

# Addressing Workforce Shortages Through Equitable Design of Education and Opportunities

[Faryaal Alam](#)

University of Pittsburgh School of Public Health, Department of Health Policy and Management, Pittsburgh, PA

<https://doi.org/10.38126/JSPG200201>

Corresponding author: [faa77@pitt.edu](mailto:faa77@pitt.edu)

Keywords: workforce development; apprenticeships, education; opportunities; rural areas; workforce shortage

**Executive Summary:** The COVID-19 pandemic has exposed the inequities in the healthcare landscape and has also exposed workforce shortages that exist at multiple levels in the healthcare atmosphere. In addition to the supply chain and economic shortages over the last calendar year, the healthcare industry has been ravished by labor shortages, disrupting patient care and education for students in many ways. The American College of Medical Colleges predicts a shortage of 122,000 physicians by 2023. Furthermore, rural areas experience greater disparities in workforce shortages than urban areas, and the demand for workers in both rural and urban areas alike will increase as the baby boomer generations age and head towards retirement. This policy position paper will highlight various existing programs for addressing workforce shortages, creating an effective recruitment strategy, getting youth interested in pursuing careers in healthcare, how to offer stipends for students working as direct support professionals, and looking into possible policy recommendations for addressing workforce shortages. After reviewing these areas, we summarize a wide variety of strategies for employers to implement in creating a more effective workforce including investing in workforce development programs and creating more opportunities for youth.

## I. Introduction

Many modern healthcare systems require a wide variety of different health professionals of different levels to ensure the healthcare system is adequately staffed. An analysis of the Labor Market and Analytics and Economic Data indicated a future shortage of close to 3.5 million healthcare workers by 2026 (Association of American Medical Colleges 2021). Within each and every unit of a hospital, there is a team of healthcare workers, including nurses, nurse's aids, physicians, patient care technicians, transporters, administrators, occupational therapists, physical therapists, and student personnel who are pursuing a health sciences related program. Each and every member of a healthcare facility is essential to ensure that the workflow of a hospital runs efficiently.

Additionally, there has been a history of shortages in filling residency positions for primary care physicians, pathologists, neurologists, and psychiatrists. The healthcare worker shortage is causing adverse outcomes in the healthcare system. In rural and underserved areas, there is a greater shortage of those in the healthcare workforce and providing workforce development programs is a step to alleviate these shortages. Only 9% of the physician workforce works in a rural area currently, further escalating the healthcare problems that occur in rural areas (Rosenblatt 2000). Furthermore, as shortages are occurring, the healthcare industry and policy makers are actively seeking ways to reform and improve the delivery system, including the development of new payment policies and incentives to reward improved performance in an area (Salsberg 2015).

Direct support professionals are those who help people with intellectual and developmental disabilities bathe, get dressed, eat, exercise, socialize, and perform fundamental tasks of daily living. The demand for direct support professionals exceeds the supply (Lunsky 2021). In order to sustain the level of services needed at the current turnover rate of 45%, 574,200 new direct support professionals would need to be hired (Institute on Community Integration 2011). With this shortage of direct support professionals, many have been left without critical care for their children or parents living with intellectual and developmental disabilities. Many direct support professionals make \$12 an hour, and many of them may not be reimbursed by their companies for the mileage on their cars. It is often hard for direct support professionals to support themselves and their families by making \$12 an hour, and it is important to have the funding and incentives available to support their needs. Direct support professionals have an annual turnover rate of 45% and an average vacancy rate of 9% among those with disabilities (The Arc 2022). Without this resource of direct support professionals, many professionals have left their workforce to care for loved ones. Many states lack adequate reimbursement rates for support services, as the living wage is not high, which makes it hard to employ and retain employees for this work.

## **II. Review of workforce development programs policy**

Last year, Alabama passed SB 295, a policy in which the requirements are passed and laid out by the United States Department of Labor's Apprenticeship program. The bill will give tax incentives to businesses who hire apprentices. Tax incentives offer a means for the government to reduce the cost of capital for new industries as well as apprenticeship programs. Tax incentives can allow many businesses to function more efficiently, and an apprentice can take on more work to alleviate burden from senior management. The State of New Jersey passed a similar legislation SB 372 in 2018, which required the state commissioners of education and laborers to collaborate on developing guidelines to encourage students and participate in apprenticeship programs (Gilmore, Hentze, and Herman 2020). Specific apprenticeship and training programs should be targeted within the healthcare landscape to recruit a diverse healthcare workforce.

