

Graduate Medical Education for Rural Practice

See also:

[Rural Practice, Keeping Physicians in](#)

[Rural Residency](#)

[Rural Health Care in Medical Education](#)

[Area Health Education Centers](#)

[Rural Health Care, Access to](#)

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The Role of Distributed Rural Medical Education in Access to Quality Healthcare

In the century since the Flexner Report, medical education in the United States has become specialized, centralized and urban, embracing uniformly rigorous standards of patient care, education, and research. Despite an increased production of the total number of physicians, a persistent geographic maldistribution of physicians has characterized the past 70-80 years. While twenty percent of the US population lives in rural areas, only nine percent of physicians doⁱ. The opportunity for medical education in this century is to recapture the diversity and relevance of distributed training even as patient care, education and research is further improved. Distributed medical education that is uniquely adapted and responsive to the needs of rural underserved communities has the potential to reclaim medicine's social contract with the public.

Changes in technology continue to transform the ability of medical educators to offer a geographically distributed quality medical education through the use of information exchange and communication with faculty and peers. At the same time, technology is also influencing the delivery of healthcare services to rural areas. Concurrently, healthcare policy reform and anticipated changes in payment have placed a new emphasis on population and community oriented care. These policy changes in healthcare delivery are now becoming increasingly aligned with a community-focused and geographically distributed medical education format.

Examples of technology advances include use of telemedicine, information exchange through electronic medical records and databases, population health within a patient panel and patient centered medical home and rural community integration into regional delivery systems accountable to a population. Enhanced communications such as distant synchronous group learning models, asynchronous educational curricula, and access to resource libraries, even in very remote areas are particularly relevant to medical education. Practice based research networks are also reaching rural campus and practice locations.

Distributed medical education models such as rural tracks in both undergraduate and graduate medical education are therefore increasingly applicable and supported for the following reasons:

- ongoing transitions toward population-based, community centered healthcare delivery
- payment methodology reform for primary care delivery in medical homes
- team-based care delivery incorporating healthcare providers in the community
- increased and enhanced use of information technology and electronic communication
- growing evidence supporting rurally located education's impact on rural workforce

The proceedings of meetings of rural medical educators demonstrate that challenges to rural* medical education stubbornly persistⁱⁱ. Of note is that rural physicians continue to demonstrate a satisfaction with practice and a passion for serviceⁱⁱⁱ. Yet, after more than 30 years of policy initiatives, incentives, and rural-focused programs, the challenge of providing an adequate supply of physicians in rural practice remains virtually unchanged. Both the NRHA and the AAFP have long been advocates for the health of rural populations and continue to promote the development and funding of programs that will address this rural health provider shortage. Still, the scale of these current efforts does not appear to be alleviating the growing shortage.

More recently however, policy makers, researchers and educators have made renewed and significant contributions to the literature and have initiated investments supporting and promoting successful models of rural track medical education. The intuitive propositions of those earlier rural health education leaders have now been borne out by a preponderance of evidence demonstrating:

- a. Medical school programs intended to produce rural physicians have an impact to increase the rural physician supply^{iv}
- b. A study of medical school rural tracks reveals the importance of the selection process for admissions and the extensive rural clinical experience provided and accompanied by financial support^v
- c. Residency rural training track (RTT) programs produce physicians locating to rural areas with high proportions of graduates providing care in shortage areas and safety net provider settings^{vi}

Studies linking rural physician supply and demand, geographic mapping of physician workforce and educational institution outcomes are now available^{vii}. These findings can be associated with workforce needs projections published in the literature incorporating anticipated healthcare policy reform such as the Affordable Care Act^{viii}, better delineating future needs. Studies investigating factors influencing medical student and resident choice^{ix} are accompanied by an understanding of the unequal geographic distribution of physicians^x.

