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Health Careers Opportunity Program: A Pathway to Increase Providers in Underserved Communities

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Abstract

Abstract

The current critical shortage of primary care physicians (PCPs) in rural communities has been well documented. To respond to this shortage, the Federal Bureau of Healthcare Workforce has encouraged medical schools to recruit students from underrepresented backgrounds to apply to medical schools and upon graduation to work in rural communities. This paper presents four programs the University of Washington School of Medicine (UWSOM) has implemented toward that end, with focus on the Ambassador program.

Methods

The UWSOM Office of Rural Programs offers a Health Careers Opportunity Program (HCOP). The HCOP summer programs recruit, train, and provide academic and social support to underrepresented students from rural and underserved areas. The students are thereby encouraged to enter medical school and eventually to practice in those communities. The Ambassador program recruited these students by e-mail with assistance from various health professional schools. Selection criteria were educational and/or economically disadvantaged backgrounds and currently attending a health professional school.

Results

The UWSOM program's pathways have engaged high school and undergraduate students in its summer preparation programs. For students in three of the four pathways (high school, undergraduate, and medical school), the initial numbers are small, but the trajectory demonstrates an encouraging trend. The HCOP Ambassador program has 50 students, most of whom are medical and physician assistant students. Ambassadors found the program helpful, especially regarding the interprofessional education and mentoring of high school and undergraduate students interested in becoming future PCPs.

Conclusion

Preliminary results show an encouraging trend in recruiting and retaining students willing to serve in rural and underserved communities. Our goal is to build upon this favorable trend by continuing recruitment and training of underrepresented students, learning from each cohort the changes needed to optimize future recruitment and training, and creating a healthcare workforce to serve these populations.

Key words: underserved; healthcare workforce; underrepresented students; rural areas

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Introduction

According to the Census Bureau, rural areas refer to areas that are not urban or urban clusters which contain at least 2,500 in population; those that are not urban or urban clusters are considered rural.¹ While some states have developed their own definition of rural, the Washington State Department of Health uses 124 aggregated ZIP code to identify rural health service areas.² Due to an aging population and the rising cost and increased complexity of healthcare, rural and other underserved communities are struggling to recruit and retain healthcare professionals to meet their populations' needs.³⁻⁵ To provide the highest-quality health care and overcome health disparities, the workforce must diversify to increase the numbers of providers who are demographically similar to, and most likely to serve, our increasingly diverse U.S. population.⁶ "Demographically similar" in this context is defined as providers who reflect or are experientially familiar with the racial, ethnic, cultural and linguistic diversity of the populations served. Race/ethnicity, immigration status, initially limited language proficiency, and rurality may characterize underrepresented groups more likely to work in medically underserved areas. Increased numbers of providers from similar backgrounds should improve patient/provider relationships resulting in higher patient satisfaction and improved patient outcomes.^{7,8}

The increase in medical school applications, acceptances, and matriculants has failed to adequately raise the number of students from underrepresented and minority communities.⁹ Some barriers to increasing diversity in the healthcare workforce include inadequate academic preparation, lack of social and emotional support, life experiences, lack of familiar role models and mentors, financial challenges, and institutional biases.^{10,11} Pipeline interventions have resulted in positive outcomes by promoting racial/ethnic minorities and disadvantaged students' academic performance and likely enrollment in health professions schools.¹¹ Thorough preparation for the college experience and introduction to the fields of healthcare are critical ingredients of a comprehensive program targeting prospective disadvantaged students.¹²

High school programs that provide exposure to the undergraduate curriculum, familiarize students with the clinical and scientific aspects of medicine, provide opportunities for productive mentoring relationships, and familiarize students with health care issues have been successful.⁹ Those methods tend to ensure that students are aware of the allied health fields that comprise the total health care delivery team. Programs targeting college and graduate students benefit early students through mentorship and exposure providing clinical care.^{12,13}

Washington State is home to a wide range of racial and ethnic populations. These populations include agrarian eastern Washington's large Hispanic population, the Native American populations located in northeast, northwest, and south-central portions of the state, a substantial urban immigrant population, and the historically redlined Black neighborhoods of Western Washington. Almost 1 in 6 residents is an immigrant, comprising 15.5% of the state's population.¹⁴

