AACOM
American Association of Colleges of Osteopathic Medicine

APRIL 2024

Issue Brief: Expanding Clinical Education Opportunities: A Strategic Approach for Health Workforce Goals and Physician Recruitment and Retention

Introduction

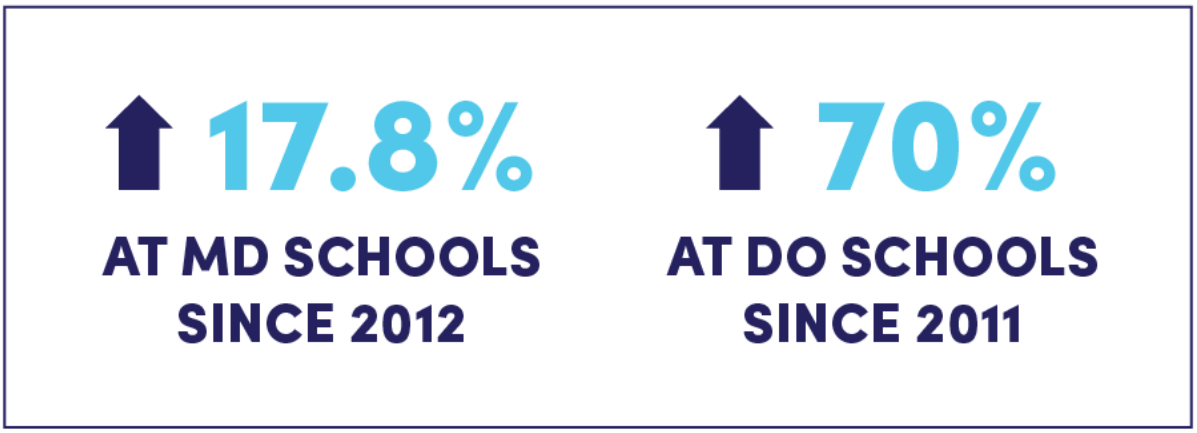
The landscape of healthcare is evolving rapidly, with an increasing demand for skilled professionals. There is a physician and health worker shortage in the United States and a need for primary care practitioners. Healthcare professional schools in rural and underserved areas need mechanisms to offer robust clinical experiences while addressing recruitment and retention challenges. Since clinical education is an educational necessity and a tool to accomplish workforce development goals for states and the nation, there is a critical need to expand clinical education opportunities at medical and other health profession schools to meet these increasing demands.

This issue brief explores the imperative for expanding clinical training opportunities (including training sites) to address the growing demands of the health workforce by examining the benefits of expanding clinical education opportunities. The document aims to provide a comprehensive overview for policymakers, educational institutions and healthcare stakeholders.

Background

Clinical education is a cornerstone to developing practical skills for healthcare professionals. Increased opportunities for hands-on training enable students to hone their abilities, fostering a more competent and adaptable health workforce. Community-based experiential training in rural areas through clinical rotations enhances the education and training of all health professionals. While the structure of clinical education may vary based on the school's curriculum and model, the essential purpose of clinical education is to embed the medical student in a clinical setting to ensure exposure to patient care and the community.

Enrollment percentage increase in medical schools.



There are insufficient clinical training opportunities for medical school graduates to meet the needs of a growing learner population. Enrollment has expanded at both doctor of medicine (MD) and osteopathic (DO) medical schools with an increase of 17.8 percent at MD schools since 2012[1] and an increase of 70 percent at DO schools since 2011.

The availability and increasing cost of clinical sites and training continues to be a limiting factor for growth in health profession schools. Preceptors, who are clinicians who teach, mentor and supervise students, are hampered by clinical and fiscal responsibilities and limited by time constraints. Increased competition for limited clinical training sites and preceptors among medical schools and other health professions also presents a challenge, often resulting in higher costs.

Nursing programs compete across states for a constrained number of clinical spots with short-staffed providers. In the backdrop, the cost of medical school has continued to rise by almost $1,500 every year since 2015[2].

