governments accountable for the use of public resources.

The results of our work are widely distributed through a variety of reports, which are available on our website and through our free, electronic **subscription service**.

We take our role as partners in accountability seriously. We provide training and technical assistance to governments and have an extensive quality assurance program.

For more information about the State Auditor’s Office, visit [www.sao.wa.gov](http://www.sao.wa.gov).

## ***Americans with Disabilities***

In accordance with the Americans with Disabilities Act, this document will be made available in alternative formats. Please email [Communications@sao.wa.gov](mailto:Communications@sao.wa.gov) for more information.

## ***State Auditor’s Office contacts***

### **State Auditor Pat McCarthy**

360-902-0360, [Pat.McCarthy@sao.wa.gov](mailto:Pat.McCarthy@sao.wa.gov)

### **Chuck Pfeil, CPA – Director of Performance Audit**

360-902-0366, [Chuck.Pfeil@sao.wa.gov](mailto:Chuck.Pfeil@sao.wa.gov)

### **Shauna Good, CPA – Principal Performance Auditor**

360-725-5615, [Shauna.Good@sao.wa.gov](mailto:Shauna.Good@sao.wa.gov)

### **Tania Fleming – Senior Performance Auditor**

360-725-5627, [Tania.Fleming@sao.wa.gov](mailto:Tania.Fleming@sao.wa.gov)

### ***For media inquiries***

### **Kathleen Cooper – Assistant Director for Communications**

360-902-0470, [Kathleen.Cooper@sao.wa.gov](mailto:Kathleen.Cooper@sao.wa.gov)

### ***To request public records***

### **Public Records Officer**

360-725-5617, [PublicRecords@sao.wa.gov](mailto:PublicRecords@sao.wa.gov)

# Executive Summary

---

The 64th Washington State Legislature directed the State Auditor's Office to conduct an audit relating to the cost of medical education in Washington in Engrossed Substitute Senate Bill 6052 (sec. 124 (3) (a) through (c)).

From this mandate, the Office of the State Auditor developed the following audit questions, seeking to determine:

1. The cost per student of medical education for the University of Washington medical school by fund source
2. The cost per student for students from WWAMI partner states
3. Whether any Washington state funds or Washington resident student tuition is used to subsidize students from WWAMI partner states
4. The planned per-student cost of medical education by fund source for the Washington State University Elson S. Floyd College of Medicine

Nationwide physician shortages have significant impacts on patient access to medical care and treatment. Difficulty finding a physician can lead to poor health outcomes. Organizations such as the Association of American Medical Colleges project significant need for more doctors over the next 10 years.

The state's efforts to train more medical professionals date from the 1970s. The University of Washington (UW) School of Medicine, with the state's support, developed a regional, community-based program, now called WWAMI for the five states that share resources and responsibilities: Washington, Wyoming, Alaska, Montana and Idaho. It continues to provide medical education to students from the entire region. In 2015, Governor Jay Inslee and the Legislature authorized Washington State University (WSU) to begin offering medical education also; WSU's Elson S. Floyd College of Medicine plans to enroll its inaugural class in 2017. Both universities' medical schools emphasize increasing the number of doctors practicing in rural Washington communities.

Both universities commissioned studies that estimate their annual per-student costs to deliver medical education. However, there is little information to support how the estimates were calculated and what they include.

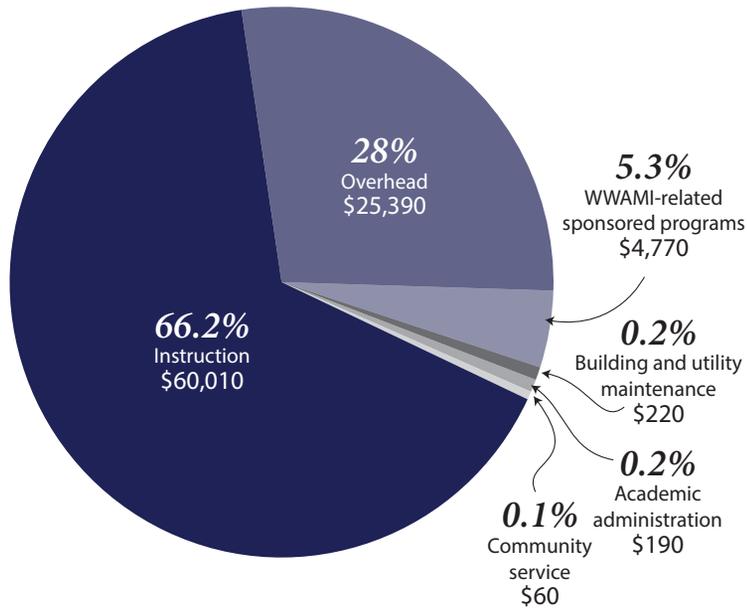
In keeping with the legislative mandate, the calculations made by the Office of the State Auditor use data available at the time and present an estimation of the total cost to educate a medical student – as opposed to a student's cost to attend medical school, which is just a portion of the total cost of education. This study does not project per-student costs for UW. The study also does not compare costs between the two medical schools because differences between programs – including the number of students, the length of time the school has been operational, and other considerations – all affect the cost of medical education.

## Medical education at UW's medical school cost \$90,640 for each student in fiscal year 2015

Medical education at UW cost about \$90,640 per student in fiscal year 2015, as shown in the chart below. This cost, calculated using expenditures, represents the total cost of education for all students enrolled in medical school to become a medical doctor, regardless of their home state university. Costs include faculty instruction, student support services, WWAMI-related sponsored programs, buildings and maintenance, libraries, and administrative overhead.

### Breakdown of estimated costs to educate one student for one year at the University of Washington

Fiscal year 2015

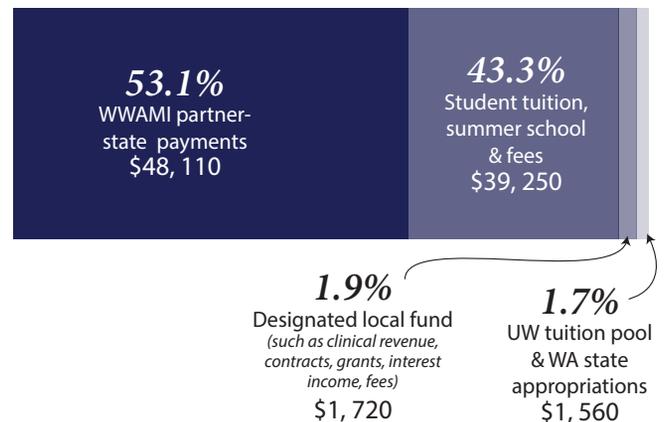


Source: Auditor calculation of UW's medical school program costs.