The University of Washington School of Medicine (UWSOM) is the largest allopathic medical school in Washington State. Besides Washington State, UWSOM cooperates with regional campuses in Wyoming, Alaska, Montana and Idaho which makes up the WWAMI medical school region.¹⁵ UWSOM accepts students from these universities. This allows for a diverse cohort of 275 incoming medical students annually. UWSOM curriculum is delivered in collaboration with UWSOM's Interprofessional Program (IP) which allows students to experience rural and underserved education as part of their medical education curriculum. As part of the IP, partnerships are formed with other universities, institutions, programs, and community organizations to expand students' opportunities for learning. The IP contains content on how different healthcare professionals work together for the benefit of patients, improve students' confidence in working with different populations and professionals, and provide clerkships in different WWAMI regions and populations. Also, UWSOM's Office of Rural Programs (ORP) works to enhance students' educational achievement and aspirations towards flourishing healthcare careers.¹⁶ In alignment with current research, the ORP's goal is to train and recruit

disadvantaged future primary care physicians and healthcare providers who will serve in rural and disadvantaged communities.^{17,18} Efforts to enhance diversity in the physician workforce have been recognized as crucial in addressing healthcare disparities.¹⁷ However, increasing the number of underrepresented physicians requires multifaceted approaches that go beyond recruitment alone.¹³

Additionally, UWSOM provides medical students an opportunity to pursue their interest with various pathway programs. For example, students may choose to learn more about Black Health, Indian Health, Latinx Health, and Underserved Health through specific programs aimed to increase knowledge and experience with these populations.¹⁸ Pathway programs contribute to the solution of addressing the workforce shortage of primary care providers in underserved areas.^{18,19} There are similar programs in medical schools which address the need for specific training to encourage students to be exposed to rural or urban underserved areas.^{20,21}

In order to increase the number and diversity of health professionals from disadvantaged backgrounds serving Washington's communities of need, the UW's Health Careers Opportunity Program (HCOP) was created to augment and strengthen programs designed to enhance the health career recruitment and educational ecosystem from high school to medical school.^{22,23} More specifically, the HCOP offerings address the goal of increasing representation of African American, Latino/a/x, American Indian/Alaska Native, and Pacific Islander students in the health professions.²⁴ HCOP aligns with the best practices in addressing the shortage of underserved students in graduate medical education, as institutions are increasingly focusing on holistic support strategies to advance workforce diversity.^{23,24}

Methods

During the 2023-2025 academic year, the University of Washington School of Medicine (UWSOM) recruited health professional students as part of the Health Careers Opportunity Program (HCOP). HCOP is a Federal Bureau Workforce program under the Health Resources and Services Administration. The UWSOM's HCOP is one of 20 funded programs in the U.S.

UWSOM. HCOP encompasses four interconnected programs targeting high school, undergraduate, and medical students, each aimed at recruiting, training, and supporting participants along the educational pipeline. The project is IRB exempt by the University of Washington.

The Ambassador program was created to provide peer mentorship to students in Underserved Doctors (UDOC), where high school students interested in medicine can receive mentorship and volunteer experience in clinics in a summer program. The Biomedical Research Internship for Growth of High School Trainees from Underserved Populations (BRIGHT-UP) is a summer program for high school students interested in pursuing lab science where they complete a small research project with mentors in various labs. The Summer Health Professions Education Program Longitudinal Extension (SHPEPLE) program is tailored for undergraduates interested in exploring health professional schools, with the majority of these students interested in applying to medical school. Lastly, the Ambassador program is tailored to students already in a health professional program. Ambassadors receive professional mentorship as well as serving as a mentor to high school and undergraduate students. The HCOP programs were designed to address barriers faced by underrepresented students in pursuing healthcare careers^{23,25} as well as encouraging a healthcare workforce, especially in rural underserved areas.²⁵⁻²⁷

Outreach and recruitment efforts target high schools, undergraduate institutions, and community organizations in Washington State, prioritizing students from educational and economically disadvantaged backgrounds who demonstrate an interest in healthcare careers. Programs provide academic enrichment, mentorship, career exploration, and financial support to participants from rural and underserved communities. HCOP admits both high school and post high-school students in the medical education ecosystem. It provides them with academic, social support and a sense of community during college.^{28,29} The focus of this paper is on the Ambassador program because UWSOM's goal is to increase the physician workforce, especially in rural and underserved areas.

