



National Rural Health Association Policy Brief

Addressing the national rural health care worker shortage with a focus on kindergarten through 12th grade educational strategies

Authors: Nicole Thill, Michelle Fortune, Abigail Radcliffe

Introduction

Nationally, there is a scarcity of health care professionals in rural communities across nearly every level and type of health care workforce. The Health Resources and Services Administration (HRSA) National Center for Health Workforce Analysis projects that by 2030 there will be a shortage of more than 17,000 primary care physicians.¹ The American Nurses Association has indicated that the national nursing shortage has reached a critical state.¹ While workforce shortages occur across the U.S., including in urban areas, they are more pronounced in rural areas. More than three in five primary care health professional shortage area (HPSA) designations are in rural or partially rural areas.² The insufficient supply of health care workers in rural areas goes well beyond physician and nursing shortfalls, impacting all areas of the health care sector. The need for qualified rural health professionals with skills in business functions, support services such as laboratory, radiology, EMS, and other clinical and allied health disciplines is significant.

One of the factors most closely associated with health care professionals choosing to practice in a rural area is being raised in a rural area.³ Therefore, strategies to engage a pipeline of K-12 rural students are vital to addressing rural workforce shortages. Approaches might include educating K-12 rural students regarding the variety of careers available in the health care sector, sparking their interest in pursuing these opportunities, and preparing them for entry into health care careers.

Analysis

Educational and programmatic factors

The need to begin preparation of students in rural communities early in life is an important foundational building block in creating future health care workforce. However, rural students experience barriers to such instruction. For example, the difficulty in recruiting qualified teachers to rural communities, particularly in the areas of science and advanced math instruction, is well documented. Advanced placement coursework to prepare students for higher education is often more limited in rural areas, rural teachers have diminished access to professional development options, and there are fewer science and math extracurriculars offered in rural schools.⁴ The absence of universal broadband in rural and frontier communities can also be a barrier to supplementing local educational resources. Expanding teacher recruitment and internet availability may not be viable options for all areas, so it is necessary to create local and regional partnerships to mentor students.

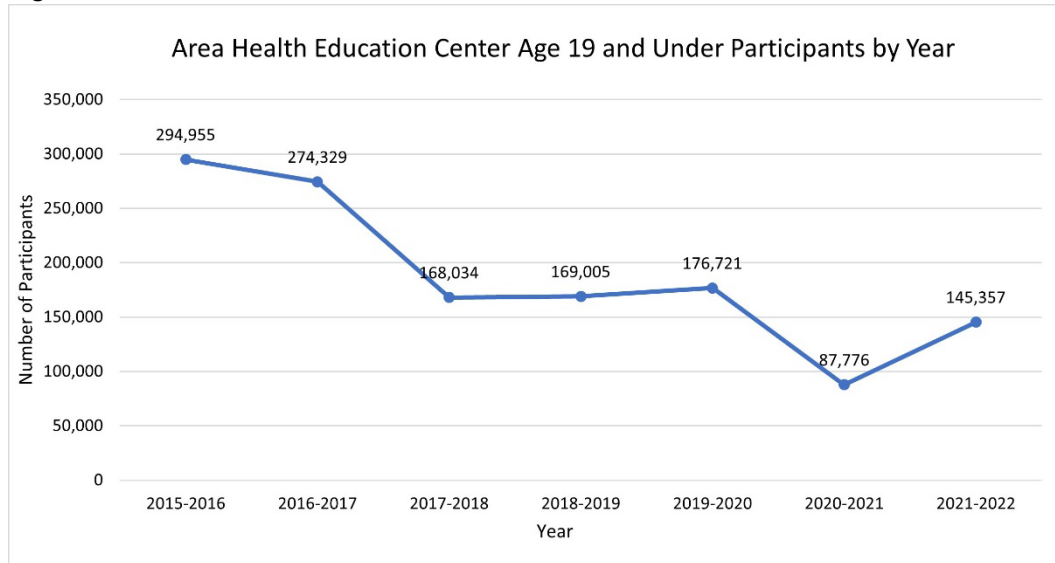
A review of formal health care career pathway programs in the United States indicates that a “grow-your-own” approach to address the shortage of health care workers in rural areas has a positive impact on students and inspires them to pursue rural health careers. Strategies include experiential learning such as shadowing opportunities, exposing students to health care work environments, and mentorship by health care professionals with rural backgrounds.⁵ Early action to proliferate health careers information and recruitment in elementary aged children is important. Data show that children often “de-select” or begin to make choices about potential careers at 6 to 8 years old.⁶ Educational systems, public and private sector employers, and community-based organizations must take an immediate and active role in developing partnerships to affect positive



