COMMENTARY

— What Should We Teach? —

The Role of Rural Graduate Medical Education in Improving Rural Health and Health Care

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One out of five people live in rural America. There is a widening gap for all-cause mortality rates in rural areas that is linked in part to physician shortages.[1] Moreover, rural counties with majority Black or indigenous populations suffer the highest rates of premature death.[2] Evidence is mounting that the current pandemic has exacerbated these conditions. Family physicians need to be prepared to assume the roles and take the actions that have the greatest impact. Graduate medical education (GME) of family physicians must attain educational quality, but must also go beyond this to become a promoter of the partnerships necessary to find community-based solutions. In doing this we will be returning to our roots of formal community-based education and socially-accountable GME.

Rural communities are diverse but at the same time collectively posses unique characteristics. Strong rural communities offer an existing local fabric of resilience to effectively provide maximal care in an isolated or resource-lean environment.[3] Investment in rural GME is an investment in rural communities.

Correcting the existing workforce shortages in rural America with intentional family medicine GME will save lives while contributing to the economic basis of local health care, keeping both patients and health care economic investment close to home. Literature exists addressing the rural placement rates as related to admission of students,[4] undergraduate medical education,[5] recruitment, and retention strategies employed.[6] As we take up our role in GME for rural practice,[7] the core concept of situational adaptation applies. In residency training, contextual competence yields confidence. This adaptive confidence for practicing in rural places results in recruitment and retention, resiliency, and increased satisfaction in rural practice. Place-based training has demonstrated favorable workforce outcomes for rural practice, for example, as evidenced by the outcomes of 1+2 Rural Training Tracks (RTTs).[8,9]

Training With and For Rural Communities

Community competence in family medicine is grounded in the effectiveness of primary care. Evidence for this is perhaps best recognized in the work of Barbara Starfield's four "Cardinal C's of Primary Care."[10] When applied to rural and remote practice, the delivery of primary care brings both unique challenges and advantages.

As an a priori example, applying the Starfield "C" of first-contact availability in rural settings must include the golden hour of trauma care but should also address golden hours of maternity care. The Improving Access to Maternity Care Act[11] calls for designation of maternity care target areas, and family physicians must be prepared to serve to improve maternal and neonatal outcomes. Family physicians will continue to be called to operate at the top of their license and to the extent of

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their training. Rural comprehensiveness is defined by the immediate needs of the patient, at the first point of contact. We must train family physicians to anticipate and adapt to what telemedicine does not accomplish as well as to how it can be a tool to augment the skills they have otherwise gained in their training.

Likewise, the Starfield "C's" of continuity and coordination remain central to everyday rural primary care and yet uniquely demand competence for effective transitions between local care and urban-based tertiary care. Decisions involving transport and timing across many miles and the risks of environmental conditions require an educated and informed perspective. The best decisions require the rural competency of integrity, and recognizing your own limits.

These and other examples demonstrate ways in which competence must be considered in rural context.[12] The applied skills and aptitudes of the successfully trained rural family physician will be guided by these same principles of primary care, although through a rural lens.

Development of competence as a rural family physician should particularly emphasize training of resident physicians as "master adaptive learners."[13] Being prepared for the infrequent or unanticipated patient care need, potentially combined with a resource-limited setting requires the rural competencies of agency and courage in addition to comprehensiveness.[12] When measuring quality in health care and education, we often rely on outcome measures. However, while simply increasing the volume of training may produce reliable outcomes in similar circumstances, we as educators must also design and implement process measures for the quality outcomes of the master adaptive learner that become evident in a dynamic, resource-limited environment. A well-trained family physician must posses both skill sets, with just enough volume-based experience and also the capability to adapt patient care to the circumstances in the moment that best meet the needs of the patient who is actually in front of them. Thus, the well-prepared rural family physician will be able to shift the context of care to have competence for the situation within their own rural community. This is the value of the rural family medicine generalist, providing just the specialized care their community needs.

Recommendations

Program requirements fit for purpose will involve rural track models (including RTTs) and rural 4-4-4 programs associated with critical access (CAH) and sole community hospitals (SCH). The substantial integration of rural tracks and programs in association with larger hospitals and institutions should include time for subspecialty experiences and bidirectional integration of didactic teaching through use of technology. Sponsoring institution and health care system support of faculty development and faculty recruitment will be particularly important. Studies suggest that rurally-located programs, such as rural training tracks, would benefit from both financial and programmatic support, including flexibility in program design and targeted technical support in areas such as scholarly activity.[14] These findings align with the recent Council on Graduate Medical Education policy brief related to rural health, recommending the linking of GME funding to programs that yield a high return on investment for rural communities, such as the Rural Residency Planning and Development program funded by Health Resources and Services Administration.[15]

The Review Committee for Family Medicine standards should be amenable to the innovations and adaptability of rural programs, while graduates of rural programs should be expected to meet the accepted standards of all GME programs.[16] See Table 1 for specific recommendations.

Urban-located programs will likewise continue to contribute graduates to the rural family physician workforce. Flexibility allowing for rural rotations promotes not only a concentrated period for learning rural-applicable skills, but also contextual learning, reinforcing the master adaptive learner elements of the curriculum. Innovation in resource-limited environments is a learned skill and develops from reflective practice. As a curricular example, shared didactics and case presentations between rural and urban locations highlight both rural-specific skill sets and shape the culture in the curriculum, recognizing that care occurs in the context of resources and community. This encourages faculty and residents alike to ask the question, "What if this care were happening in a rural place?" Curricular requirements should prepare all family medicine graduates to acutely assess, stabilize, and triage patients for treatment and/or transfer in the context of place and local resources.

Table 1: Recommendations for ACGME Family Medicine Residency Program Requirements

ACGME Program Requirements for FM	Recommendation
III.B.4 Accredited "1-2" programs must have at least two actively enrolled residents at each level. (Core)	With substantial program and social integration, allow flexibility to one actively enrolled resident at each level.
Distance between rural and urban training sites	Allow flexibility with substantial integration and goal-oriented outcomes.
Issues of reporting outcomes for small numbers of residents	Consider a longer term of observation with active monitoring.
Need for transparency, further study, and additional outcomes-based evidence	Increased accurate geocoding of training locations to include rural nomenclature

Abbreviations: ACGME, Accreditation Council for Graduate Medical Education; FM, family medicine.

Conclusion

Further research is needed and a reflective practice is indicated. Even the definition of rurality itself, while important, remains challenging. Rural definitions should be specific to purpose and address a particular audience.[17] In as much as rural is diverse, our GME strategy must be unified. Understanding rural GME with a common nomenclature[18] and transparency will allow for further study and discussion. Family medicine residency education must be specific to fit and address health outcomes as the priority. Simply put, GME in and with rural communities will yield the best-trained physician workforce for our rural communities.

The evidence of the impact of rural Family Medicine GME should ultimately be better health and life in rural America. Likewise, the satisfaction our graduates experience in rural practice will be well grounded in their residency education.

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