### About 1.7 percent of medical education costs for WWAMI partner-state students were subsidized by Washington state funds or tuition

Revenue for providing medical education at the University of Washington comes from several sources such as student tuition, state funds, gifts, grants, contracts and clinical revenue. In fiscal year 2015, 1.7 percent, or about \$1,560 per student, of medical education costs for students from WWAMI partner states was funded by student tuition and Washington state funds. The chart at right illustrates the average subsidy in fiscal year 2015.

### Partner-state payments fund about 53% of medical education for students from their states



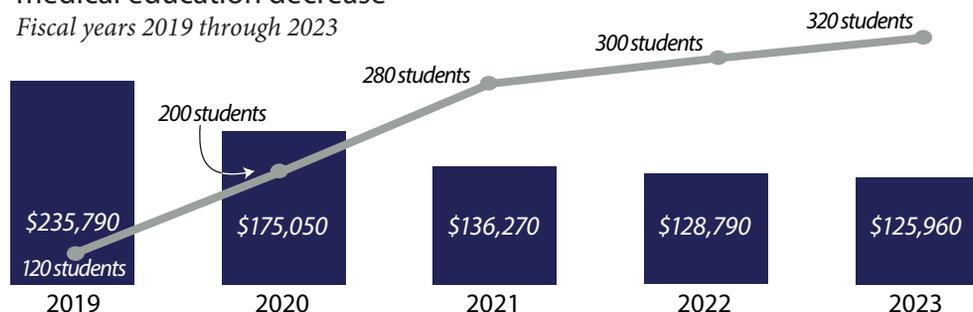
Source: Auditor calculation of estimated costs and revenue for UW's medical school in fiscal year 2015.

## Planned costs for medical education at WSU are \$125,960 for each student in fiscal year 2023

Based on WSU's projected expenses, including growth and inflation, medical education costs are estimated to be \$125,960 per student in fiscal year 2023. We emphasize fiscal year 2023 because it is the earliest year with a combination of full, planned, student enrollment and fully staffed faculty. Costs include faculty instruction, student support, academic support, research, clinical costs and indirect costs.

As WSU student enrollment increases, planned per-student costs for medical education decrease

Fiscal years 2019 through 2023



Source: WSU's Elson S. Floyd College of Medicine cost projections.

There is a natural tendency to compare the cost of these two medical schools at a set point in time. However, many factors make a comparison complicated, including:

- **Maturity and development of the medical school** – As an established program, UW's medical school, and its regional, community-based approach called WWAMI, has been operating for more than 40 years. WSU's College of Medicine is still in its development period, with classes beginning in fall 2017. Additionally, WSU does not expect full staffing until 2021 and continues to have start-up costs until 2023.
- **Different types of costs and periods in time** – While we calculated actual costs for UW, WSU's cost information comes from projections. WSU's projections include estimates for growth and inflation of between 1.8 percent and 5 percent, depending on the type of expense. Inflation in particular can significantly affect estimates.
- **Enrollment numbers** – Student enrollment at UW's medical school was 762 in fiscal year 2015. The size of its medical school provides economies of scale that can lower per-student costs. WSU plans to enroll just 60 students during its first year and is expected to grow to 320 students by 2023 – still less than half of UW's enrollment numbers. Lower enrollment at WSU contributes to higher per-student costs.
- **Program requirements** – Both universities require that students participate in scholarly research. However, the nature and extent of research may vary, from literature reviews to laboratory and community-based projects.

# Introduction

## Patients can suffer when primary care physicians are scarce

In many rural areas of Washington and the Northwest, demand for primary care physicians has exceeded supply for some time and, despite the efforts of states and medical schools, it seems likely the problem will persist. The Association of American Medical Colleges project a nationwide shortage of up to 105,000 such doctors over the next decade. The Robert Graham Center projected that by 2030, Washington will need 1,700 additional primary care physicians above current levels, a figure that does not include the 300 or more physicians who leave the state workforce annually. Physician shortages affect people's access to medical care, which in turn can lead to poor health outcomes.

## Medical schools attempt to address the physician shortage in Washington

The state's efforts to train more medical professionals date from the 1970s, when the University of Washington (UW) School of Medicine incorporated a regional, community-based approach now called WWAMI for the five states that share resources and responsibilities: Washington, Wyoming, Alaska, Montana and Idaho. It continues to provide medical education to students from the entire region, allowing them to take their initial years of training at universities in their home state. (A typical training path is shown in Exhibit 1.) In Washington, medical students may take courses in their first 18 months either at UW in Seattle or at Gonzaga University in Spokane. During the remainder of the program, students participate in clinical rotations in various medical specialty areas, which may be taken in any of the five WWAMI states.

Until recently, UW's School of Medicine was the only publicly funded school in Washington authorized by law to offer medical degrees. Prior to its current agreement with Gonzaga University, UW partnered with Washington State University (WSU) to educate medical students in eastern Washington through WWAMI. In 2013, WSU constructed a health science building with facilities that could accommodate growth in medical education. Then WSU requested funding and authorization to establish its own medical school. The Legislature granted the request in 2015, and WSU began developing the Elson S. Floyd College of Medicine. WSU's medical school, set to open in fall of 2017, emphasizes increasing the number of doctors practicing in rural Washington communities.

Exhibit 1 – Roadmap to becoming a doctor



## **Legislators need clear information on the cost of medical education**

As state-funded universities, both UW and WSU have published estimates of their annual per-student costs to deliver medical education. However, there is little information to support how the estimates were calculated and what they include.

Independent of those reviews and at the Legislature's direction, the Office of the State Auditor examined the costs of both UW and WSU's medical schools, seeking to determine:

1. The cost per student of medical education for the University of Washington medical school by fund source
2. The cost per student for students from WWAMI partner states
3. Whether any Washington state funds or Washington resident student tuition is used to subsidize students from WWAMI partner states
4. The planned per-student cost of medical education by fund source for the Washington State University medical school program

# Background

---

## Medical education costs are composed of instruction, administration and other indirect costs

While individual medical schools have unique characteristics that influence the cost of medical education, such as institutional mission or the size of the campus, many spending categories that influence cost of education are common to all. They can include instructional costs, maturity of the institution, and number of students. The following are common categories of medical education costs.