Rural training tracks (RTT's) have demonstrated how a rigorous teaching program can thrive in rural communities. Although they account for only a small number of first year postgraduate positions presently available in family medicine, RTT's are a demonstrated benefit for both recruitment of new physicians and retention of experienced rural faculty. Studies show that at least half of RTT graduates locate in rural areas after graduation, two to three times the proportion of family medicine residency graduates overall^{xi}.

By linking data on rural workforce needs to the evidence regarding successful models of rurally located medical training, more attention has been drawn to the opportunity for expansion of undergraduate and graduate medical education, specifically in rural patient care settings^{xii}.

The Rural training Track Technical Assistance Program has identified and studied separately accredited 1-2 RTTs and identified tracks within larger programs in which the tracked residents meet their 24-month continuity requirement in a rurally located Family Medicine Practice^{xiii}. These programs complement the other ACGME and AOA residency programs providing some or all of their family medicine residency training in rural communities across the nation.

After reaching a peak of 36 such programs in 2001, and decreasing to 21 in 2012, separately accredited allopathic rural residency training tracks now number 26. While several programs closed in the past decade, RTTs are now increasing in number, especially if non-separately accredited rural tracks and osteopathic rural programs are included. Most allopathic programs follow the original “1-2” configuration, with one year in the usually urban sponsoring institution followed by two years in the more rural location. However, variation exists and may conform to the assets, opportunities and needs of a particular program and community.

An “integrated RTT,” a term in federal legislation since (BBRA 1999) was codified by CMS, in a Final Rule in 2003 which defined the term as any residency track that as part of a larger program placed residents in a rural location for more than 50% of their training. The term has also been defined since 2002 by the National Rural Health Association and the American Academy of Family Physicians to also include rural focused residency programs or tracks which are not separately accredited by the ACGME in the 1-2 format and that place residents in rural places for less than 50% of their training.

An integrated rural training track according to the NRHA and AAFP has the following required components:

- At least four (4) rural block months to include a rural public and community health experience. During a rural block rotation, the resident is in a rural area for a minimum of 4 weeks or a month
- A minimum of three (3) months of obstetrical training or an equivalent longitudinal experience
- A minimum of four (4) months of pediatric training to include neonatal, ambulatory, inpatient and emergency experiences through rotations or an equivalent longitudinal experience
- A minimum of two (2) months of emergency medicine rotations or an equivalent longitudinal experience

Some RTT’s have grown in program size and even evolved into full-fledged rural “4-4-4” programs while others have closed, a subset of which have substantially contributed to the local rural physician workforce prior to the program ending.

It must be remembered that many residency programs not located in rural areas also have variously configured rural training streams or a rural training focus. Although the rural placement rates of these programs are typically lower than the RTT’s, they ultimately contribute

the larger numbers of graduates to the population of rural doctors by virtue of their much larger size and total number.

Changes in accreditation and funding of educational programming have also altered the landscape of rural medical education. It should be noted as well that osteopathic and international medical graduates (IMGs) constitute a proportion of graduates locating in rural and persistent poverty locations^{xiv}. Examples of practice and training settings include Critical Access Hospitals, Federally-Qualified Health Clinics, and Rural Health Clinics. These entities provide new venues for patient care and education and a safety net for rural communities while ongoing innovation and adaptations for medical education in these environments include the Teaching Health Center (THCGME) pilot under the Affordable Care Act of 2010^{xv}. Integrated residency strategies that align undergraduate and graduate medical education in a seamless manner have developed in some states such as the Targeting Rural Underserved Student Track (TRUST) developed in Montana^{xvi}. Some programs were noted to have been granted an exemption to the National Residency Matching Program (NRMP).

Successful rural graduate medical education programs have also developed in specialties other than family medicine and osteopathic GME standards for rural track residencies now exist in both family medicine and pediatrics. Although it has been shown that the more specialized the physician, the less likely that physician will practice in a rural area, family medicine is not the only specialty integral to the health of rural communities. Rural-focused residency programs have been established in general surgery, emergency medicine, psychiatry and internal medicine with varying configurations.

