

Bridging the Diversity Gap in Rural Healthcare by Recruiting Underrepresented Minority Physicians

Rural communities in America are becoming increasingly diverse: 14 million Black, Hispanic or Latino, Asian, Native, and multiracial people live in rural America.¹ In New York State, despite a decline in the rural population overall, the diversity within rural communities has increased from 8.7% identifying as non-white in 2011, to 12.2% in 2022 (figure 1).² Several individual rural regions in the state have even higher racial and ethnic diversity with upwards of 40% of their population identifying as Hispanic or Latino of any race, or of another race other than white. As the rural population diversifies, so too must the physicians caring for them. Physician diversity is linked to improved access and better quality of care, reducing health inequities and improving outcomes for underserved minority populations.³ As the nation continues its march toward greater racial and ethnic diversity, physician workforce diversity has become an increasingly important and urgent matter as diversifying the physician workforce may also be key in addressing health disparities among racial and ethnic groups.⁴

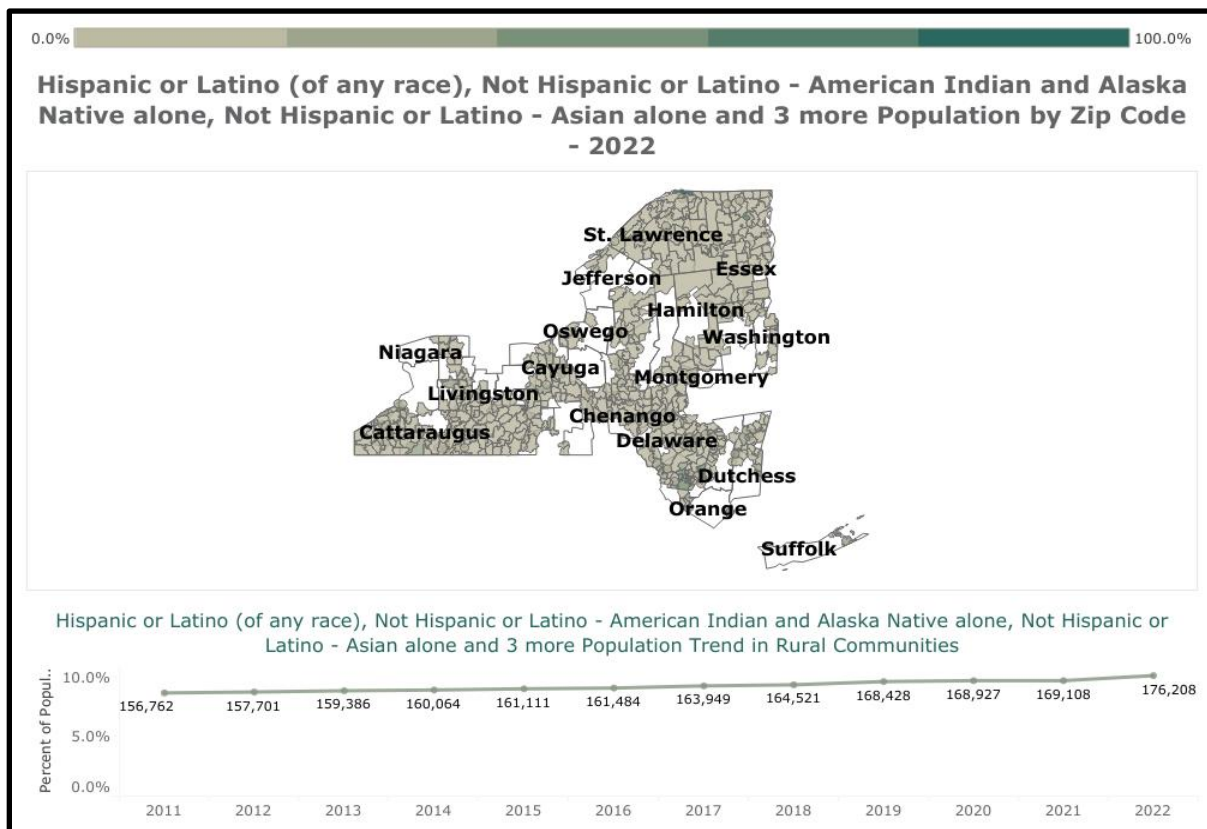


Figure 1: Map illustrating racial and ethnic diversity across rural areas of New York State, including longitudinal trends from 2011-2022. Graphic is sourced from the NSYARH Diversity Dashboard ² which uses data from the American Community Survey.⁵