**Instructional costs** – Direct costs for classrooms, laboratories, instructional technology, department-based administration, and salaries for faculty and staff.

**Academic support** – Costs that support the primary mission of the program, instruction, and research. The category includes centrally organized academic activities and services that are direct costs of the medical school as well as activities and services that include libraries, computer centers and clinics.

**Institutional support** – Costs that generally arise from centrally organized administrative activities that serve all functional areas. These costs include presidents' and chancellors' offices, long-range planning, legal and fiscal services, purchasing, printing, public relations, university development, human resources, accounting, and institutional research. These costs may also include financial aid, campus operations, building maintenance and depreciation.

**Student services** – Administrative and support services designed to support students and their overall educational experience. Costs can include admissions and registrars' offices, student activities, placement and counseling centers, and supplemental support services, as well as other activities that do not generate revenue.

**Clinical costs** – Costs related to the clinics the school operates to help train students during clinical rotations, including rent for clinical training sites, stipends for clinicians and equipment.

**Research** – Accreditation standards for medical schools broadly require that programs are conducted in an environment that fosters intellectual challenge and that opportunities are given for medical students to participate in the research and other scholarly activities of its faculty. Both universities in this report require students to participate in some form of research, but the nature of research projects can vary. Student research is different from sponsored faculty research, which students are less likely to be involved in.

### What is included in “the cost of medical education”?

For the purposes of this study, we consider the cost of medical education as the *total expense of providing education*, as opposed to the cost of tuition, which is the amount students contribute to their education.

Tuition alone is rarely sufficient to operate a medical school. Other resources typically include state funds, gifts, grants, contracts, and income from school-operated clinics.

## University of Washington’s UW Medicine

UW Medicine’s mission to improve the health of the public is delivered through three components: education, patient care and faculty research.

### School of Medicine

Founded in 1946, the UW School of Medicine is widely known for providing high-quality education to medical students, residents, fellows, physician-assistants and students of other health professions. The School of Medicine offers several programs including, but not limited to, its medical school. The core of the medical school is WWAMI, serving 762 students from five participating states. This model allows medical students opportunities to receive clinical training at facilities located throughout the region and particularly in rural or underserved areas. All WWAMI students receive the same first-year curriculum at their home state university in the same sequence as at UW’s main Seattle campus. The School of Medicine also provides advanced training through residency and clinical fellowship programs through Graduate Medical Education. Several other programs educate physician assistants, enable medical scientists to obtain advanced degrees in basic medical research, and provide undergraduate and graduate training for health sciences careers.

### Hospitals

The four hospitals owned or operated by UW Medicine (Harborview Medical Center, Northwest Hospital & Medical Center, Valley Medical Center and UW Medical Center) receive about 1.5 million outpatient and Emergency Department visits, and admit more than 63,000 patients annually.

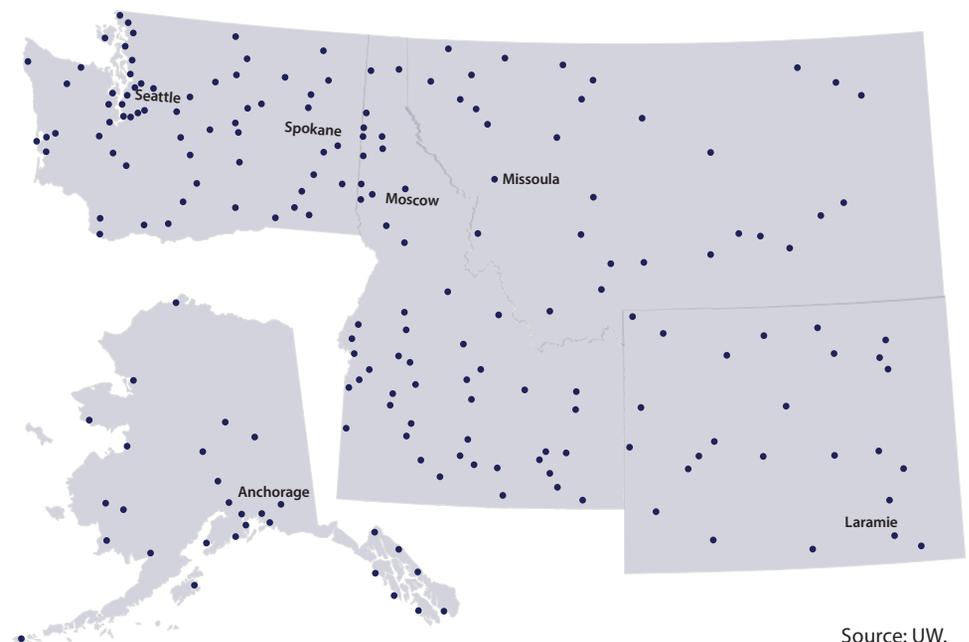
### Medical research

UW Medicine faculty participate in research activities and programs in areas as diverse as cancer treatment and prevention, protein design, and global health metrics.

### Regional locations

More than 170 active community-based educational sites in the WWAMI region serve as accredited training sites to the WWAMI program (Exhibit 2), in addition to UW’s main campus in Seattle and the recently added campus at Gonzaga University in Spokane. Starting in the 2016-17 school year, students attend the first 18 months of medical school at state universities in their home states: University of Alaska (Anchorage), Montana State University, University of Idaho, and University of Wyoming. Washingtonians may complete their first 18 months in either Spokane or Seattle. All students participate in summer school during their second and third years and may do their clinical rotations in any of the five WWAMI states.

Exhibit 2 – WWAMI site locations



Source: UW.