The Ambassador program recruited its first cohort in Fall 2023 by contacting the various program leaders at UWSOM. Flyers and emails were sent to students in such programs as medicine, dentistry, physician assistant, nursing, public health, and pharmacy. Interested students completed an online application requesting their demographic information, current health professional schools, their economic status, and a short essay about why they would like to become an HCOP Ambassador. Selection criteria included whether they were from educational and economically disadvantaged backgrounds and their commitment to pursue a health career, especially medicine, in a rural or underserved area. Accepted students completed online modules on Canvas, a learning management system, with reflections on how they thought healthcare professionals could improve patient experience and outcomes, as well as their thoughts on content learned during the Ambassador program. Also, each Ambassador was assigned to a high school or an undergraduate student as a mentee and they were to meet monthly with their mentees.

Program Design and Implementation

The HCOP programs were designed to address barriers faced by underrepresented students in pursuing healthcare careers.^{19,22,23} The programs provided academic enrichment, mentorship, career exploration, and financial support to participants from rural and underserved communities. Outreach and recruitment efforts targeted high schools, undergraduate institutions, and community organizations in Washington state, prioritizing students from disadvantaged backgrounds who demonstrated an interest in healthcare careers. It is important to have longitudinal support and adaptation of programs to ensure student success. HCOP offerings allow students to enter our programs from high school and the ecosystem is intended to support and inculcate a sense of belonging that will continue through college. We plan to follow the students until they enter a health professional school such as medical school, and then we hope to follow their career trajectories to learn where they plan to apply and complete their training

Data collection and analysis

Data collection focused on participant demographics, program completion rates, and feedback on program impact. We employed REDCap surveys which included both quantitative and qualitative items to assess participant experiences, satisfaction, and perceived impact on their career aspirations. We visualized and analyzed quantitative data using Microsoft Excel to calculate descriptive statistics summarizing program enrollment, demographics, and completion rates. We thematically analyzed qualitative responses from surveys to identify recurring themes regarding participants' experiences and the program's impact.

Results

Our first Ambassador cohort started in the fall of 2023 and concluded in June of 2025. This cohort consists of 21 students in medicine, dentistry, pharmacy, and physician assistant programs. Our second cohort of 29 students began in 2024 and will end in 2026 (Table 1). Ambassadors are required to complete online modules with content on how to best serve patients in rural and underserved populations. Participants are also required to complete a presentation based on their interprofessional experience in a community organization or clinic that partners with UWSOM. All participants told us that the modules were helpful in how they view collaborating with other healthcare professionals and that they would use what they learned to help improve their patient care and outcomes.

Ambassadors highlighted key aspects of their experience, recounting overall positive experiences with other ambassadors and the satisfaction of mentoring high school and undergraduate students. One ambassador responded, "I learned so many new things that a traditional education does not offer." The response underlined the unique educational value of the program. Students reported a sense of belonging, community, and engaging in valuable networking.

In our first cohort, we only had five ambassadors who had mentees. We also had three of the ambassadors who needed mentorship from UWSOM faculty and were matched with the faculty they requested. As the program matured, the second cohort had 19 out of

29 ambassadors matched with a mentee, with 17 pre-medical mentees from the SHPEPLE program.

The majority of the 2024–2026 HCOP cohort expressed a strong interest in serving small town and rural communities after completing their medical education (Fig. 1). Most first-year participants wanted to work in underserved areas, a minority preferring small cities and rural, unincorporated areas. This commitment to addressing healthcare disparities aligns with the HCOP mission to serve disadvantaged communities.

We evaluated how the IP experience with healthcare professionals contributed to their collaboration skills and knowledge. We asked our ambassadors how valuable they found their experience to be on a 5-point Likert scale, from “strongly agree” to “strongly disagree”. In the first cohort, 89% of participants found the experience to be valuable and contributed to their understanding of collaboration and how it may potentially benefit their patients. The second cohort is ongoing.