Rural education is by nature more inter-professional, with physicians, pharmacists, mental health providers, dentists, nurse practitioners, physician assistants, social workers, dietitians and other health professionals learning side by side. There is a growing body of evidence regarding the success of inter-professional training and education in rural communities^{xvii}, particularly in the setting of the Patient Centered Medical Home concept of primary care delivery and the growth of the Teaching Health Center model of residency education.

Finally, there is an increasing recognition for the value of context in training, career satisfaction and retention. Experiential place integration, an active developmental process based on three 'principles' - security, freedom and identity – first described by Cutchin, is a sound theoretical basis for place-based education and policy.^{xviii} The preparation and teaching for rural medical education is best anchored in the experience of rural places, complemented by facilitated reflection and intentional learning from that experience.

In the immediate future, rural residency programs will continue to face the challenges of (1) student recruitment in the face of historically low student interest in generalist careers, and in particular, rural practice, (2) faculty recruitment in the face of an aging and declining number of rural physicians with a wide range of skills accompanied by an interest in teaching, (3) the lack of sustainable funding inherent in the governmental and institutional policies supporting medical education.

To overcome these challenges, a more organic, coherent, sustainable and community-anchored distributed medical education approach is necessary^{xix}. Programs centered on community context in medical education can prepare learners to be both competent and confident, matching skills to patient and community needs. Rural medical education must be readily adaptable to changing conditions, aligned with the interests of multiple stakeholders, and linked to desired outcomes and workforce needs. Rural programs should be self-renewing and less dependent upon external funding as local environments can benefit from workforce “return on investment” from program service and graduate retention. Academic institutions and communities will mutually benefit from a medical education enterprise that is distributed, rooted, nourished and relevant in diverse underserved communities, is interprofessional in nature, and is adapted in scale and scope to the population it serves.

Recommendations

Structure and content of postgraduate rural training:

Learning in context is essential to training for rural practice. Although residents trained in urban environments may be equipped with the necessary knowledge and skills, there is no substitute for personal experience in rural medicine. The rural physician’s scope of practice cannot be rigidly proscribed and is best defined by the needs of the community. Therefore the following general curricular structure and content is warranted:

1. Cumulative rural training experience for all medical students and residents with an interest in rural practice should be at least six (6) months in duration^{xx}.
2. Knowledge and skill acquisition with demonstrated competency in the following areas especially relevant to rural practice:
 - a. Maternity care
 - b. Pediatric and newborn care
 - c. Orthopedics and sports medicine, including basic fracture care
 - d. Surgical and procedural skills, including colposcopy, ultrasound and endoscopy
 - e. Trauma and other emergency care and stabilization, including training in programs such as ACLS, ATLS, CALS, NRP, PALS, and ALSO
 - f. Critical care in a rural setting
 - g. Occupational health and safety, including recreation, agriculture, mining, and forestry
 - h. Behavioral health and psychiatry, including access issues unique to rural practice
 - i. Practice management in a small practice setting and system integration
 - j. Telemedicine, the electronic health record, and other electronic tools and resources
 - k. Public Health, including basic definitions, resources for rural health, access and barrier issues, funding and delivery of rural health care, interdisciplinary teams in rural health, health outcomes and disparities in rural populations, strategies for delivery of care, and cultural competence
 - l. Community-oriented primary care

Rural residency programs and medical educators, in addition to specific content particularly relevant to rural practice, should elaborate, teach, and measure general competencies in rural medicine including:

- a. Adaptability – how to shape one’s skill set to the needs of the rural community
- b. Improvisation – how to deliver quality care within the resources and skills you have available in the moment
- c. Life-long learning – how to continually acquire additional knowledge and skills as needed
- d. Collaboration – how to get help from others and work together
- e. Endurance – how to sustain oneself and others in rural practice and lifestyle
- f. Resilience – how to continue to re-energize your practice in the context of changing personal and community needs

Medicare funding and definitions of rural training

CMS should deliver on congressional intent and, under the rural exemptions granted in the Balanced Budget Act of 1997 and the Balanced Budget Refinement Act of 1999, eliminate caps on GME funding for both new and existing rural programs in graduate medical education provided these programs are rural training tracks as defined below or have a significant track record of placing a high proportion of graduates in rural practice.