## Washington State University’s Elson S. Floyd College of Medicine

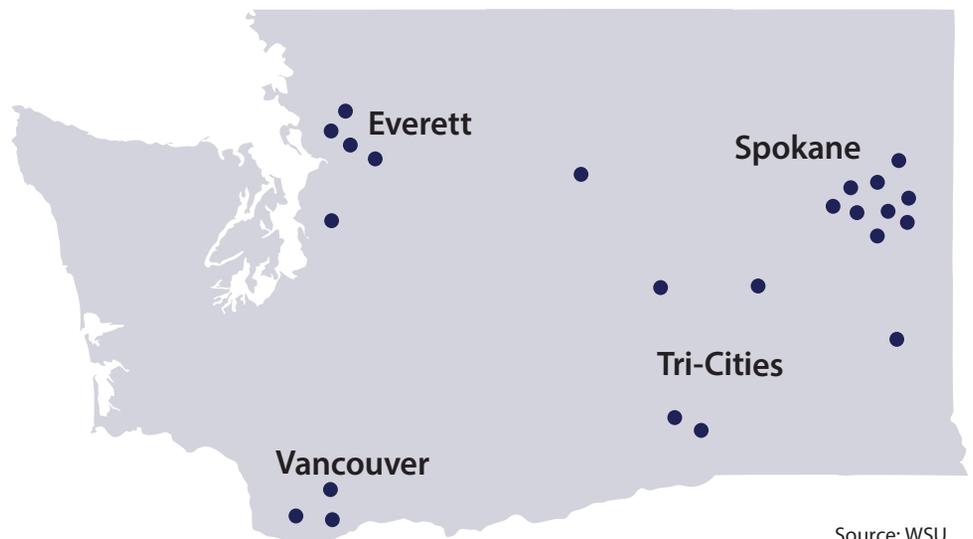
In 2008, WSU embarked on a project to establish a comprehensive network of health science services and programs at WSU Spokane. WSU’s Board of Regents designated Spokane as the university’s health sciences campus, and since then, the university has consolidated many of its medically oriented academic programs to WSU Spokane campus. To share capital costs, WSU shares many of the endeavors and buildings on campus with Eastern Washington University. In 2014, WSU and UW Medicine announced an agreement to dissolve their WWAMI partnership, allowing WSU to pursue its own course to meet Washington’s medical education needs.

In 2015, Governor Inslee signed the law permitting WSU to create an independently accredited medical school in Spokane; the Elson S. Floyd College of Medicine received preliminary accreditation in October 2016 to begin serving as a medical school. The College’s first 60 medical students will start class in August 2017; WSU plans to increase the number of students enrolled each year to 320 in fiscal year 2023.

The school’s stated mission is to develop “healthier communities across Washington,” achieved by offering students a community-based medical education curriculum that introduces clinical practice from the first year. Students will spend the first two years of medical education on the WSU Spokane campus before undertaking third and fourth year clinical rotations at one of WSU’s clinical campuses, primarily located in Spokane, Tri-Cities, Vancouver and Everett as seen in Exhibit 3.

Since its founding, the College has received research grants to expand its research activities in areas such as basic biomedical sciences, speech and hearing sciences, and population health research, among others. In addition to clinical experiences, medical students will also participate in research activities as part of the medical education program.

Exhibit 3 – WSU College of Medicine site locations



## **Earlier cost studies produced different estimates for educating medical students**

Both UW and WSU commissioned studies to outline estimated costs for medical education. The WSU study also made statements about the cost of medical education through WWAMI.

WSU's report, published in September 2014, was conducted by MGT of America (now MGT Consulting Group), which conducts a variety of studies for federal, state and local governments, with a focus on education. WSU's "Medical School Feasibility Study" estimated \$98,000 in planned costs for each student enrolled in the new Elson S. Floyd Medical College. MGT said its projections were in part based on costs reported by other recently developed medical schools to inform the estimate and information available at the time.

The report also compared WSU's projected/estimated costs with a figure for UW's medical school. It claimed that the state of Washington spent \$214,997 for each Washington WWAMI student in fiscal year 2011. The report noted that figures were calculated by dividing the total state funding received by UW that year for its medical school by the number of Washington students enrolled. The published report does not provide enough detail to determine which costs were included in the estimate.

UW's report, published in October 2014, was conducted by Tripp Umbach, a consulting firm specializing in health care, higher education, academic medicine and economic development. UW's "Cost/Benefit and Economic Impact Analysis of Medical Education Expansion Options/Needs in Eastern Washington" reported that the cost to educate a student through the medical school was \$70,000. UW representatives said the Tripp Umbach estimate was not representative of the entire program. School officials said that the estimate represented only the additional direct costs per student that would be required if more students were added to the medical school.

More information about these and other studies can be found in **Appendix B**.

# Scope & Methodology

---

Identifying and analyzing the precise pathways of revenue and expenditure in higher education is a complex endeavor, because many revenue sources – such as federal and state grants or dedicated versus discretionary endowments – are combined before money is spent on teaching, research or building maintenance. Even experts in the field say that the complexity of revenue sources and business operations make answering questions about cost difficult.

This complexity is compounded by the challenge of finding truly comparable data. For one thing, universities have great discretion in assigning expenditures to cost categories. Universities may use quite different charts of accounts and process financial transactions in legacy software systems that are difficult to mine for information. For another, maturity of the institution can significantly affect its costs and budget. Establishing a new medical school often results in costs that are higher than at already established schools. New buildings, smaller class sizes and growing programs all contribute to higher costs in the early years of a new medical school.

Calculations in this report use data available at the time. This audit does not compare costs between the two medical schools as it was not in the scope of the legislative mandate and because comparing costs between two programs – one long-established, the other new – poses several challenges. Medical schools differ in many areas that affect costs, including the number of students, the length of time the school has been in operation, and other considerations.

## **Identifying medical education costs at the University of Washington's UW Medical School**

This study includes only those costs related to the medical school and its associated WWAMI community-based education model. We excluded costs related to other programs within the School of Medicine and two other components of UW Medicine: patient care and sponsored faculty research.

### **Determining cost per student of medical education by fund source**

To develop an understanding of data related to fund sources and associated costs, we interviewed representatives from the School of Medicine and the UW Internal Audit Department. To evaluate costs per student in the medical school (including students from WWAMI partner states), we reviewed expenditures from fiscal year 2015. The review included all costs directly associated with WWAMI. For indirect costs, we applied costs based on the proportion of students in the medical school to the entire School of Medicine.

To calculate per-student costs, we distributed total costs across the total number of medical students during that year. Because UW includes students participating through the WWAMI program in its total population of medical school students, costs for all students are the same regardless of the student's home state university. For this reason, we calculated a basic cost per student without regard for the student's home state university.

In keeping with the legislative mandate, this audit does not project per-student costs for future years.

## **Determining whether Washington state funds or student tuition are used to subsidize partner state students**

We reviewed WWAMI student tuition and partner state payments made to the School of Medicine during fiscal year 2015, then compared tuition and partner state revenue to the costs of medical education. For any costs that exceeded tuition from WWAMI students and partner state revenue, we estimated the amount funded by state dollars or the UW tuition pool. However, limitations in UW's legacy financial system prevented us from drawing a direct pathway from each revenue source to specific activities so we assumed that revenue was applied proportionally to all activities.

