

Chapter 5.1.2

TRAINING IN FAMILY MEDICINE FOR RURAL PRACTICE IN THE USA

David Schmitz

*Family Medicine Residency of Idaho,
United States of America*

Barbara J Doty

*University of Washington Family Medicine Network,
United States of America*

Introduction

The United States is currently in the midst of a substantial health care delivery transformation. This includes a growing recognition that there is a shortage of rural physicians overall and a new emphasis on access to primary care and emergency services for all persons – and it is at the intersection of these two factors that the rural family medicine physician¹ workforce finds itself. In this context, more attention is being paid to rural family medicine residency² training, given the broad and primary care-based skill set developed in this training as well as its recognised success in producing broadly trained primary care physicians and family medicine physicians.

Family medicine residency programmes in rural settings must function within the context of national regulations and, as for all training programmes, must meet both accreditation and financial targets. As these have generally been tied to historical precedent, however, it is necessary to know the historical context in order to understand the key issues as well as the lessons learned in the United States (US) family medicine residency training for rural practice.

¹ A 'physician' here (in North America more broadly) is another term for 'doctor' or general practitioner, while in countries like South Africa and Australia, a 'physician' is a specialist in internal medicine.

² A resident – or registrar - is a qualified doctor who is part of a structured specialist training programme, be it vocational or postgraduate.

The purpose of this chapter is to focus on the current circumstance of postgraduate medical education (i.e. training of residents) as preparation for rural practice in the United States. In so doing, and in emphasising family medicine, this is not intended to diminish the less frequent but important contributions of other specialty physicians to the rural workforce; most notably: general internal medicine, pediatrics, general surgery, general obstetrics and gynecology, emergency medicine, and psychiatry. Similarly, this chapter does not fully address specialties that can expand the availability of services to rural communities, particularly general surgery, which is also a substantial area of study and importance, particularly in more remote community settings.

Practice pearls and evidence

Family physicians' training is broadly applicable for rural practice.

- Family physicians may have a varied scope of training in achieving certification.
- Not all family physicians completing residency training have the same breadth of training or preparation in skills suited for rural practice.

Training for rural practice faces historical challenges and current opportunities.

- Historical bias, incentives, and the overall trend toward sub-specialisation and urbanisation of medical care provides significant challenges to rural medical education in the United States.
- While rural healthcare issues are frequently recognised as critical, the attention given to rural issues is often diluted or overlooked in overarching funding or policy decision making.
- While facing competition for funding, interest has increased in the investigation of successful educational models and replication of best practices specific to rural family physician training.
- Opportunities come from the recognition of the importance of primary care, an effort to sustain access to primary and critical health care services across the United States, and the increasing realisation of the workforce shortages to accommodate these goals.

Educational models remain a key strategic component in the recruitment and retention of rural healthcare physician workforce.

- There is evidence that supports the link between training in a rural location and rural practice selection, including in the US (1).
- Residency funding is traditionally through hospitals, most often in urban areas.
 - This arises from an historical standardisation of residency education and its linkage to reimbursement mechanisms - at a time when most medical services and education was about the care of hospitalised patients.
 - Traditionally, urban hospitals receive funding and may elect to pass monies to support the residency programme, providing it is in clinic settings or even other hospitals (including in rural areas). Teaching Health Centers are a new pilot exception to this.
 - When funding is not transmitted to support training in these rural environments, either additional sources of funding must be found or the programme is not run.

Accreditation standards are more easily accomplished in larger programmes since a key restriction is the geographic requirement for continuity in the clinic.