It would be important to have specific programs aimed at younger individuals, starting from high school age, to be equipped within the healthcare industry. Throughout the entirety of student education, there should be an emphasis on the shortages within the healthcare workforce. One example of this could be offering interested students shadowing opportunities within healthcare careers that are currently having shortages including nursing, direct support professionals, and medical residency specialties that are currently facing shortages. Using New Jersey as a model, it would be important for all states to offer guidelines and encourage teachers to even share healthcare apprenticeship programs with students.

## **III. Challenges in improving healthcare**

There is a lack of government sponsored health insurance plans in rural areas, which makes it difficult for students and their families to receive resources about various insurance plans. Rural areas have a higher proportion of uninsured and individually insured respondents compared to urban areas (Hartley 1994). Among rural residents who have purchased insurance through an employer, rural residents had fewer covered benefits than urban areas (Hartley 1994). Moreover, rural residents who purchased insurance through an employer had fewer covered benefits than urban residents, and they had a deductible of 80% versus 40% for their urban counterparts (Hartley 1994). Additionally, there are many barriers to accessing healthcare in a rural area. First and foremost, transportation is often a barrier from those in a rural area. Transportation can be an unforeseen cost in medical care including the cost of travel, before even receiving care. Oftentimes, the travel to a doctor's office can be upwards to two hours in rural areas. Furthermore, many may have to change buses two or three times before even coming to the doctor's office. The United States Department of Transportation's Federal Highway Administration estimates that 40% of roads in rural areas are inadequate for current travel, with nearly 50% of bridges deemed structurally deficient (Memcott 2012). Maintenance of roads is crucial to address from a policy perspective for a child's overall well-being, access to healthcare, and schooling (Memcott 2012).

#### IV. Policy recommendations

With the current infrastructure of the education system, there are many things that can be done from a policy perspective to further opportunities for advancement. With a specific emphasis on healthcare education, students from rural areas will serve as an asset to bringing in personal perspectives to address the shortage of healthcare workers and addressing the needs of healthcare in those areas. It is important to have specific programs to address healthcare within rural areas.

As an example, two out of the three graduates from the Rural Physician Associate Program at the University of Minnesota Medical School have gone on to practice in that state, and 40% of them practice in rural areas (Jaret 2020). Of the one hundred twenty-seven doctors that have graduated from the University of Colorado Medical School's rural track since it began in 2005, 35% are practicing in communities that are considered rural or frontier (Jaret 2020). It is important to increase these percentages and offer more pipeline programs to rural medicine. It is important to create an equitable healthcare system and tackle the problem head-on with feedback from the community at large to best address workforce shortages. The policy recommendations down below address these workforce shortages, areas of opportunity when it comes to rural areas, and how to create an equitable design of education focusing on workforce development.

##### *i. Policy recommendation 1: Emphasize workforce shortages through workforce development programs*

First and foremost, it would be important to educate youth on the importance of participating in workforce development programs. Through these opportunities, students could be able to better identify their interests early on and expand their professional network. As an example, students can identify interests within the healthcare industry by participating as a community health worker through workforce development. Community health workers are defined as community members who work almost exclusively in community settings and who serve as connectors between healthcare consumers and providers to promote health among groups that have traditionally lacked access to adequate care (Witmer 2022). It is imperative that community health workers' workforce development programs be

representative of the community they serve. Successful development programs for community health workers include established referrals, referrals protocols with community-based health and social services centers (Witmer 2022).

Oftentimes, the strength of workforce development programs derives from their community engagement. Many of the programs within Partner4Work are based on community-based partnerships. The University of Pittsburgh Medical Center has a partnership with Partner4Work for their Pathways for Work program. University of Pittsburgh Medical Center's (UPMC) Pathways for Work program will help those in Southwestern Pennsylvania learn more about job training and the various resources available to them (Andres 2020). Recruiters offer assistance via the telephone to help the community with any questions about résumés, interview preparation, skills assessment, guidance on workforce training opportunities, and help with applying to jobs at UPMC (Andres 2020). A wide variety of roles are available at UPMC including nursing support roles, medical assistants, customer service representatives, warehouse workers, environmental service associates, and foodservice attendants. Recently, UPMC has started a partnership with local universities to help recruit Hospitality Associates to assist within healthcare facilities.

Furthermore, UPMC Pathways for Work Program has started the Freedom House 2.0 program. The Freedom House 2.0 program is a specific program designed to recruit, train, and employ first responders from economically disadvantaged communities (Andres 2020). The community-based program has a specific emphasis on the recruitment of under-represented minorities in healthcare to become certified emergency medical technicians (Andres 2020). In addition to academic training, participants will receive mentorship from community members in the Greater Pittsburgh region. All the graduates from the Freedom House 2.0 program have passed their national exam, and all are ready to join the healthcare workforce (KDKA-TV News Staff 2021).