change in the trajectory of rural health care career interest.⁷ Hosting shadowing events, partnering to create local career technical education, and championing discovery of health care careers are plans of action that can provide value. Gaps exist in the knowledge base of the prevalence and success of the actual number of formal and informal health career pathway programs and career and technical education (CTE) programs nationally. As a result, it is difficult to create standardized best practices and replicate successful initiatives. Rural and frontier communities may not have access to a strong CTE or pathway program, and many face funding challenges to launch and maintain co-curricular programs of this nature.

The Area Health Education Center (AHEC) program was developed in 1971 by Congress to recruit, train, and retain a health workforce committed to serving rural and underserved communities. AHECs are funded by the Health Resources and Services Administration (HRSA) and have been a long-standing leader in health care workforce development. Historically, AHECs have been pivotal in instituting health career exposure activities at the K-12 level. However, while funding for AHECs has risen 17 percent since 2019,⁸ beginning in 2017 HRSA strongly recommended that AHECs use no more than 10 percent of their total federal funding for youth pipeline activities⁹ and instead invest more resources into AHEC Scholars and other programs for students already enrolled in health professions training. Nationally, this has led to a decrease in the number of students ages 19 and under participating in HRSA-funded AHEC programs as shown in figure 1.¹⁰

Figure 1



Source: <https://data.hrsa.gov/topics/health-workforce/training-programs>
Participant Demographics tab, Select program =U77 AHEC

Attitudinal and environmental factors

Post-pandemic employment trends and the increased demand for services related to the aging population may worsen health care workforce projections. The COVID-19 pandemic led many health care workers to leave their jobs due to burnout, stress, and mental health concerns, which has resulted in even greater burdens on the already strained health care workforce. One report shows that 47 percent of health care workers plan to leave their position by 2025.¹¹ Additionally, the COVID-19 pandemic led many hospitals and clinics to cease job shadowing and other student health career exploration programs for youth, which limits opportunities and awareness of opportunities in health care sector.



National Rural Health Association Policy Brief

The lack of diversity among health professionals and co-occurring growth of diversity in rural areas must also be considered. The United States is becoming more racially and ethnically diverse,¹² but we are not seeing that same trend in our health care workforce. For example, a 2019 study examined 10 health care professions and found that Black, Hispanic, and Native American people were underrepresented in all 10 careers.¹³ Nearly 81 percent of all nurses identify as Caucasian,¹⁴ and among physicians only 5.8 percent identify as Hispanic and 5.0 percent as Black or African American.¹⁵ Having a diverse health care workforce that represents the population it serves has been shown to lead to improved care and health outcomes,¹⁶ making these statistics particularly concerning. An intentional focus on encouraging students of color to pursue health care careers should be adopted as strategies to expand the rural health workforce pipeline.

Financial factors

Rural communities experience poverty to a greater degree than urban residents. Considering costly long-term education may be financially challenging for youth and families, deterring them from pursuing careers that require higher education.¹⁷ A commitment to direct available funds to invest in rural health professional development will be important for the sustainability of viable health care pathways.