The Need for Expansion

Addressing Workforce Shortages

139,160

ESTIMATED SHORTAGE OF PHYSICIANS BY 2030 IN UNITED STATES

The United States is expected to face an estimated shortage of 139,160 physicians by 2030[5]. The shortage of physicians and other healthcare providers contributes to limited access to healthcare and health disparities for underserved populations. To encourage more doctors and other health professionals to practice in underserved locations (which include rural and urban areas), more physicians and health professionals should receive their clinical training prior to graduation in these settings.

These workforce shortages impact the local community and, if addressed, can improve the health of the community. Studies have shown that having local healthcare services tends to increase the health of the entire population, for example,Tong et al.[6] describe the importance of having local obstetric services in rural communities.

Availability of these services is associated with lower perinatal morbidity and mortality and decreased healthcare utilization and cost. Of family physicians who perform cesarean section as the primary surgeon, 57.3 percent did so in a rural county and 38.6 percent did so in a county without any obstetrician/gynecologists. Having more family physicians who provide obstetric care could improve obstetric outcomes, prevent the closing of obstetric units and fill “obstetrical desert” gaps in rural communities.

FAMILY PHYSICIANS WHO PERFORM CESAREAN SECTION AS THE PRIMARY SURGEON

57.3%

IN RURAL COUNTY

Although recruiting healthcare workers is essential to meeting workforce shortage needs, doing so is more challenging than ever due to expanding job responsibilities, limited support, increased risk of disease and stressful work conditions. Workforce shortages such as those in nursing have increased burnout and attrition of staff. Primary care physicians, nurses and behavioral health practitioners alike feel burdened by extensive administrative load, limited patient time and worsening

FAMILY PHYSICIANS WHO PERFORM CESAREAN SECTION AS THE PRIMARY SURGEON

38.6%

IN COUNTY WITHOUT ANY OBSTETRICIAN/ GYNECOLOGISTS

burnout. Electronic health records have increased, rather than reduced, provider workload. As such, there is a shortage in supply of healthcare workers and, in turn, recruitment and retention of these professionals.

To meet these needs, leaders in medical education, policymakers and other leaders have sought to increase medical and health profession schools and clinical education. However, availability of clinical education opportunities[7] is a significant bottleneck to the growth and sustainability of these schools.

Benefits of Investing in Clinical Education

Health Professions Recruitment & Retention

The expense to recruit a physician is $100-$150K, on average, for three years as health systems and employers outsource to recruitment firms. Retention is challenged by several factors such as high workloads, low pay and the inability to compete with higher-paying alternatives and large health systems. Clinical education can be a short- and long-term strategy to address healthcare workforce recruitment and retention, while also providing essential skills to learners. Studies show that medical students who have a positive experience in their clinical site tend to return to those sites even if they leave for a different institution to pursue residency. They also may tend to pursue clinical sites for residency, where they trained in their third and fourth years.

Experiences with Practice Environments

Students are more likely to practice in rural and underserved areas and practice primary care in those areas when they have exposure to those environments through clinical undergraduate training.[8] Medical schools with a focus on preparing students for rural practice, primary care specialties and practice in medically underserved areas have higher rates of their graduates ultimately practicing in those areas and specialties. Osteopathic training uniquely aligns with the philosophy to serve these populations. Data show that student intention has a significant impact on likelihood of learners staying to practice in rural settings and may preserve scarce rural clinical training resources.[9,11] Some students also seek to practice in underserved areas for reasons like teaching reputation, remote and rural medicine experience, lifestyle factors and educational development. Exposure to clinical training in these sites often further strengthens their desire to practice in these settings.