## **Identifying planned costs at Washington State University's Elson S. Floyd College of Medicine**

### **Determining the planned per-student cost of medical education**

To identify expenses that are indicative of expected costs when WSU's Elson S. Floyd College of Medicine begins to achieve full operations, we analyzed planned costs for fiscal years 2019 through 2023. We emphasize fiscal year 2023 because it is the earliest year with a combination of full planned student enrollment and fully staffed faculty.

WSU representatives provided a 10-year plan that outlines growth in faculty and staff, facilities, number of students to enroll, and planned revenues and expenses. It also incorporates basic inflation at a rate of 1.8 percent to about 5 percent depending on the expense category, which has a significant impact on estimated figures in 2023.

WSU representatives developed this plan in October 2015 as one of several requirements to receive preliminary accreditation for the College of Medicine and with the understanding that it was conservative and would be updated and refined over time. It represents management expectations for growth.

Generally, these decisions and associated expenses are used as stated. We did not conduct an extensive assessment of the appropriateness of WSU's decisions as represented in their 10-year plan, but did broadly determine its reasonableness before calculating planned per-student costs.

Using this information, we identified 1) direct costs related to instruction, facilities and program support, and 2) indirect costs for the entire university or campus that were allocated to the College of Medicine. Then, we distributed the costs across the number of students expected to enroll in the medical program.

### **Determining fund source**

To determine the fund source, we reviewed and calculated WSU's planned revenue sources for fiscal year 2023, then distributed the revenue by the number of students expected to enroll.

## **Use of subject matter experts**

The State Auditor's Office hired Sjoberg Evashenk Consulting, Inc. to conduct the cost analyses and to answer the study's objectives. Sjoberg Evashenk Consulting has in-depth familiarity with higher education financial information, and experience conducting financial reviews and evaluations of higher education institutions. The firm has conducted audits, evaluations and cost studies of large governments and higher education institutions in California, Washington, Colorado, Oregon and Idaho. More information on the firm's qualifications can be found on its website:

[www.secteam.com](http://www.secteam.com)

## **Audit performed to standards**

This performance audit was conducted under the authority of state law (RCW 43.09.470), approved as Initiative 900 by Washington voters in 2005, and in accordance with Generally Accepted Government Auditing standards (December 2011 revision) issued by the U.S. Government Accountability Office. Those standards require that the Auditor's Office plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for the findings and conclusions based on the audit objectives. The Office believes that the evidence obtained provides a reasonable basis for our findings and conclusions based on the audit objectives. See **Appendix A**, which addresses the I-900 areas covered in the audit.

## **Next steps**

Performance audits of state programs and services are reviewed by the Joint Legislative Audit and Review Committee (JLARC) and/or by other legislative committees whose members wish to consider findings and recommendations on specific topics. Representatives of the State Auditor's Office will review this audit with JLARC's Initiative 900 Subcommittee in Olympia. The public will have the opportunity to comment at this hearing. Please check the JLARC website for the exact date, time, and location ([www.leg.wa.gov/JLARC](http://www.leg.wa.gov/JLARC)). The State Auditor's Office conducts periodic follow-up evaluations to assess the status of recommendations and may conduct follow-up audits at its discretion.

# Audit Results

---

Accurately determining medical education costs is complicated, at best. We did not provide a comparison of costs between the two medical schools as it was not in the scope of the Legislative mandate and because comparing costs between two programs – one long-established, the other new – poses several challenges. Medical school programs differ in many areas that affect costs including the number of students, the length of time the school has operated, degree requirements, and the way the schools are funded. During the course of this audit, readers should bear in mind four areas as they review the results of this work.

**Costs for both medical schools are based on information from different years and different circumstances.** At the University of Washington (UW), we reviewed actual costs; at Washington State University (WSU), we reviewed planned costs. The cost of education at UW is based on fiscal year 2015, while planned costs at WSU are based on fiscal year 2023.

**The maturity of a medical school has a significant impact on the cost of education.** Establishing a medical school requires substantial initial costs for planning, infrastructure, faculty and other start-up costs. We used 2023 for WSU because start-up costs would change and some are even eliminated by that point in time.

**UW has the advantage of economies of scale.** With more students enrolled, the per-student cost of education often drops. WSU's costs level off over time as the school increases student enrollment.

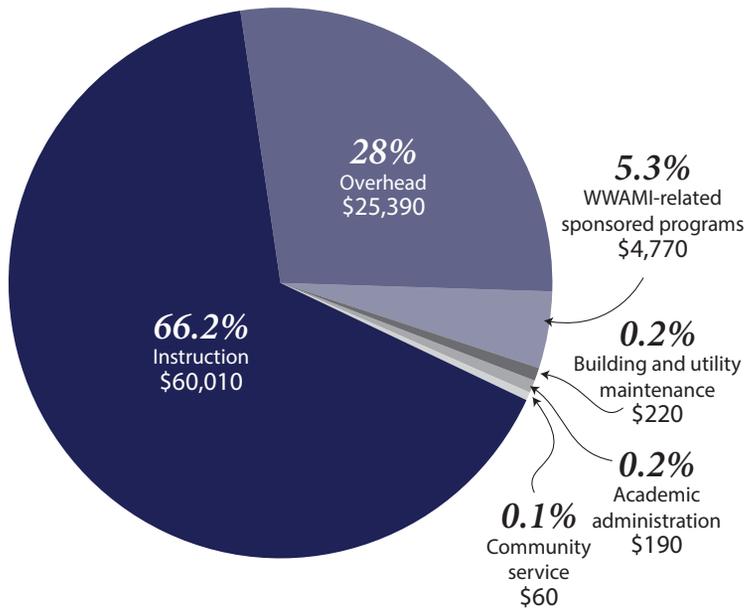
**The cost of medical education is not the same as student tuition.** For the purposes of this study, the cost of medical education is the total expense of providing education, as opposed to the cost of tuition, which is the amount students contribute to their education. Tuition alone is rarely sufficient to operate a medical school: other resources typically include state funds, gifts, grants, contracts, and income from school-operated clinics.

The following results reflect how differences between the medical schools' mission, maturity and size affect the cost of activities.

## Medical education at the University of Washington cost \$90,640 annually for each student in 2015, regardless of their home state university

Medical education at the UW cost about \$90,640 per student in fiscal year 2015. We calculated the cost using expenditures from the medical school. This figure represents the estimated total cost of education for all students enrolled, regardless of their WWAMI home state university. Costs include faculty instruction, student support, academic support, clinical costs, and other indirect costs. **Exhibit 4** illustrates a breakdown of costs.