##### *ii. Policy recommendation 2: Program to improve medical school residency rates within areas of need*

According to the Association of American Medical Colleges, the United States has an estimated shortage

of between 21,400 and 55,200 primary care physicians by the year of 2033 (Primary Care Collaborative 2020). The American Association of Medical Association also reports a shortage of specialty care physicians between 17,100 and 41,900 physicians (Primary Care Collaborative 2020). Geriatrics is another field that is facing a physician shortage, which is concerning given the number of individuals aged 65 and older is predicted to increase 55% by the year 2030 (Lester). In the NRMP subspecialty match in 2015, 198 (56%) of 353 geriatric medicine fellowship medicine remain unfilled, and only 68 (19%) of the available positions were filled by graduates of United States Medical Schools (Salsberg 2015). Furthermore, the shortages will affect all areas of the world, and it is important to create pipeline programs to provide more medical students exposure to these fields.

Sydney Kimmel Medical College provides a Physician Area Shortage program that is specifically designed to increase the supply and retention of physicians in rural areas and small towns, with a focus on primary care areas in need for Pennsylvania and Delaware. The program focuses on recruiting primary care currently, but students interested in specialties with a workforce shortage are especially encouraged to apply to the program. Part of the mission of this program is to address the following disparity: approximately one fifth of Americans live in a rural area, but only 10% of the nation's physicians are located in these same areas (Thomas Jefferson University n.d.). This shortage is considered one of the reasons why rural Americans have higher rates of death, disability, and chronic diseases compared to their urban counterparts (McElistrem-Evenson 2011). The program has been very successful with recruiting physicians from rural areas including having a retention rate of 79% after 11-16 years in practice. Participants are eight times more likely than their peers who did not complete the program to become primary care physicians in a rural area (Thomas Jefferson University n.d.).

*iii. Policy recommendation 3: Provide more funding to rural areas to recruit healthcare workforce*

It is important for states that are in rural areas to receive the proper funding and have specific targeted programs for recruiting an equitable healthcare workforce. As an example, states could look into the Workforce Opportunity for Rural Communities

program. The specific goals of this program include implementing innovative approaches to design and facilitate workforce development, especially in sectors that have been hit hard by and are slowly recovering from economic transition. These efforts aim to implement innovative approaches to address economic impacts, providing enhanced training and support activities to all eligible individuals, support workforce development strategies that prepare eligible program participants for good jobs in demand, and help address the opioid crisis in the Appalachian region (United States Department of Labor n.d.). Additionally, specific programs targeting those who are interested in providing care in a rural or underserved area need to be targeted. As an example, there should be a centralized website that shows all the various scholarships that health science can pursue if they have a commitment, passion, and dedication to serving a rural or underserved area in the future.

Another example of a program that needs to be highlighted more to prospective medical students is the National Health Service Corps, which awards scholarships to students pursuing eligible primary care health professional trainings (National Health Service Corps 2022). The participating medical student must commit to a minimum two years of service, and the student will have their tuition and eligible fees paid for during the duration of their medical education (National Health Service Corps 2022). Monthly stipends are also provided to assist with living expenses for the duration of the program (National Health Service Corps 2022). Medical schools should provide more education on these programs and work to provide students more resources on serving in a rural area following their medical education.

**V. Call to action**

To support workforce development programs, we must create a centralized Department of Workforce Development Office within each state as well as create programs with direct career opportunities for underpaid careers in teaching and the healthcare workforce, and finally, increase funding for rural schools for curriculum development and broadband internet services access. It is also important to look further into current workforce development actions on a state and national level to support legislation that will further develop an equitable workforce in

healthcare and teaching careers. When there is enough workforce that does not feel overburdened and underpaid, they will be interested in mentoring future generations. In the coming years, it is important to offer workforce development programs

in an in-person, hybrid, and virtual environment to make education more equitable for all. It is urgent that all those involved in policy decisions to increase the funding in workforce development programs and to offer and increase access to the opportunities.