The BBA (Public Law 105-33) placed a cap on the number of medical residents that are eligible for Medicare direct and indirect GME payments. This limitation has negatively impacted the availability of funding to support rural residency programs. In the BBRA (Public Law 106-113), an exemption for RTT’s was included that was intended to exempt both “1-2” rural and “integrated” RTT’s from the GME funding freeze. Subsequent reallocation of residency slots under the Medical Modernization Act of 2003 (Public Law 108-173) did not benefit rural programs as predicted^{xxi}.

NRHA supports the following definitions of residency programs training physicians for rural practice in any specialty:

1. A traditional rural training track, with at least 24 months practice experience in a rural setting
2. An integrated rural training track with the following required components:
 - a. At least four (4) rural block months to include a rural public and community health experience. During a rural block rotation, the resident is in a rural area for a minimum of 4 weeks or a month
 - b. A minimum of three (3) months of obstetrical training or an equivalent longitudinal experience
 - c. A minimum of four (4) months of pediatric training to include neonatal, ambulatory, inpatient and emergency experiences through rotations or an equivalent longitudinal experience

- d. A minimum of two (2) months of emergency medicine rotations or an equivalent longitudinal experience

Although included in legislation (BBRA), the terminology “1-2 Rural Training Track” is no longer used by accrediting bodies, either the ACGME or the AOA. The NRHA has recently adopted an operational definition of a rural training track for the purposes of the RTT Technical Assistance Program as follows:

Continuing Definition of a “1-2 RTT” (for the purposes of the RTT TA program grant)^{xxii}
A residency training program that is either:

1. An alternative training track integrated with a larger more urban program and separately accredited as such, with a rural* location, a rural mission, or a major rural service area, in which the residents spend approximately two of three years in a place of practice separate and more rural or rurally focused than the larger program.
2. An identified training track within a larger program, not separately accredited (i.e. without a separate accreditation program number), in which the tracked residents meet their 24-month continuity requirement** in a rurally located continuity clinic or Family Medicine Practice site (FMP).

*Rural by Rural Urban Commuting Area (RUCA) code of 4 or greater, except 4.1, 5.1, 7.1, 8.1, and 10.1, which are urban

**Continuity requirement as defined by the ACGME Family Medicine Review Committee and the American Board of Family Medicine.

The NRHA and AAFP further recommend that the waiver of a cap on GME positions for "rural" programs be extended by including in the definition of "rural" any allopathic or osteopathic residency program which can document that over 50% of its graduates in the last three years are practicing in rural areas. Although other arguably more appropriate definitions of “rural” exist, use of rural by Rural Urban Commuting Area (RUCA) codes^{xxiii} of 4 or greater, except 4.1, 5.1, 7.1, 8.1, and 10.1, which are urban, may be a reasonable proxy and the easiest data to obtain from existing sources.

Congress and CMS should take the opportunity afforded by the relatively small number and size of rural programs to streamline IRIS (interns and residents information system) reporting and simplify GME funding of actual resident FTE's, recognizing that in addition to educational tasks, resident physicians devote at least 40 hours to patient care weekly. They should provide such funding directly to rural programs, decreasing bureaucratic inefficiencies and affording an opportunity for increased accountability, linking funding to both outpatient and inpatient care and to training outcomes.

CMS should encourage and not discourage GME in rural locations and with safety net providers by allowing reimbursement of costs of residency education in settings including Critical Access Hospitals, Rural Health Clinics and Federally Qualified Health Centers (FQHC and FQHC-LA) in rural areas. Congress is urged to continue support of the THCGME program for Teaching Health Centers beyond its current expiration date set in 2015.