The distribution and demographic composition of the healthcare provider workforce is poorly correlated with the communities they serve. Rural regions of New York State, as elsewhere in the US, face perpetual healthcare provider workforce shortages. While 20% of the U.S. population live in rural communities, only 11% of physicians practice in such areas.⁶ Rural areas of New York State had the fewest primary care physicians with 3.4 per 10,000 persons compared to metropolitan areas with 15 per 10,000 persons.⁷ Underrepresented minority physicians may help to address this gap. Across the US, minority physicians remain underrepresented relative to population metrics: for example, Hispanics and African American people make up 18.5% and 13.4% of the U.S. population, but only 5.8% and 5% of the physician workforce, respectively.⁸ New York State has 51.9% physicians who identified as White, 22.3% who identified as Asian, 5.5% who identified as Hispanic, and 5.4% who identified Black/African American.⁹

Clinical training is a key component of the health care workforce pipeline, preparing medical school graduates for the workforce, cultivating interest in specialties facing shortages, and providing exposure to rural and underserved areas.¹⁰ Graduate medical education (GME), is a formal clinical training program for students who have completed medical school and earned a doctor of medicine or doctor of osteopathic medicine degree.¹⁰ To become a licensed physician, one must complete clinical training, which includes residency and fellowship programs. GME opportunities are also few and far between in rural and underserved areas, largely due to the limited availability of funding and scarcity of preceptors to supervise.¹⁰

Statement of the issue:

As the rural population becomes more diverse but remains challenged by health workforce shortages, recruiting minority physicians to rural communities is essential to provide more equitable patient care to those in need. Residency programs can be used as a vehicle for physicians to plant their roots and build a future in rural areas. This research will emphasize the need to support rural residency programs to recruit and create a supportive environment for minority physicians in training.

Analysis of the data about the issue:

Rural training encourages rural practice

Physician training location is directly related to future practice location. More than half (57.1%) of physicians who completed residency training between 2013 and 2022 are still practicing in the state where they did their residency training.¹¹ Rural family medicine (FM) residency graduates were three times more likely than graduates of nonrural residency programs to practice in a rural location, and 60% of rural residency graduates choose to practice in rural communities.¹² We found the odds of rural practice among FM residents experiencing at least 50% rural training time were at least 5-fold higher than those who did no rural training.¹³ Equally important, even spending only a small fraction (1%-9%) of FM residency training in rural areas was associated with substantially increased odds of being in rural practice.¹³ Increasing the supply of physicians in rural areas can be bolstered by increasing rural training opportunities and encouraging recruitment of minority physicians into these residency programs. Graduate Medical Education programs present an opportunity for resident physicians to experience rural communities, establish social ties, and plant roots that could lead to long-term retention in the training location or a similar practice setting.

The ability to adapt to rural practice and rural life is another key determinant of retention. Rural primary care physicians who are integrated into their workplace and community - who feel "at home" - are more likely to stay in their roles.¹⁴ Feeling that they play a meaningful community role and make a difference fosters in physicians a sense of altruism, responsibility, and a commitment to serve the rural area.¹⁴ Physicians who indicated that they felt better prepared both medically and socially for practice in a rural area stayed longer than those who felt unprepared or who were initially unaware of the special characteristics of rural practice.¹⁵ To maximize physician retention in rural communities, rural-based residency programs should work with community-based groups and with their local Area Health Education Centers (AHECs) to foster social integration and community engagement.¹⁵ With a sense of belonging and preparedness for rural life, there can be increased retention of physicians practicing in rural communities.