## References

- Andres, Taylor. 2020. "UPMC & UPMC Health Plan Launch Freedom House 2.0 to Support Economically Disadvantaged Individuals." *UPMC & Pitt Health Sciences News Blog*. <https://inside.upmc.com/freedom-house-2-launch/>.
- The Arc. 2022. "Direct Support Professionals and the Disability Community." <https://thearc.org/policy-advocacy/direct-support-professionals/>.
- American Hospital Association. 2021. "Fact Sheet: Strengthening the Healthcare Workforce: AHA." <https://www.aha.org/fact-sheets/2021-05-26-fact-sheet-strengthening-health-care-workforce>.
- Association of American Medical Colleges. 2021. "The Complexities of Physician Supply and Demand: Projections from 2019 to 2034." <https://www.aamc.org/media/54681/download>.
- Gilmore, Savanna, Iris Hentze, and Zach Herman. 2020. "Trends and Incentives in Workforce Development." *National Conference of State Legislatures*. <https://www.ncsl.org/research/labor-and-employment/trends-and-incentives-in-workforce-development.aspx>.
- Hartley, David, Lois Quam, and Nicole Lurie. 1994. "Urban and Rural Differences in Health Insurance and Access to Care." *The Journal of rural health* 10.2: 98-108. Web.
- Institute of Medicine (US) Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing, at the Institute of Medicine. 2011. *The Future of Nursing: Leading Change, Advancing Health*. Washington (DC): National Academies Press (US). 4, Transforming Education. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK209885>
- Jaret, Peter. 2020. "Attracting the Next Generation of Physicians to Rural Medicine." *AAMC*. <https://www.aamc.org/news-insights/attracting-next-generation-physicians-rural-medicine>.
- KDKA-TV News Staff. 2021. "Freedom House 2.0 Graduates Set to Enter the Workforce as Healthcare Workers." *CBS News*, CBS Interactive. <https://www.cbsnews.com/pittsburgh/news/freedom-house-2-0-healthcare-workers/>
- Lester, Paula, T.S. Dharmarajan, and Eleanor Weinstein. 2019. "The Looming Geriatrician Shortage: Ramifications and Solutions." *Journal of Aging and Health*. [https://www.nyacp.org/files/Future%20Geri%20OPDF%20\(003\)\(1\).pdf](https://www.nyacp.org/files/Future%20Geri%20OPDF%20(003)(1).pdf).
- Lunsky, Y. 2021. "The doctor will see you now": Direct support professionals' perspectives on supporting adults with intellectual and developmental disabilities accessing health care during COVID-19." *Disability and Health Journal*.
- Memmott, Jeffery. 2012. "Highway Bridges in the United States-An Overview." *Bureau of Transportation Statistics*. [https://www.bts.gov/archive/publications/special-reports-and-issue-briefs/special-report/2007\\_09\\_19/entire](https://www.bts.gov/archive/publications/special-reports-and-issue-briefs/special-report/2007_09_19/entire).
- McEllistrem-Evenson, Alex. 2011. *Informing Rural Primary Care Workforce Policy: What Does the Evidence Tell Us?* Grand Forks, ND: Rural Health Research Gateway.
- Primary Care Collaborative. 2020. "New Report Confirms Growing Shortage of Primary Care Physicians." <https://www.pccpc.org/2020/07/10/new-report-confirms-growing-shortage-primary-care-physicians>.
- National Health Service Corps. 2022. "NHSC Scholarship Program Overview." <https://nhsc.hrsa.gov/scholarships/overview>.
- Rosenblatt, R A, and L G Hart. 2000. "Physicians and rural America." *The Western journal of medicine*, vol. 173, 5: 348-51. <https://doi:10.1136/ewjm.173.5.348>
- Salsberg, Edward S. MPA. 2015. *Is the Physician Shortage Real? Implications for the Recommendations of the Institute of Medicine Committee on the Governance and Financing of Graduate Medical Education, Academic Medicine: Volume 90 - Issue 9 - p 1210-1214* <https://doi.org/10.1097/ACM.0000000000000837>
- Thomas Jefferson University. *Physician Shortage Area Program*. <https://www.jefferson.edu/academics/colleges-schools-institutes/skmc/programs/physician-shortage-area-program.html>
- United States Department of Labor. "Workforce Opportunity for Rural Communities (WORC) Initiative."

---

<https://www.dol.gov/agencies/eta/dislocated-workers/grants/workforce-opportunity>.

*American Journal of Public Health*,  
<https://ajph.aphapublications.org/toc/ajph/0/0>.

Witmer, Anne. 2022. "Community Health Workers: Integral Members of the Health Care Workforce."

---

**Faryaal Alam** is a second-year Masters of Healthcare Administration student at the University of Pittsburgh School of Public Health. At the University of Pittsburgh, she is involved in the Allegheny Science Policy and Governance as the Brand and Advertising Manager, the Maternal and Child Health Equity Scholars Group, the Social Media Coordinator for the Leaders in Intersectional Public Health and Equity, and a member of the school's Global Health Students Association. In her free time, she enjoys reading, cooking, spending time with family and friends, and volunteering in the community.