**Exhibit 4 – Breakdown of estimated costs for medical education at the University of Washington in fiscal year 2015**



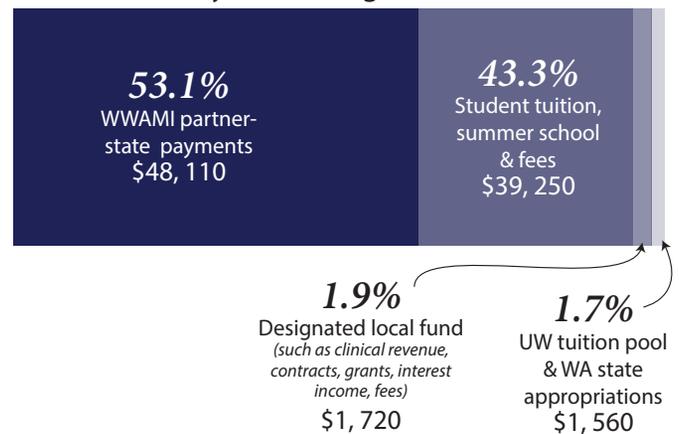
Source: Auditor calculation of UW's medical school costs in fiscal year 2015

## Washington state funds or tuition subsidized 1.7 percent (\$1,560) of medical education costs for WWAMI partner-state students

Revenue for providing medical education at UW comes from several sources such as student tuition, state funds, gifts, grants, contracts and clinical revenue. In fiscal year 2015, we estimate that 1.7 percent, or \$1,560 per student, of medical education costs for students from WWAMI partner states was funded by student tuition (\$1,110) and Washington state funds (\$450). Because the student tuition pool aggregates tuition from both Washington state residents and non-residents, we were unable to determine how much of \$1,110 was from Washington residents alone.

**Exhibit 5** illustrates the estimated subsidy and its possible source in fiscal year 2015.

**Exhibit 5 – Funding sources for medical education at the University of Washington**



Source: Auditor calculation of estimated costs and revenue for UW's medical school in fiscal year 2015.

### How much does it cost to attend UW's medical school?

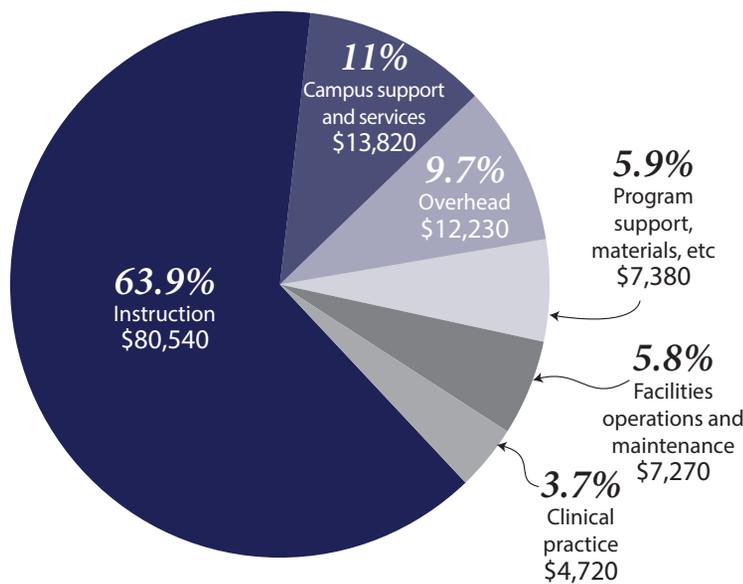
While the cost to educate a medical student at UW in fiscal year 2015 was about \$90,640, the average cost to attend in 2015, including summer school, was \$39,250.

## Estimates for medical education at Washington State University's College of Medicine

To estimate per-student costs for medical education at WSU, we used a preliminary budget developed by the College of Medicine in October 2015. Officials said these projections were conservative and representative of information available at the time. The projections incorporate inflation rates between 1.8 percent and 5 percent depending on the type of expense. Since then, the College has continued to refine its projections and diversify its revenue sources.

Based on WSU's planned costs, we found that per-student costs for medical education at WSU are \$125,960 when the College reaches full planned student enrollment in fiscal year 2023. **Exhibit 6** illustrates the breakdown for costs in fiscal year 2023.

**Exhibit 6** – Breakdown of estimated costs to educate one medical student for one year at Washington State University in fiscal year 2023

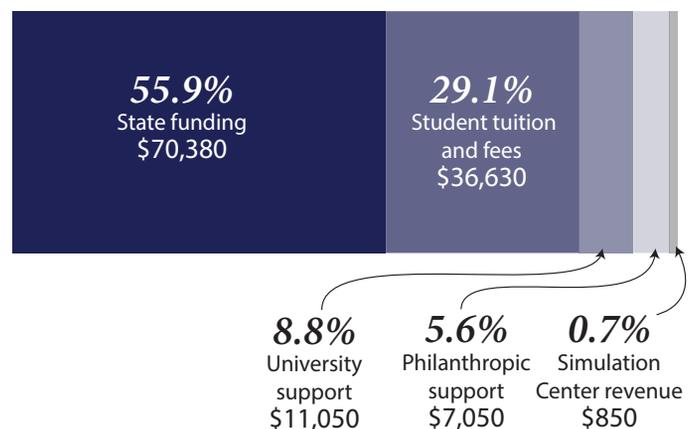


Source: Auditor calculation of WSU's planned costs in FY 2023.

**Exhibit 7** illustrates revenue by fund source. Note that state funding granted to the university at establishment of the medical school is \$10,270 while new state funding is \$60,000.

Planned per-student costs at WSU vary depending on factors, including the number of students enrolled and the number of faculty in a given year. Because WSU is enrolling its inaugural class in August 2017, the information used to analyze costs is not based on historical data and may vary from actual costs.

**Exhibit 7** – Projected funding sources for medical education at Washington State University



Source: Auditor calculation of WSU's planned revenue sources in FY 2023.

**How much does it cost to attend WSU's medical school?**

Planned tuition for the 2017-18 school year is \$35,000.

## **Conclusion**

Using the best available data at the time and in accordance with Generally Accepted Government Auditing Standards, we responded to questions from the Legislature about estimating per-student medical education costs. In keeping with the questions asked by the Legislature, the State Auditor's Office does not offer recommendations. By identifying the cost or planned cost of medical education at both the University of Washington and Washington State University, this report provides universities and legislators with information for future discussions.