- Continuity clinic geographic requirements include:
 - Allopathic³ accreditation requires 24 months in the same place for patient population continuity.
 - Residency practices are defined clinical training sites, thereby restricting the training settings possible.
- Some accreditation standards were predicated on a view that urban located training would produce greater standardisation and opportunities for appropriate postgraduate medical education. Rural Training Tracks (RTT) are a recognised exception to the standard format of accredited programmes as offered by the Accreditation Council for Graduate Medical Education. As such they are an accepted alternative track exception in which the first year is spent in a more urban location and the remaining two years in a more rural location.
- Experiential learning for rural practice may not be available to learners in urban settings - either due to availability of a sub-specialised level of care (e.g. treatment of acute myocardial infarction) or a geographic bias against privileging family physicians to perform procedures which are otherwise performed by urban sub-specialists (e.g. a family physician in urban settings being denied the provision of C-section as obstetrician-gynecologists are available).

³ Allopathic as opposed to osteopathic medicine. The difference between the two is addressed on page 8.

- Flexibility of curricular innovations and adjustments (such as rural or away rotations) - which may be uniquely adaptive, productive and applicable to training for rural practice - can be hampered by the substantial accreditation and/or financial challenges of complying with current regulations.⁴
- Innovation has been encouraged, largely due to workforce demands and the success of piloted rural education programming. Although innovations or recognised exceptions are beginning to be more frequently piloted, examined and considered for replication in the cases of successful models and best practices, significant economic and accreditation barriers remain.

Rural practice settings support the training of rural family physicians, who are in high demand.

- A broad scope of practice is necessary in rural settings where family physicians frequently provide both primary care and emergency medical services to patients of all ages. As such, family physicians can provide the most efficient and cost-effective medical staffing, particularly in underserved rural areas.
- The shortage of primary care physicians⁵ is disproportionately acute in rural settings. While 20% of the US population lives in rural areas, only 9% of physicians do (2).
- While rural hospitals and clinics are supported for patients to access care and receive services, these sites are not typically funded for the education of physicians. Despite the workforce challenges, provision of care to rural patients is supported by several recent economic adaptations - such as the Critical Access Hospital Program, Rural Health Clinic Program, and rurally located Federally Qualified Health Centers.
- Rural physicians are supported for providing services to patients but not necessarily to become rural educators. Loan repayments and other physician recruitment plans have encouraged physicians' location in rural and underserved areas but training opportunities typically do not match the practice environments.

⁴ The accreditation regulations are from the Accreditation Council on Graduate Medical Education and the American Board of Family Medicine while the financial regulations are governed by CMS (Centers for Medicare and Medicaid Services).

⁵ This study was of primary care physicians, of whom the majority would have been family physicians but could have also included some pediatricians and internal medicine physicians.

Medical education in rural settings is effective in producing a rural workforce.

- Rural Training Track (RTT) family medicine residency programmes - in the one-year urban and two-year rural location format - produce two to three times the proportion of graduates entering rural practice compared with family medicine residency programmes which are not in this alternative format. At least half of RTT graduates were located in rural areas after graduation (3,4).
- RTTs produces a high proportion of graduates serving in shortage areas and in safety-net facilities (3).
- While the number of RTTs in the US is small (less than 30 programmes) they are increasing in number and size (5,6).
- RTTs face economic challenges that require innovation as well as a recognition of their value.
 - The value of educating physicians in care environments can promote
 - the education of all involved in the programme with the development of an educational culture;
 - teaching as a fulfilling experience can retain and energise physicians and staff; and
 - improved quality of care in teaching organisations.
- The local recruitment of physician trainees and graduates to the practice of the residency location can have a positive economic impact, given the associated substantial saving in recruiting costs and contribution to the local economy. (A tool has been developed for estimating the economic impact of recruiting a family physician in US (7).)
- Expanding medical and inter-professional education to funded rural patient care models through Critical Access Hospitals and Community Health Centers may provide opportunities for the education of physicians and other medical providers in rural locations.

Meeting the accreditation requirements of rural training - an historical perspective.

- From one view, the current effort is a retrofitting of physician training and education funding. While innovations have been achieved on a limited scale, this is only with diverse adaptations to specific circumstances. Widely implementable, intentional postgraduate medical education models have yet to be implemented to full scale to meet patient care access and physician recruitment strategies.