Academic support and rural leadership

The NRHA and the AAFP urge academic medical centers and clinical departments to financially support and fully integrate rural faculty who practice in communities remote from the academic institution. Strategies for accomplishing these goals include shared rural/urban governance, faculty exchanges, coverage provision for rural faculty by urban peers, and sustained funding of protected academic time.

Faculty living and working in rural places are core to the mission of rural medical education and as such should take the leadership role in advancing training in these settings. They should be recognized with faculty appointments commensurate with that role, encouraged and supported in the scholarship of practice, education and community engagement, and participate in key decisions and strategic planning within the academic enterprise. This should include access to technology in communication and electronic resources and teaching aids such as medical reference libraries and simulation labs. Visits to the rural location by academic leaders and reciprocal visits by rural faculty to urban centers are integral to building mutual respect, sharing understanding of the realities of both rural and urban contexts, and establishing relationships and trust. The challenges of time and distance can be addressed in part through telephone and videoconferences, but these can only complement and do not substitute for in-person meetings and activities.

Rural medical education leaders should have access to education and support in the areas of scholarly activity and presentations, research, curriculum development, program financing and demonstration of community benefit of medical education programs.

Accreditation of rural programs

The ACGME should continue to allow flexibility and innovation in the development and the required curricula of rural training programs in adapting to local resources while graduates of all rural programs should be expected to meet the accepted standards of all GME programs. In addition, since context is an important element of residency education, the ACGME should require the reporting of geographical data identifying the location of the continuity practices and hospitals of all residency programs, enabling the identification of rural training tracks and other programs that are located in rural and other underserved settings. An accurate listing of rural programs and rural training tracks should be readily accessible to medical students, researchers and policy makers alike.

Community investment in rural training

Rural institutions, including Critical Access hospitals, Rural Health Clinics, and rural FQHC's, should make sustained investments in health professions education. Rural practitioners should continue to support the training of students and residents in rural environments. Rural communities should support health professions education as an important driver of economic development and public health.

Organizational Support

The NRHA and the AAFP advocate and support collaboration of rural medical faculty with family physicians and other health care professionals in rural practice through organizational staff support, intentional network development, funded innovation, advocacy and increased research in the area of rural training and retention in rural practice.

Summary

This paper has summarized the recent history of residency education to prepare physicians to practice in rural environments. It makes specific recommendations relating to the content and conduct of postgraduate training. Most importantly it outlines critical policy changes with regards to funding and definitions of rural training.

Medical education anchored in rural places, nourished and funded through significant federal, state and local community support, and meaningfully connected to both regional academic institutions and local physicians in practice has great potential to address both present and future needs for physicians who provide care to our rural populations.

* For this document, rural is defined as Rural Urban Commuting Area (RUCA) code of 4 or greater, except 4.1, 5.1, 7.1, 8.1, and 10.1, which are urban.

ⁱ National Rural Health Association (policy). Rural Health Fellows: Burrows, Suh, Hamann. "Health Care Workforce Distribution and Shortage Issues in Rural America." (2012)

ⁱⁱ Example: web site "RTT Conclave summaries".
(http://www.raconline.org/rtt/programs_toolbox.php).

ⁱⁱⁱ Pathman, D. E., Williams, E. S. and Konrad, T. R. (1996), Rural Physician Satisfaction: Its Sources and Relationship to Retention. *The Journal of Rural Health*, 12: 366–377.

^{iv} Rabinowitz, H. K., Diamond, J. J., Markham, F. W., & Wortman, J. R. (2008). Medical school programs to increase the rural physician supply: a systematic review and projected impact of widespread replication. *Academic Medicine*, 83(3), 235-243.

^v Deutchman, M. (2013), Medical School Rural Tracks in the US. (US Medical School Rural Track Policy Brief. September 2013).

^{vi} Patterson, D., Longenecker, R., Schmitz, D., Phillips R., Skillman, S. Doescher, M. (2013), Rural Residency Training for Family Medicine Physicians: Graduate Early-Career Outcomes, 2008-2012 (Policy Brief).

^{vii} Example: website "The Robert Graham Center". (<http://www.graham-center.org/online/graham/home.html>).