Graduate medical education in New York state

More than half of the active physicians in rural areas in New York completed their graduate training in the state. Outside of New York, in 11 states at least 10% of the physicians practicing in rural areas received their GME in New York. Connecticut (33%), Massachusetts (18%), Vermont (17%), Florida (16%), and New Hampshire (16%) are the most reliant on New York for their rural physician workforce.¹⁶ New York has served as an invaluable source of physicians, particularly primary care physicians and those practicing in rural populations.

New York State has the largest GME infrastructure in the United States, referring to resources, systems, and facilities; approximately \$4.4 billion is spent on GME in New York from federal, state, and private payer sources.¹⁶ In 2021, there were more than 18,000 physicians training (about 13% of all physicians training in the US) in more than 1,350 accredited and combined residency and fellowship programs in New York.¹⁶ Solutions such as recruiting future physicians from areas of shortage, including rural areas, and developing training tracts specifically focused on these areas and providing service to the underserved have been recently recommended by the federal Council on Graduate Medical Education.¹⁶ Medical education and training partnerships between urban and rural areas that can provide physician resources to rural areas is one strategy that needs further development as well as leveraging the existing GME infrastructure in New York to better ensure success.¹⁶

There are 44 rural counties in New York State, however, the top 15 most-viewed medical residency programs in New York are in urban locations, consisting in Brooklyn, Bronx, Albany, etc. Therefore, there is not enough recognition and support in rural residency programs to recruit more minority physicians. As seen in figure 2 below, there is an estimated number of 9 residencies that have a rural track, as seen in red, during their training. Nevertheless, there is a lack of residency programs in rural locations, as seen in orange. In addition, according to Rural GME, about 7 locations throughout the state of New York have at least one Federal Office of Rural Health Policy (FORHP) rural rotation site while 4 residency programs have greater than 50% of resident training time at FORHP sites.¹⁷