Rural school districts also experience financial constraints due to their lower tax revenue, which leads to lower salaries for teachers and scarcer resources. Due to the consolidation of many rural school districts to save money, students are being bussed longer distances, making it more challenging to participate in extracurriculars, including clubs focused on future health care careers.¹⁸ Because of these struggles, schools cannot easily provide essential health care career pipeline opportunities within the curriculum.

Policy recommendations

NRHA recommends that Congress and the U.S. Department of Health and Human Services:

- Expand health career programming for students in rural communities through increased flexibilities in AHEC programming.
- Establish a best practice clearinghouse that will ensure innovations directed toward rural health pipelines are shared so they can be replicated.
- Expand federal and state-supported funding guidelines to ensure rural schools have programs to encourage early learning about and pursuit of health careers. This should focus on increasing science and math competencies in elementary grades and exposure to health careers throughout the continuum.
- Enhance federal and state-supported higher education programs to ensure promising lower-income students from rural communities with interest in a health career are identified early and receive assistance through grants, scholarships, tuition waivers, and other opportunities.
- Establish a mentorship program for students interested in rural health care careers.
- Recommend that federally supported organizations and programs are linked to and supportive of rural programming and development.



National Rural Health Association Policy Brief

Recommended actions

NRHA recommends that Congress and the U.S. Department of Health and Human Services:

- Advocate to support an increase in AHEC funding to allow direction of funding to 9-12 health care education programs, as well as greater flexibilities in program authority.
- Expand funding for the Rural Health Information Hub to ensure best practices are shared and scaled.
- Advocate for professional school linkages with rural programs at the pre-college level for programs currently receiving federal funding.
- Establish funding for the development of a national health careers mentorship program, which allows rural providers to equip and develop the next generation.
- Recommend expansion of existing loan forgiveness programs to prioritize rural teachers focusing on STEM learning.
- Advocate for the U.S. Department of Education to allocate increased funding from the Carl D. Perkins Career and Technical Education Act (Public Law 115-224) to rural community CTE programs.

Conclusion

The challenges with improving health care access in rural America are not new. The research is clear – investments in early and longitudinal programs to develop K-12 rural student preparedness and interest in health careers are necessary to create and sustain effective health care pipelines in these areas. Overcoming financial, environmental, and programmatic constraints to maximize the number of children and youth in frontier and rural communities who enter health professions will require an intentional effort at the federal, state, and local levels. To create a level playing field for rural youth and rural primary schools, policies and funding must create incentives for and focus on the development of programming targeted to early and pre-college education, experiential learning, mentorship, and sharing of national best practices and success.