Physician Retention & Impact of Students in Clinical Environment

Preceptors receive instruction on how to train students and this can help with physician retention. There is also a preceptor stipend model that incentivizes preceptors to engage in professional development. There are intrinsic benefits of precepting — enjoyment, fostering curiosity, professional satisfaction in making a positive impact on the future and developing professional skills. There are also extrinsic benefits of precepting — monetary remuneration, academic rank, access to academic resources such as library services and continuing medical education (CME). Through the expansion of clinical education opportunities, the extrinsic benefits for having learners in clinical care environments foster intrinsic motivations of teachers to enable them to incorporate learners into their daily practices.

Strengthening Local Economy and Community Health

In rural communities, the health sector can contribute to the economy. In fact, 14 percent of total employment in rural communities is attributed to the health sector[14]. Furthermore, one rural primary care physician generates direct clinic employment impact of five jobs with $0.4 million in wages, salaries and benefits and direct hospital employment impact of 14.5 jobs with $0.7 million in wages, salaries and benefits. The total direct impact of a rural primary care physician is 19.5 jobs with $1.2 million in wages, salaries and benefits. Total impact of a rural primary care physician (direct and secondary impact) is 26.3 jobs with $1.4 million in wages, salaries and benefits as derived from a sample of 1,261 independent rural health clinics and 102 critical access hospitals in 19 states[13].

14% OF TOTAL EMPLOYMENT IN RURAL COMMUNITIES IS HEALTH SECTOR

GENERATES DIRECT CLINIC EMPLOYMENT IMPACT OF FIVE JOBS

$400K

WAGES, SALARIES AND BENEFITS

DIRECT HOSPITAL EMPLOYMENT IMPACT OF 14.5 JOBS

$700K

WAGES, SALARIES AND BENEFITS

TOTAL DIRECT IMPACT OF A RURAL PRIMARY CARE PHYSICIAN IS 19.5 JOBS

$1.2M

WAGES, SALARIES AND BENEFITS

TOTAL IMPACT OF A RURAL PRIMARY CARE PHYSICIAN (DIRECT AND SECONDARY IMPACT) IS 26.3 JOBS WITH

$1.4 M

IN WAGES, SALARIES AND BENEFITS

derived from a sample of 1,261 independent rural health clinics and 102 critical access hospitals in 19 states[13]

Top 5 Reasons to Invest in Clinical Education

1. **Recruit and retain health professionals**
2. **Increase economic development and local employment opportunities local employment opportunities**
3. **Prepare health professions students to serve communities of need**
4. **Address physician shortage and implications**
5. **Strengthen medical education across the health professions**

Conclusion

Federal and state legislators and advocates should look to clinical education as a mechanism to support workforce development goals at the state and national levels because expanding clinical education opportunities is paramount to meeting the dynamic needs of the health workforce. Addressing the clinical education shortages with targeted funding efforts and support for existing incentives will help to enhance skill development and strengthen retention and recruitment of healthcare professionals. Advancing a robust clinical education infrastructure can build a resilient and adaptable health workforce that is ready to navigate the complexities of modern healthcare.

This issue brief serves as a foundation for dialogue and action, urging stakeholders to prioritize and invest in the expansion of clinical education opportunities to secure the future of the health workforce.

References

1. The nation's medical schools grow more diverse. AAMC.org. Published December 13, 2022. Accessed March 21, 2024. https://www.aamc.org/news/nation-s-medical-schools-grow-more-diverse.

2. https://educationdata.org/average-cost-of-medical-school

3. Quick Facts. AACOM.org. Accessed March 21, 2024. https://www.aacom.org/become-a-doctor/about-osteopathic-medicine/quick-facts.

4. American Association of Medical Colleges. Recruiting and Maintaining U.S. Clinical Training Sites. Published March 2013. Accessed March 21, 2024. https://www.aamc.org/media/10921/download.