## UNIVERSITY OF WASHINGTON

August 17, 2017

The Honorable Pat McCarthy  
Washington State Auditor  
Insurance Building  
Capitol Campus  
302 Sid Snyder Avenue SW  
Olympia, WA 98504-0021

Dear Ms. McCarthy,

The University of Washington (UW) appreciates the opportunity to respond to the audit conducted by the Washington State Auditor's Office (SAO) with the assistance of Sjoberg Evashenk Consulting (SEC) in response to ESSB 6052, Sec.124 (3) (2016 Operating Budget). This was a complex audit and required significant time and effort by all parties to complete the assigned audit objectives. We appreciate the collaborative and thoughtful approach taken in completing the work.

The UW is committed to providing high quality and cost effective medical education to the State of Washington and our WWAMI partner states (Wyoming, Alaska, Montana and Idaho). The WWAMI medical education program was created by the Washington Legislature and signed into law by Governor Evans in 1971 to train medical students to meet physician workforce needs throughout the State of Washington and the WWAMI region, with a strong emphasis on rural and underserved areas. Our UW program has been nationally recognized as the No. 1 ranked primary care medical school in the country for the 23<sup>rd</sup> time in the past 24 years and has been ranked No. 1 in family medicine and rural medicine for 26 consecutive years. These rankings along with the fact that the UW is the No 1 recipient of NIH research funding among public universities, have created a nationally renowned medical school that effectively and efficiently serves the needs for the State of Washington and our WWAMI partner states.

The UW agrees with the SAO's first audit determination that the estimated average annual cost is \$90,640 per student to train all of our medical students, including Washington state students and WWAMI partner state students. However, the UW respectfully disagrees with the second audit determination that Washington state funds and tuition subsidize the four partner states by approximately 1.7 percent or \$1,560 per student.

With regard to the subsidy issue, the legislature asked SAO:

"(b) To determine the cost per student for students from WWAMI partner states other than Washington and whether any Washington State funds or Washington resident student tuition is used to subsidize students from WWAMI partner states," ESSB 6052, Sec.124 (3)(b).

The SAO acknowledged that limitations in the University's legacy financial system prevented them from drawing a direct pathway from each revenue source to specific activities; thus, they made certain assumptions regarding the calculation of the partner state subsidy. In determining the partner state subsidy, the SAO report first identified that, of the \$90,640 in per student cost, \$87,360 per student in the partner states was provided by the combination of WWAMI partner state payments and WWAMI

student tuition funding, leaving a partner state funding gap of \$3,280 per student. The SAO had previously determined that the overall funding for the \$90,640 per student cost came 47.5 percent from state funds and 52.5 percent from designated local funds. The SAO therefore applied the same percentage split to the \$3,280 partner state funding gap per student and concluded that \$1,720 per student was funded from designated local funds (patient clinical revenue and gifts) and \$1,560 per student was subsidized annually from Washington state funds and tuition.

The UW does not believe the methodology used by the SAO was the best methodology for the purpose of identifying the source of the partner state subsidy. UW data shared with SAO shows that across all WWAMI students, \$4,770 of the annual per student cost is on average, funded by patient clinical revenue and gifts; i.e., non-state appropriated and non-tuition funds. Therefore, when determining a Washington state or resident tuition subsidy, the total estimated cost should be reduced off the top by this patient clinical revenue and gift funding. Adjusting the overall cost by what is supported by these patient clinical revenue and gift funds, leaves a balance of \$85,870 per medical student cost that would be expected to be funded on average by State funds or Washington resident student tuition. Accordingly, the four WWAMI partner states and student tuition funding of \$87,360 per year exceeded the average cost per student funded with state appropriated funding and student tuition. Therefore, Washington State appropriated funds and resident tuition did not subsidize medical students from WWAMI partner states.

We also strongly disagree with MGT of America's report that summarized UW's Washington state's costs of educating medical students in Appendix B. The UW Board of Regents shared these concerns in a letter to WSU Regents in September of 2014. MGT's calculation grossly overstated the state of Washington costs to educate a UW medical school student. First, MGT captured all of UW's state and tuition funding in support of all UW School of Medicine students and trainees and research indirect cost recovery. Second, MGT did not recognize that our funding not only supports medical students but that it also supports our undergraduate and graduate students in research programs and allied health and our residents and fellows.

Thank you again for the opportunity to provide a response to the SAO conclusions in the draft report. The UW remains committed to high quality and cost effective medical education and we appreciate the support of Washington State and our WWAMI partner states.

Sincerely



Paul Ramsey  
CEO, UW Medicine  
Executive Vice President for Medical Affairs and  
Dean of the School of Medicine,  
University of Washington



Richard Cordova  
Executive Director  
Internal Audit  
University of Washington

cc: Ana Mari Cauce, President, UW  
Tania Y. Fleming, Senior Performance Auditor, SAO

August 11, 2017

The Honorable Pat McCarthy  
Washington State Auditor  
P.O. Box 40021  
Olympia, WA 98504-0021

Dear Auditor McCarthy:

Thank you for the opportunity to review and respond to the State Auditor's Office (SAO) performance audit report, 'Determining costs per student for Washington's medical schools'.

While the identified cost per student at Washington State University is reported at a higher rate in the report than we had calculated, the difference is extremely marginal. Rather, we will focus our comments on three elements found in this report that we would like to express our appreciation.

- The audit report repeatedly highlights the complexity of identifying costs specific to medical education and complications with comparing actual costs to projected costs at notably different points in time.
- The audit report rightfully considers projected WSU costs at a date in the future by which time the Elson S. Floyd College of Medicine will have developed economies of scale not possible until enrollment scales up. It also assumes a variable inflationary factor as we have.
- The audit report accurately projects a funding mix that includes a state contribution that is unchanged since well before Gov. Jay Inslee signed House Bill 1559 into law on April 1, 2015.

Since that momentous day, we have worked tirelessly and diligently in partnership with the health care community statewide, our legislators, and community leaders to develop the infrastructure that will deliver on the University's promise for a community-based medical school. A pivotal milestone was achieved on October 18, 2016 when the College received preliminary accreditation enabling the recruitment of the charter class of 60 students to begin receiving instruction this fall.