National Rural Health Association Policy Brief

References

1. *Recommendations for Priorities to Support National Health Service Corps Efforts to Address the U.S. Health Care Workforce Shortage 2021-2023*. National Advisory Council on the National Health Service Corps Accessed July 11, 2023. <https://www.hrsa.gov/sites/default/files/hrsa/advisory-committees/national-health-service-corps/nhsc-healthcare-shortage-2021-2023.pdf>
2. Designated Health Professional Shortage Area Statistics-Third Quarter of Fiscal Year 2023. Bureau of Health Workforce Health Resource and Services Administration (HRSA) U.S. Department of Health and Human Services. Designated HPSA Quarter Summary as of June 30, 2023. Accessed July 17, 2023. <https://data.hrsa.gov/Default/GenerateHPSAQuarterlyReport>
3. Fritsma T, Henning-Smith C, Gauer JL, et al. Factors Associated with Health Care Professionals' Choice to Practice in Rural Minnesota. *JAMA Network Open*. 2023;6(5):e2310332. doi: <https://doi.org/10.1001/jamanetworkopen.2023.10332>
4. Barshay.J. Proof Points: Rural American Students Shift Away from Math and Science During High School, Study Finds. The Hechinger Report. June 12, 2021. Accessed July 17, 2023. <https://hechingerreport.org/proof-points-rural-american-students-shift-away-from-math-and-science-during-high-school-study-finds/>
5. Education and Training of the Rural Healthcare Workforce Overview - Rural Health Information Hub. www.ruralhealthinfo.org. Accessed July 18, 2023. <https://www.ruralhealthinfo.org/topics/workforce-education-and-training#grow-your-own>
6. Jopson AD, Pollack SW, Schmitz DF, et al. Promoting Health Careers Among Rural K-16 Students: A Mixed-Method Study to Describe Pathway Programs. *J Health Care Poor Underserved*. 2020;31(4S):223-259. doi:10.1353/hpu.2020.0152
7. Leveraging Career Pathway Programs: State Strategies to Combat Healthcare Workforce Shortages. National Conference of State Legislatures. June 29, 2023. Accessed July 17, 2023. <https://www.ncsl.org/health/leveraging-career-pathway-programs-state-strategies-to-combat-health-care-workforce-shortages>
8. AHECs to Receive Increase in FY23 Federal Funding. National AHEC Organization. January 9, 2023. Accessed July 12, 2023. <https://www.nationalahec.org/news/627638/AHECs-to-receive-increase-in-FY23-federal-funding.htm>
9. United States Department of Health and Human Services, Health Resources & Services Administration, Bureau of Health Workforce, Division of Health Careers and Financial Support. Area Health Education Centers Program Funding Opportunity Number: HRSA-22-053. January 6, 2022. Assessed July 13, 2023. <https://www.grants.gov/web/grants/view-opportunity.html?oppld=334468>
10. Explore Health Professions Training Programs. Health Professions Training Programs Dashboards. Health Resources and Services Administration. Accessed September 20, 2023. <https://data.hrsa.gov/topics/health-workforce/training-programs>.
11. Elsevier. Clinician of the Future: a 2022 report. Elsevier Connect. Published March 15, 2022. <https://www.elsevier.com/connect/clinician-of-the-future>
12. US Census Bureau. 2020 U.S. Population More Racially and Ethnically Diverse Than Measured in 2010. The United States Census Bureau. Published August 12, 2021. <https://www.census.gov/library/stories/2021/08/2020-united-states-population-more-racially-ethnically-diverse-than-2010.html>
13. Salsberg E, Richwine C, Westergaard S, et al. Estimation and Comparison of Current and Future Racial/Ethnic Representation in the US Health Care Workforce. *JAMA Network Open*. 2021;4(3):e213789. doi: <https://doi.org/10.1001/jamanetworkopen.2021.3789>
14. Smiley RA, Ruttinger C, Oliveira CM, et al. The 2020 National Nursing Workforce Survey. *Journal of Nursing Regulation*. 2021;12(1):S1-S96. doi: [https://doi.org/10.1016/S2155-8256\(21\)00027-2](https://doi.org/10.1016/S2155-8256(21)00027-2)
15. Association of American Medical Colleges. Diversity in Medicine: Facts and Figures 2019. Accessed November 30, 2023. <https://www.aamc.org/data-reports/workforce/data/figure-18-percentage-all-active-physicians-race/ethnicity-2018>.
16. Stanford FC. The Importance of Diversity and Inclusion in the Healthcare Workforce. *J Natl Med Assoc*. 2020;112(3):247-249. doi:10.1016/j.jnma.2020.03.014
17. Data Shows U.S. Poverty Rates in 2019 Higher in Rural Areas Than in Urban for Racial/Ethnic Groups. United States Department of Agriculture (USDA) Economic Research Service. Accessed July 17, 2023. [https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=101903#:~:text=Data%20show%20U.S.%20poverty%20rates,urban\)%20areas%20at%2011.9%20percent](https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=101903#:~:text=Data%20show%20U.S.%20poverty%20rates,urban)%20areas%20at%2011.9%20percent).
18. Tieken, M.C., Montgomery, M.K. Challenges Facing Schools in Rural America. National Association of State Boards of Education. January 2021. Accessed July 17, 2023. https://nasbe.nyc3.digitaloceanspaces.com/2021/01/Tieken-Montgomery_Jan-2021-Standard.pdf