5. Zhang X, Lin D, Pforsich H, et al. Physician workforce in the United States of America: forecasting nationwide shortages. Hum Resour Health. 2020;18:8. doi:10.1186/s12960-020-0448-3

6. Tong ST, Eden AR, Morgan ZJ, et al. The essential role of family physicians in providing cesarean sections in rural communities. J Am Board Fam Med. 2021;34(1):10-11. doi:10.3122/jabfm.2021.01.200132

7. American Association of Medical Colleges. The complexities of physician supply and demand: projections from 2019 to 2034. Published June 2021. Accessed March 21, 2024. https://digirepo.nlm.nih.gov/master/borndig/9918417887306676/9918417887306676.pdf

8. Raymond Guilbault RW, Vinson JA. Clinical medical education in rural and underserved areas and eventual practice outcomes: a systematic review and meta-analysis. Education for Health. 2017;30(2):146. doi:10.4103/efh.EfH_226_16

9. Brooks RG, Walsh M, Mardon RE, et al. The roles of nature and nurture in the recruitment and retention of primary care physicians in rural areas: A review of the literature. Academic Medicine. 2002;77(8):790.

10. Russell DJ, Wilkinson E, Petterson S, et al. Family medicine residencies: how rural training exposure in GME is associated with subsequent rural practice. J Grad Med Educ. 2022;14(4):441-450. doi:10.4300/JGME-D-21-01143.1

11. Davis CS, Roy T, Peterson LE, et al. Evaluating the teaching health center graduate medical education model at 10 years: Practice-based outcomes and opportunities. J Grad Med Educ. 2022;14(5):599-605. doi:10.4300/jgme-d-22-00187.1

12. Kim D, Manzo RD, Montoya M, et al. Medical mentorship deconstructed: an analysis and structural recommendation for high value mentorship. MedEdPublish 2023;12:13. doi:10.12688/mep.18944.2

13. Elma A, Nasser M, Yang L, et al. Medical education interventions influencing physician distribution into underserved communities: a scoping review. Hum Resour Health. 2022;20. doi:10.1186/s12960-022-00726-z

14. Doekson G, Clair C, Eilrich F. Economic Impact of Rural Health Care. RuralHealthworks.org. Published October 2016. Accessed March 21, 2024. https://ruralhealthworks.org/wp-content/uploads/2018/04/Summary-Economic-Impact-Rural-Health-FINAL-100716.pdf.

15. Brotherton SE, Etzel SI. Graduate medical education, 2022-2023. JAMA. 2023;330(10):988-1011. doi:10.1001/jama.2023.15520

16. Petterson SM, Liaw WR, Tran C, et al. Estimating the residency expansion required toavoid projected primary care physician shortages by 2035. Ann Fam Med. 2015;13(2):107-114. doi:

17. Crampton PES, McLachlan JC, Illing JC. A systematic literature review of undergraduate clinical placements in underserved areas. Med Educ 2013;47(10):969-978. doi:10.1111/medu.12215

18. Taylor J, Goletz SE. Using area health education centers to promote interest in rural practice. Rural Remote Health. 2016:16.3. doi:10.22605/RRH3934
19. Rabinowitz HK, Diamond JJ, Markham FW, et al. The relationship between matriculating medical students' planned specialties and eventual rural practice outcomes. Acad Med 2012;87(8):1086. doi:

20. Parlier AB, Galvin SL, Thach S, Kruidenier D, Fagan EB. The road to rural primary care: a narrative review of factors that help develop, recruit, and retain rural primary care physicians. Acad Med. 2018;93(1):130-140. doi:10.1097/ACM.0000000000001839

21. Lapidus A, Shah S, Mekonnen M, et al. Medical student intentions to practice internal medicine in underserved areas associated with debt, identity and extracurricular participation. BMC Med Educ. 2023;23:420. doi:10.1186/s12909-023-04392-0

22. Jones MP, Bushnell JA, Humphreys JS. Are rural placements positively associated with rural intentions in medical graduates? Med Educ. 2014;48(4):405-416. doi:10.1111/medu.12399

23. Henry JA, Edwards BJ, Crotty B. Why do medical graduates choose rural careers? Rural Remote Health. 2009;9(1):1083.

24. Goodfellow A, Ulloa JG, Dowling PT, et al. Predictors of primary care physician practice location in underserved urban or rural areas in the United States: a systematic literature review. Acad Med. 2016;91(9):1313-1321. doi:10.1097/ACM.0000000000001203

25. Brooks RG, Walsh M, Mardon RE, et al. The Roles of nature and nurture in the recruitment and retention of primary care physicians in rural areas: a review of the literature. Acad Med 2002;77(8):790.