---

PULLMAN • SPOKANE • TRI-CITIES • VANCOUVER • GLOBAL CAMPUS • EXTENSION

PO Box 641048, Pullman, WA 99164-1048  
509-335-4200 • Fax: 509-335-5515

August 11, 2017

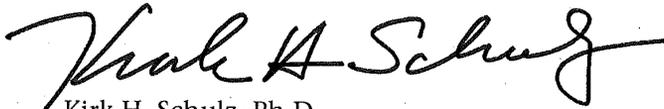
Page 2 of 2

As the College's program has matured from concept to reality, program development and emphasis, research collaboration and delivery techniques continue to stay true to the original vision for providing expanded access to health care in challenging health care environments throughout Washington and further the University's land-grant mission to serve the needs of the state.

The initial pro forma developed in 2015 served as the basis for the auditors' evaluation. Some details have been refined but the overall mission and direction will continue to stay in focus with the drive and vision of initial stakeholders and supporters. The projected costs have been developed based on actual costs in similar expense categories and in best efforts to align with the fluid nature of a developing entity. We appreciate the audit team's efforts to best understand the nature and intent behind these projections.

The SAO and its contractor, Sjoberg Evashenk Consulting, Inc., worked collaboratively with the finance and program teams involved in this audit, and we thank the audit team for its work.

Sincerely,

A handwritten signature in black ink, appearing to read "Kirk H. Schulz". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Kirk H. Schulz, Ph.D.  
President



**Office of the Washington State Auditor  
Pat McCarthy**

August 23, 2017

We thank both the University of Washington and Washington State University for their assistance and cooperation in this audit.

Calculating costs and identifying funding sources is complex. The University of Washington believes that discretionary funds from clinical revenue and gifts exceed any remainder after payments from WWAMI partner states and student tuition. However, the data provided by the University does not adequately demonstrate that discretionary funds are specifically spent on the medical school. Therefore we have no way to verify the University's assertion that it allocates patient clinical revenue and gift funds to the cost of educating medical students.

Pat McCarthy  
Washington State Auditor

# Appendix A: Initiative 900

---

Initiative 900, approved by Washington voters in 2005 and enacted into state law in 2006, authorized the State Auditor’s Office to conduct independent, comprehensive performance audits of state and local governments.

Specifically, the law directs the State Auditor’s Office to “review and analyze the economy, efficiency, and effectiveness of the policies, management, fiscal affairs, and operations of state and local governments, agencies, programs, and accounts.” Performance audits are to be conducted according to U.S. Government Accountability Office government auditing standards.

In addition, the law identifies nine elements that are to be considered within the scope of each performance audit. The State Auditor’s Office evaluates the relevance of all nine elements to each audit. The table below indicates which elements are addressed in the audit. Specific issues are discussed in the Results and Recommendations section of this report.

I-900 element	Addressed in the audit
1. Identify cost savings	<b>No.</b> This study focused on identifying cost estimates for providing medical education.
2. Identify services that can be reduced or eliminated	<b>No.</b> This study focused on identifying cost estimates for providing medical education.
3. Identify programs or services that can be transferred to the private sector	<b>No.</b> Providing public medical education is a function of Washington’s public universities. This study focused on identifying the costs associated with doing so.
4. Analyze gaps or overlaps in programs or services and provide recommendations to correct them	<b>No.</b> This study focused on identifying cost estimates for providing medical education.
5. Assess feasibility of pooling information technology systems within the department	<b>No.</b> This study focused on identifying cost estimates for providing medical education.
6. Analyze departmental roles and functions, and provide recommendations to change or eliminate them	<b>No.</b> This study focused on identifying cost estimates for providing medical education.
7. Provide recommendations for statutory or regulatory changes that may be necessary for the department to properly carry out its functions	<b>No.</b> This study focused on identifying cost estimates for providing medical education.
8. Analyze departmental performance data, performance measures and self-assessment systems	<b>No.</b> This study focused on identifying cost estimates for providing medical education.
9. Identify relevant best practices	<b>No.</b> This study focused on identifying cost estimates for providing medical education.

---

# Appendix B: Medical Education Cost Studies

---

## **Prior studies provided vastly different cost estimates for educating more medical students**

In recent years, various groups published studies related to identifying ways to increase the number of physicians in Washington. The following information provides a brief description of those studies.

### ***Medical School Feasibility Report*** (2014), MGT of America

MGT of America, Inc., at the request of Washington State University, conducted a feasibility assessment of the potential for a new medical school at WSU's health sciences campus in Spokane. The study determined that:

- Washington has a need for more physicians
- The state of Washington disbursed \$214,997 per Washington student for UW's medical students while other states disbursed an average of \$41,650 per student in fiscal year 2011\*
- WSU planned costs for a new medical school were \$98,000 per student\*

*\*Figures in MGT's report for and WSU are based on costs from other recently developed medical schools and information available at the time.*

The report noted that figures were calculated by dividing the total state funding received by UW that year for its medical school by the number of Washington students enrolled. The published report does not provide enough detail to determine which costs were included in the estimate.

Read the report on the State Auditor's Office website at:

[www.sao.wa.gov/state/Pages/PAMedEducation.aspx](http://www.sao.wa.gov/state/Pages/PAMedEducation.aspx)

### ***Cost/Benefit and Economic Impact Analysis of Medical Education Expansion Options/Needs in Eastern Washington*** (2014), Tripp Umbach

Tripp Umbach, at the request of the University of Washington, conducted an independent analysis of the costs and economic benefits of medical education expansion options in Eastern Washington. Among other things, the analysis determined that the UW School of Medicine in Spokane costs approximately \$70,000 per student.

UW representatives stated that the Tripp Umbach estimate was not representative of the entire program. The university explained that the estimate represented only the additional direct costs per student that would be required if more students were added to the medical school.

Read the report on the State Auditor's Office website at:

[www.sao.wa.gov/state/Pages/PAMedEducation.aspx](http://www.sao.wa.gov/state/Pages/PAMedEducation.aspx)

### ***Evaluation of Policy Options for Increasing the Availability of Primary Care Services in Rural Washington State*** (2016), RAND Corporation

The Washington State Institute on Public Policy (WSIPP) contracted RAND International to evaluate several policy options that could address a perceived shortage of primary care physicians in rural Washington. Potential options include opening a new medical school increasing the number of primary care residency positions, expanding educational loan-repayment incentives, increasing Medicaid payment rates for primary care physicians in rural Washington, and encouraging the adoption of alternative models of primary care.

Read the report on the WSIPP website at:

[www.wsipp.wa.gov/Reports/593](http://www.wsipp.wa.gov/Reports/593)