Family Medicine Residency Programs in New York State

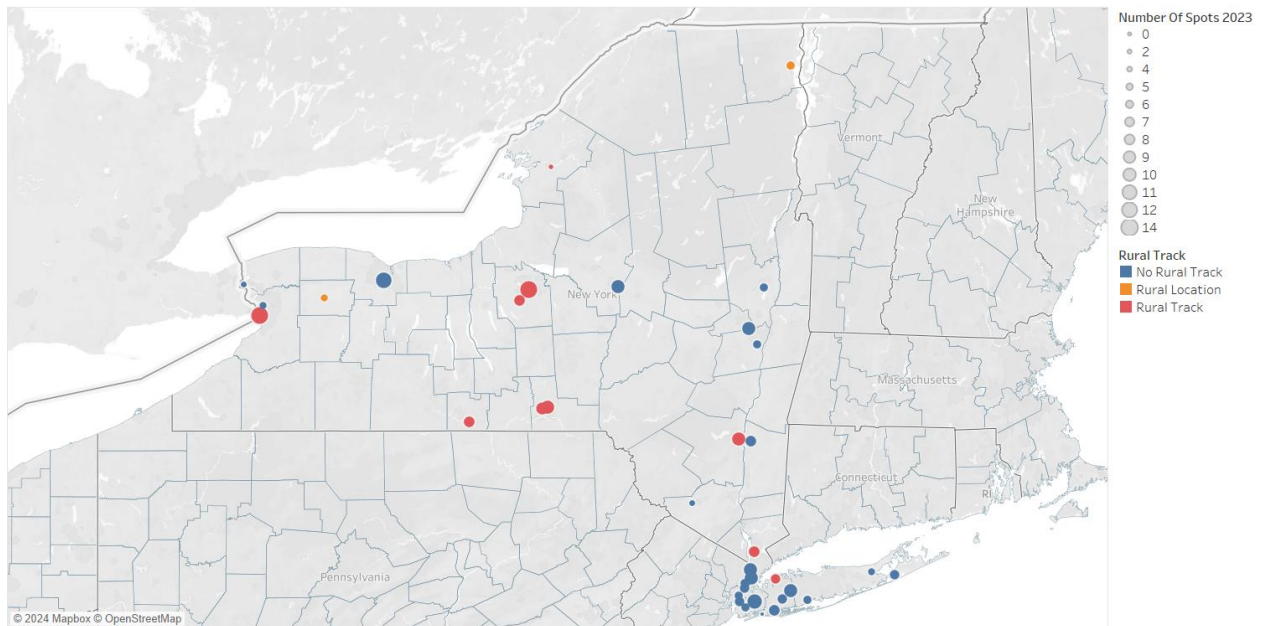


Figure 2: Location of family medicine residency programs in New York State. Data from the Residency Explorer Dashboard. ¹⁸

Regulation and funding of NYS medical residencies

GME is funded by multiple mechanisms, including federal, state, and private entities, with the federal government being by far the largest contributor.¹⁹ The mechanism by which federal funds flow is through Direct GME (DGME) and Indirect Medical Education (IME).¹⁹ DGME funds cover the direct costs associated with training residents while IME funds compensate teaching hospitals that indirectly support resident training, such as maintaining advanced technology, specialized services, and higher staffing levels. Both DGME and IME payments are administered and regulated by Medicare, which means the Centers for Medicare and Medicaid Services (CMS) essentially controls GME funding.¹⁹

Other non-CMS initiatives and funding opportunities also provide support for GME programs. The “Community and Public Health Programs Extension Act of 2019” bill funds five important programs centered around public health, including the Teaching Health Center Graduate Medical Education (THCGME) Program, through Health Resources and Services Administration (HRSA).¹⁹ This bill is one of the few opportunities that has increased GME funding outside of direct Medicare-supported entities. The THCGME Program currently supports 728 residents and has the added benefit of prioritizing underserved populations.¹⁹ The bill also expands funding for the National Health Service Corps (NHSC) which is an important program that provides loan repayment assistance to physicians in exchange for a service commitment to practice in a healthcare provider shortage area.¹⁹

Any health care facility with a GME program must be accredited and is sometimes called a “sponsoring institution.”²⁰ Accreditation is managed and monitored through THCGME and HRSA on a state and federal level. Accreditation criteria vary by specialty but generally include faculty-to-resident ratios, sufficient patient volume to support training experiences, availability of specific clinical experiences, such as training in other

specialties provided onsite or offsite at contracted training sites, leadership from an experienced GME director, and financial resources for long-term sustainability of the program.²⁰ The Government Accountability Office (GAO) found in 2021 that Medicare GME funding is unevenly distributed between states, with most residents and GME training sites located in the Northeast.²⁰ Rural and underserved communities tend to have fewer residents and GME programs than urban and suburban communities.²⁰

Barriers and facilitators to rural GME programs

Rural residency programs face many challenges due to their small size and geographic remoteness. These include inadequate patient volumes, lack of sustained funding after start-up grants, frequent leadership turnover, limited educational resources, difficulty recruiting residents, and insufficient support for faculty development and protected teaching time.²¹ In 2019, the Rural Residency Planning and Development (RRPD) program was used to develop rural GME programs through funding of 27 rural hospitals, schools of osteopathic and allopathic medicine and Indian Health Service sites. RRPD developed the “Roadmap for Rural Residency Program Development” which is a framework that describes the steps needed in each of 5 key stages of program development, including exploration, design, development, start-up, and maintenance.²¹ The ultimate goal of the program is to increase physician supply in rural communities by supporting the development of new accredited and financially sustainable rural residencies or Rural Track Programs (RTPs).²² RTPs are accredited programs in which residents gain both urban and rural experience with more than half of the education occurring in a rural facility. The RRPD program has been able to overcome many of these barriers and create new rural-based training sites that have largely proven successful; 81% (n = 29) of the first 2 cohorts of grantees who received start-up funding in late 2019 (Cohort 1) and 2020 (Cohort 2) have successfully launched accredited residencies and are currently training 182 new rural primary care resident physicians.²² The launch of the RRPD program sites provides an opportunity to understand the types of communities where rural residency programs have been able to launch ACGME-accredited training programs.²²

While many factors affect the supply and distribution of physicians, graduate medical education (GME) funding is a major determining factor. Though the expected government investment in GME amounted to billions of dollars, the allocation of funding does not correspond with the growing demands of the rural workforce, as 99% of Medicare expenditure on GME training is directed toward urban programs.²³ Even if their expenses are comparable to or even greater than those of urban programs, the majority of rural training programs do not receive reimbursement on an equitable basis. In comparison to other payers, rural hospitals frequently have lower ratios of Medicare volumes and greater proportions of underinsured or uninsured patients.