^{viii} Petterson, S., Liaw, W., Phillips, R., Rabin, D., Meyers, D., & Bazemore, A. (2012). Projecting US primary care physician workforce needs: 2010-2025. *The Annals of Family Medicine*, 10(6), 503-509.

^{ix} Center, R. G., Bazemore, A., Bennett, K., Dodoo, M. S., Legagneur, C., Petterson, S., ... & Xierali, I. (2009). *Specialty and Geographic Distribution of the Physician Workforce--What Influences Medical Student and Resident Choices?*. Robert Graham Center.

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- ^x One-Pager, G.C. (2013). Unequal Distribution of the U.S. Primary Care Workforce, Graham Center Policy One-Pager. *American Fam Physician*, 87(11), 1.
- ^{xi} Patterson, D., Longenecker, R., Schmitz, D., Phillips R., Skillman, S. Doescher, M. (2013), Rural Residency Training for Family Medicine Physicians: Graduate Early-Career Outcomes, 2008-2012 (Policy Brief).
- ^{xii} Xierali, I. M., Sweeney, S. A., Phillips, R. L., Bazemore, A. W., & Petterson, S. M. (2012). Increasing Graduate Medical Education (GME) in Critical Access Hospitals (CAH) Could Enhance Physician Recruitment and Retention in Rural America. *The Journal of the American Board of Family Medicine*, 25(1), 7-8.
- ^{xiii} Patterson, D., Longenecker, R., Schmitz, D., Skillman, S., Doescher, M. (2011) Training Physicians for Rural Practice: Capitalizing on Local Expertise to Strengthen Rural Primary Care (Policy Brief).
- ^{xiv} Fordyce, M., Doescher, M., Chen, F., & Hart, G. (2012). Osteopathic physicians and international medical graduates in the rural primary care physician workforce. *Family Medicine-Kansas City*, 44(6), 396.
- ^{xv} For information: web site "US Department of Health and Human Services, Health Resources and Services Administration". (<http://bhpr.hrsa.gov/grants/teachinghealthcenters>).
- ^{xvi} For information: website "Targeting Rural and Underserved Track (TRUST) Program". (<http://healthinfo.montana.edu/TRUST.html>).
- ^{xvii} Florence, J. A., Goodrow, B., Wachs, J., Grover, S., & Olive, K. E. (2007). Rural health professions education at East Tennessee State University: survey of graduates from the first decade of the Community Partnership Program. *The Journal of Rural Health*, 23(1), 77-83.
- ^{xviii} Hancock C; Steinbach A; Nesbitt TS; Adler SR; Auerswald CL. "Why doctors choose small towns: A developmental model of rural physician recruitment and retention," *Social Science & Medicine*, 2009 Nov; 69(9):1368-76.
- ^{xix} Longenecker R; Reynolds S. "An Organic Approach to Growing a Rural Physician Workforce," Family Medicine Education Consortium, Philadelphia, PA, November 2, 2013. website: (<http://www.fmdrl.org/index.cfm?event=c.beginBrowseD&clearSelections=1&criteria=Longenecker#4590>).
- ^{xx} Lu, D. J., Hakes, J., Bai, M., Tolhurst, H., & Dickinson, J. A. (2008). Rural intentions Factors affecting the career choices of family medicine graduates. *Canadian Family Physician*, 54(7), 1016-1017.
- ^{xxi} Chen C; Xierali I; Piwnica-Worms K; Phillips R. The Redistribution Of Graduate Medical Education Positions In 2005 Failed To Boost Primary Care Or Rural Training, *Health Affairs*, 32, no.1 (2013):102-110.
- ^{xxii} For information: website "Rural Assistance Center: Rural Training Track Technical Assistance Program". (http://www.raconline.org/rtt/about_rtt.php).
- ^{xxiii} For information: website "Rural Urban Commuting Area (RUCA) codes". (<http://depts.washington.edu/uwruca/>).

(2001) (2008)

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