Conclusion

There is a gap between racial, ethnic, and socioeconomic groups are growing with a decreasing percentage of medical students working with these groups. Medical education is simply out of reach for many underserved and minority students. UWSOM embraces the diversity of our communities and recognizes the need for diverse healthcare providers. By ensuring that underrepresented students are exposed to health careers and receive support throughout their academic journey, we expect to increase the number of health providers serving in underserved communities.^{30,31} At the same time, our project helps reduce health disparities and addresses social determinants of health that disproportionately affect communities of color.

The opportunity of interprofessional programs with different patients, locations, and interactions with healthcare professionals provided meaningful education for the HCOP Ambassadors.³² Shared learning experiences and collaboration with students from different health professional schools allowed for varied perspectives in a setting of coordinated care and allowed future health care providers to be ready

to be a part of a team clinical setting to provide best care and increased patient outcomes. Also, positive interpersonal, peer interactions increase students’ sense of belonging and sense of belonging leads to student success and the Ambassador program allows for positive student interaction from various backgrounds but shares the same common goal of becoming future health care providers.³³

We found that early support and encouragement enhances students’ academic success. This is demonstrated in our pre- and mid-program survey from the first and second Ambassador cohorts administered on Canvas online learning system. We seek to prepare disadvantaged students to reach their intrinsic potential and help those who want to be physicians realize their goals.^{20,22,23} HCOP also targets economically and educationally disadvantaged students who are underrepresented in health professional schools as well as health care providers. Medical student mentorship helps increase knowledge and confidence among pre-medical students in the medical school application process.³⁰ One of program’s main objectives is to increase the physician workforce, especially in the rural areas where physicians are lacking.^{17,24,25} By providing students with rural healthcare exposure, additional resources and mentorship, the diversity of future classes of physicians may improve and better mirror the populations they will serve.^{21,22,24} Given the importance of structured recruitment programs in diversifying the workforce, the success of HCOP echoes findings that sustained interventions and mentorship significantly contribute to the retention of underrepresented minority students in medicine.^{13,27,28}

HCOP represents an ecosystem that moves students through their educational journey into a healthcare career. However, a gap exists for students who face barriers to entering health professional schools. Research reveals such barriers as lack of financial support for college and professional school and lack of a sense of belonging.^{28,29} The focus should be on helping students develop academic skills, hands-on experience in healthcare fields, assistance with test preparation and applications to professional schools, and providing a stipend for the summer programs so that these students can participate and prepare

academically without having to work outside the program.

Consistent with recent research, we found that giving attention to students while they are in high school and continuing to follow them through their academic trajectory will lead to increased student success and a sense of belonging, especially those from disadvantaged backgrounds.^{29,30} Research shows that students who lack of a sense of belonging tend to perform poorly compared to those who do,^{28,29} and students' sense of belonging is greater if and when they socialize with peers whose backgrounds may differ from their own.³⁴ This presents an opportunity for students to interact with students with a diverse range of experiences and backgrounds.

Our findings confirm the importance of identifying these students at the high-school level and providing resources and support for their goals. Future research should focus on programs that serve as a bridge to support a path to professional schools, providing them with paid training in the healthcare field. Future strategies must incorporate lessons learned from the current evolving healthcare landscape that underscore the urgent need for adaptable and equity-driven transformations in medical education.³¹

Our study has some limitations. This study is of a single public medical school so small sample size may limit the ability to generalize findings. Its results do, however, highlight the importance of identifying interested students early and creating supportive learning environments with mentoring to encourage development of scholars and physicians. HCOP represents a valuable step in exploring how underrepresented students may be supported on the path to and through medical school for the benefit of our evolving healthcare world. The timeliness of our results has given us an understanding of students' needs for academic, professional and personal support upon which they can build their professional futures.

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Table 1: Ambassador Cohort, 2023-2026

Ambassadors	2023-2025 Cohort N = 21	2024-2026 Cohort N = 29
Medicine	6	17
Dentistry	5	6
Physician Assistant	8	3
Pharmacy	1	2
Public Health	0	1
Nursing	1	0

Figure 1: Plans of Working in Rural/Underserved Populations Upon Graduation