- The Flexner report (8) facilitated the standardisation of medical education, with a trend toward urbanisation. This resulted in accredited rurally-located medical education being less available and more difficult to achieve. Funding of postgraduate medical education became hospital-based and more often associated with urban hospitals. The flow of public funding being predominately to urban hospitals persists today.
- Sub-specialisation by physicians is increasingly common and incentivised; and there is increasingly a separation of primary care from specialty care, and ambulatory care from hospital-based care.
- There is a new emphasis on outpatient patient care and physician training. An example of a pilot innovation for physician graduate education funding is seen in the Teaching Health Center pilot (9).
- Two accreditation systems presently exist independently in the US: allopathic and osteopathic. While they are presently governed separately, they may become combined in the future – and some innovations in accreditation of rural training programmes are being allowed in the US.
 1. Allopathic accreditation⁶ (M.D. or Doctor of Medicine)
 - The RTT is as an allowed exception (10). This innovation allows for the first year of training in a more urban place with a second and third year of training in a more rural-focused training environment. These ‘1-2 models’ (1 year urban and 2 years rural) contain the required 24 months of continuity for family medicine clinic training. Specifically, these programmes are allowed to be accredited with less residents in the latter years than the typical requirement, which is otherwise four residents per class minimum.
 - The RTTs have achieved federal recognition and support, including funding of projects and studies related to RTT residency programmes. RTTs produce a higher proportion of graduates entering rural practice as well as graduates likely to serve in physician shortage areas (3).

⁶ This is the first possible accreditation of postgraduate physician education in the USA. It is regulated by the Accreditation Council on Graduate Medical Education.

- Urban strategies for rural training include:
 - away rural rotations (which can emphasize a curricular area such as emergency medicine or be general for rural exposure);
 - curricular elements in an urban setting (e.g. additional obstetrics training in an urban location);
 - rural rotations away from the urban programme which can fill in rural curricular gaps.

Funding rules can be restrictive of away rotations, however, due to postgraduate funding being tied to time in the urban hospitals.

- Rural fellowships following residency training provide graduates of three-year programmes with an opportunity to gain rural skills or experience before beginning rural practice. While they are non-accredited, they are widely recognised by physicians and employers as having value.
 - Some are urban located and procedure-based. While they allow high volume experiences, they are not in a rural context. Obstetrics is a common area of emphasis for additional experience and training.
 - Some include rural located experiences which allows the physician to learn rural context in practice.

2. Osteopathic accreditation⁷ distinct (D.O or Doctor of Osteopathic Medicine)

- Here there may be flexibility for rural location and smaller programmes (minimum size of 2 instead of 4 residents per class).
- Distributive education model with residents traveling to different locations for periods of time is more common and may therefore be more easily adapted to rural and smaller environments in some circumstances.

In summary, currently allopathic and osteopathic educational systems have separate accreditation – although an intention was recently announced to achieve reciprocal standards (11). The possible requirement of a larger minimum number of residents per year for accreditation may have substantial deleterious effects on rural programmes in particular, due to their small size.

⁷ This is the second possible accreditation of postgraduate medical education in the USA. It is regulated by the American Osteopathic Association.

Lessons learned

- Without the advantage of actually training in a rural environment much of the time, urban-located allopathic programmes have taken advantage of rural or procedure-focused rotations away from the urban site to gain the unique procedures and experiences particularly suited to rural practice.
- In some circumstances leaving the urban environment may be necessary to accomplish family physician training, given a more restrictive urban privileging environment where such training may be limited to other specialties or sub-specialists.
- The amount of time spent away from the urban setting is limited by accreditation standards, particularly in the continuity requirements regarding the geographic location of the family medicine clinic.
- Rural setting training can also have significant limiting factors such as numbers of patients of certain sub-types, e.g. paediatrics.
- Flexibility of accreditation - such as longitudinal as opposed to block scheduling - can be helpful. Certain exposures such as specific procedural training or specific populations of patients may be best taught during a targeted away rotation.