26. Council on Graduate Medical Education (COGME). Strengthening the Rural Health Workforce to Improve Health Outcomes in Rural Communities. HRSA.gov. Published April 2022. Accessed March 21, 2024.

27. Larson EH, Andrilla CH, Simas TA. (2017). United States primary care physician workforce, 2013-2014: A state-level analysis. J Rural Health. 2017;33(3), 211-219. https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/data-research/primary-care-state-projections2013-2025.pdf

28. Chou CL, Teherani A, Masters DE, et al. Workplace learning through peer groups in medical school clerkships. Med Educ Online. 2013;18, 21135.

29. World Health Organization. Increasing access to health workers in remote and rural areas through improved retention: Global policy recommendations. World Health Organization. Published 2010. Accessed March 21, 2024. https://apps.who.int/iris/bitstream/handle/10665/44369/9789241564014_eng.pdf?sequence=1&isAllowed=y

30. O'Neill TR, Neubauer LC, Puntillo KA. Benefits of interprofessional clinical education for healthcare professional students: A systematic review. J Allied Health. 2015; 44(3), 163-172.

31. Strasser R, Neusy AJ, Plattner HK. Reflections on rural health: A manifesto for celebrating successes and embracing futures. Rural and Remote Health. 2010;10(3), 1539.

32. Thistlethwaite JE, Quirk F, Evans R. Medical education in rural communities: Implications for career pathways and policy. Med J Aust. 2014; 200(1), 14-17.

33. Rittenhouse DR, Chen ES, Filer R, et al. Valuing primary care: an assessment of primary care workforce preferences in the United States. BMC Health Serv Res. 2014;14:337. doi:10.1186/1472-6963-14-337

34. Larson EH, Andrilla CHA, Foley RP, et al. Retaining rural health care providers in Washington state: 2013 rural health professions update. WWAMI Rural Health Research Center, University of Washington; 2013. https://depts.washington.edu/uwrhrc/uploads/RHRC_RB42.pdf

35. Nandi A, Galea S, Lopez G, et al. Access to and use of paid sick leave among low-income families with children. Pediatrics. 2013;132(2):e411-e417. doi:10.1542/peds.2013-0893

36. Rosenthal TC, Williams BC, Naughton BJ, et al. Clinical competence in a changing healthcare system: the impact of hospitalist systems and the electronic medical record. Postgrad Med J. 2013;89(1053):379-383. doi:10.1136/postgradmedj-2012-131160

37. Cooper RA, Getzen TE, McKee HJ, et al. Economic and demographic trends signal an impending physician shortage. Health Aff (Millwood). 2002;21(1):140-154. doi:10.1377/hlthaff.21.1.140

38. Askin F, Moore M. Retaining physicians in rural practice. Rural Remote Health. 2004;4(3):356. PMID: 15588061

39. Rabinowitz HK, Diamond JJ, Veloski JJ, et al. The impact of multiple predictors on generalist physicians' care of underserved populations. Am J Public Health. 2000;90(8):1225-1228. doi:10.2105/ajph.90.8.1225

40. Dill MJ, Salsberg ES. The complexities of physician supply and demand: projections through 2025. Assoc Am Med Coll. 2008. https://www.aamc.org/system/files/reports/1/2008_complexities.pdf

41. Zurn P, Dal Poz MR, Stilwell B, et al Imbalance in the health workforce. Hum Resour Health. 2004;2(1):13. doi:10.1186/1478-4491-2-13


AACOM
American Association of Colleges of
Osteopathic Medicine