Access to care and health disparities in rural areas: intersections with race and ethnicity

There are vast differences between rural and urban communities regarding their health, access to healthcare, and socioeconomic factors. Rural residents have more uninsured residents, as well as higher rates of unemployment, leading to less access to care.⁶ Rural residents experience a shorter life expectancy than urban residents, with higher mortality rates from specific causes such as chronic obstructive pulmonary diseases, coronary heart disease, and lung cancer.⁷ Overall, there are higher mortality rates among rural

residents for all five leading causes of death – heart disease, stroke, cancer, unintentional injury, and chronic lower respiratory disease – as compared to urban residents.⁷ Along with limited access to healthcare, physician shortages are leaving a number of rural communities desperate for care and increasing the gap of lack of healthcare and increasing health disparities in rural populations.

In addition, along with the rural and urban differences in health and access to care, there is an intersectionality of race and ethnicity in these geographic areas. African Americans and Hispanics in rural areas may have poorer access to medical care, be less likely to have health insurance, and make fewer physician visits, compared with their urban counterparts or rural non-Hispanic Whites.²⁴ For all racial/ethnic groups at the bivariate level, rural areas experienced disadvantaged rates of reported health care use (screenings and dental visit) relative to urban areas.²⁴ For all racial/ethnic groups, geographical isolation may be a key driver of rural–urban disparities in screenings, with possibly longer travel times to medical care and difficulty with transportation.²⁴ Regardless of place, there is still systemic and historical racism that continues to shape the use of and access to healthcare. For instance, particularly among African Americans, higher reports of distrust of one’s own physician were found to be associated with lower preventive service use.²⁴ Therefore, it is necessary to consider race/ethnicity and geography factors to adequately address health disparities as they intersect with one another.

Given the choice, minority patients tend to choose a physician from their same racial background, and race-concordant visits tend to be longer with patients feeling their physicians were more participatory.³ Nevertheless, underrepresented minority physicians are more likely to practice primary care in minority-concentrated regions.³ Therefore, increasing minority representation in the physician workforce in rural areas can improve patient-physician relationships, create deeper trust, and provide direct patient care with rural residents which will help address the physician shortage and health disparities in these communities. From a workforce policy perspective, increasing representation from Black, Hispanic, and Native American populations in particular may help reduce the persistent geographic maldistribution of the overall physician workforce.⁴

Call to action:

There is an increasing need for physician diversity and retention in rural communities as there is a lack of healthcare and increase in health disparities. Rural communities suffer from higher mortality rates and shorter life expectancy due to lack of healthcare access and complication of diseases.⁷ Physician diversity allows patients to develop trust and a sense of comfort through better quality of care and increased access.³ Through residency programs, minority physicians are more likely to stay in their trained locations, increasing retention rates especially in rural areas. Therefore, there is a need to enhance rural training opportunities and recruit underrepresented physicians into them.