Future innovations and current research areas

Integrated Rural Training Tracks (IRTT) (12)

- IRTTs are distinguished from the aforementioned RTTs in that they are preliminarily defined by non-accrediting bodies but are not officially recognised for the purpose of accreditation. Nonetheless the IRTT is noted in federal statute and could become an important vehicle for future funding.
- IRTTs comprise the following:
 - during a rural block rotation, the resident is in a rural area for a minimum of four weeks;
 - at least four rural block months to include a rural public and community health experience;
 - a minimum of three months of obstetrical training or an equivalent longitudinal experience;
 - a minimum of four months of paediatric training to include neonatal, ambulatory, inpatient and emergency experiences through rotations or an equivalent longitudinal experience; and
 - a minimum of two months of emergency medicine rotations or an equivalent longitudinal experience.

- The IRTT model would allow further flexibility of geographic location of training to better suit the resources and challenges of constructing the best programme possible for an existing or newly developing rural programme.

Organisational efforts and grant-funded projects

- RTT Technical Assistance Co-operative Agreement (13) comprises federal funding for study and support of the presently accredited 1-2 model Rural Training Tracks.
- The RTT Collaborative (14) is a sustaining organisation which will continue to study and advocate for successful models of preparing physicians for rural practice

Putting it all together: A strategy for rural medical education in the US.

- Encourage people from rural areas to become medical students.
- Promote medical school rural tracks, through admissions, scholarships, and interest groups.
- Promote Rural Training Track residency programmes, rural-focused urban programmes, rural fellowship programmes.
- Establish rural practice loan repayment programmes and recruitment strategies.
- Undertake further research for best programme practices and outcomes.
- Re-shape the rural workforce and healthcare delivery through promoting team-based care and learning environments and the utilisation of telemedicine in rural healthcare delivery, for emergency, intensive care, psychiatry etc.

An illustrative case study

The family medicine residency of Idaho is located in a rural state which ranks nearly last regarding physicians per capita, including for primary care. As one of the few states without its own medical school, state agencies and government have collaborated to implement educational strategies, citing residency training in family medicine as the key element to expanding the workforce to meet the diverse needs in this rural state.

Collaboration with the University of Washington has allowed the development of a rural medical student track, in addition to the expansion of postgraduate medical education focused on the training of rural family physicians - in both the urban (with rural rotation) and Rural Training Track models. An additional rural fellowship is also being developed.

Broader applicability/application/implementation

By taking part in collaborative pilot programmes and co-operative efforts, evidence is being gathered on best practices and education innovations. Current examples include a series of studies of both medical school rural tracks and a taxonomy of postgraduate rural training programmes across the United States.

Groups such as the National Rural Health Association, the American Academy of Family Physicians, and the Society of Teachers of Family Medicine are contributing both policy and work to this effort. Information can be found at such sites as the Rural Assistance Center (web site: <http://www.raconline.org>). Funding for some projects has occurred with the support of the Federal Office of Rural Health Policy, convening key partners in such work. Efforts are being made to connect these studies to facilitate early outcome determinations and possible replication of successful models for rural physician medical education.

Conclusion

The present circumstance of postgraduate medical education (residency training) in preparation for rural practice in the United States has received increased attention in the context of health care delivery transformation and acute workforce shortages. Programmatic innovations and studies are underway in an attempt to meet the healthcare access needs of the people who reside in rural areas. Currently, in the United States, this is occurring within the context of transformation of healthcare delivery and financing.

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12A-05 Chartered Square Building
152 North Sathon Road
Silom, Bangrak
Bangkok 10500
THAILAND



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12A-05 Chartered Square Building
152 North Sathon Road
Silom, Bangrak
Bangkok 10500
THAILAND



manager@wonca.net

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