References

1. Who lives in rural America? How data shapes (and misshapes) conceptions of diversity in rural America. Research, Mapping, and Data Analytics. January 2023. <https://ruralinnovation.us/blog/who-lives-in-rural-america-part-i/>
2. Explore the Diversity in Your Region. NYS Association for Rural Health. <https://nysarh.org/explore-the-diversity-in-your-region/>
3. Clayborne et. al. Diversity Pipelines: The Rationale to Recruit and Support Minority Physicians. *J Am Coll Emerg Physicians*. 2021;2(1). doi:10.1002/emp2.12343
4. Xierali I, Nivet M. The Racial and Ethnic Composition and Distribution of Primary Care Physicians. *J Health Care Poor Underserved*. 2018;29(1):556-570. doi:doi:10.1353/hpu.2018.0036
5. American Community Survey (ACS). United States Census Bureau. <https://www.census.gov/programs-surveys/acs>
6. About Rural Health Care. National Rural Health Association. n.d. <https://www.ruralhealth.us/about-nrha/about-rural-health-care>
7. Ziller et. al. Rural-Urban Residence and Mortality among Three Cohorts of U.S. Adults. *Maine Rural Health Res Cent*. Published online May 10, 2020.
8. Robeznieks A. How Diversity's Power Can Help Overcome the Physician Shortage. American Medical Association. May 18, 2022. <https://www.ama-assn.org/delivering-care/health-equity/how-diversity-s-power-can-help-overcome-physician-shortage>
9. U.S. Physician Workforce Data Dashboard. Association of American Medical Colleges. 2023. <https://www.aamc.org/data-reports/report/us-physician-workforce-data-dashboard>
10. Woolworth R. Expanded Medical Training Could Help Hospitals in Rural, Underserved Areas. National Conference of State Legislatures. July 17, 2023. <https://www.ncsl.org/state-legislatures-news/details/expanded-medical-training-could-help-hospitals-in-rural-underserved-areas>
11. *Report on Residents*. Association of American Medical Colleges; 2023. <https://www.aamc.org/data-reports/students-residents/data/report-residents/2023/executive-summary>
12. Chen et al. The U.S. Rural Physician Workforce: Analysis of Medical School Graduates from 1988-1997. Published online October 2008.
13. Russell D, Wilkinson E, Petterson S, Chen C, Bazemore A. How Rural Training Exposure in GME Is Associated With Subsequent Rural Practice. *J Grad Med Educ*. 2022;14(4):441-550.
14. Mandal A, Phillips S. To stay or not to stay: the role of sense of belonging in the retention of physicians in rural areas. *Int J Circumpolar Health*. 2022;81(1). doi:10.1080/22423982.2022.2076977
15. Rural Practice, Keeping Physicians In (Position Paper). American Academy of Family Physicians. 2014. <https://www.aafp.org/about/policies/all/rural-practice-keeping-physicians.html>
16. *Graduate Medical Education in New York: The Nation's Largest Supplier of Physicians*. Center for Health Workforce Studies; 2023. https://www.chwsny.org/wp-content/uploads/2023/01/CHWS-GME-Brief_FINAL_01192391.pdf
17. Rural Residency Programs and Rural Rotation Sites. Rural GME. <https://www.ruralgme.org/rural-programs>
18. Residency Explorer Tool. Residency Explorer. 2024. <https://www.residencyexplorer.org/>
19. Clifford C, Tarchione A. Making Sense of Graduate Medical Education Funding. December 16, 2019.

<https://www.emra.org/emresident/article/gme-funding>

20. Graduate Medical Education Funding. National Conference of State Legislatures. January 9, 2024. <https://www.ncsl.org/health/graduate-medical-education-funding>
21. Hawes et al. A Roadmap to Rural Residency Program Development. *J Grad Med Educ.* 2020;12(4):384-387. doi:10.4300/JGME-D-19-00932.1
22. Fraher E, Page C, Hawes E, et al. Bolstering the rural physician workforce in underserved communities: Are Rural Residency Planning and Development Programs finding the sweet spot? *J Rural Health.* 2023;39(3):521-528.
23. Hawes et al. Rural Residency Training as a Strategy to Address Rural Health Disparities: Barriers to Expansion and Possible Solutions. *J Grad Med Educ.* 2021;13(4):461-465. doi:<https://doi.org/10.4300/JGME-D-21-00274.1>
24. Caldwell J, Ford C, Wallace S, Wang M, Takahashi L. Intersection of Living in a Rural Versus Urban Area and Race/Ethnicity in Explaining Access to Health Care in the United States. *Am J Public Health.* 2016;106(8):1463-1469. doi:10.2105/ajph.2016.303212