A Roadmap to Rural Residency Program Development

Emily M. Hawes, PharmD, BCPS, CPP
Amanda Weidner, MPH
Cristen Page, MD, MPH
Randall Longenecker, MD
Judith Pauwels, MD
Steven Crane, MD
Frederick Chen, MD
Erin Fraher, PhD, MPP

Rural communities face a pressing need for primary care, behavioral health, and obstetrical care services, yet rural hospitals around the country are closing, and the gap between mortality rates in rural and urban areas is widening.[1,2] While there is some debate about whether the nation faces a shortage of physicians, there is general consensus that the workforce is maldistributed.[3] Estimates suggested we face a shortfall of 14 164 practitioners in primary care health professional shortage areas.[4] While efforts to address rural workforce shortages need to be targeted along multiple points in a physician's career trajectory, exposure to rural and underserved settings during training has been shown to increase physicians' sense of preparedness for rural practice and retention in rural communities.[5,6] Despite this evidence, graduate medical education (GME) in rural areas remains very limited, and the US Government Accountability Office estimates that only 1% of residents across all specialties train in rural areas.[7–10] This is due in part to the unique challenges that face rural health organizations in the Unites States, which often operate on thin financial margins with limited providers and staff. Rural hospitals and federally qualified health centers (FQHCs) often lack the capacity and resources to design, develop, start-up, and maintain rural residency training programs in their communities. The small size and remoteness of rural programs make them susceptible to unique challenges such as 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.[11]

Recognizing these challenges, in 2019 the Health Resources and Services Administration (HRSA) funded 27 rural hospitals, FQHCs, schools of osteopathic and allopathic medicine, and Indian Health Service sites to develop rural GME programs through the Rural Residency Planning and Development (RRPD) Program.[12] To address the unique barriers facing these and other rural communities interested in starting residency programs, HRSA also funded a Technical Assistance Center (RRPD-TAC). The RRPD-TAC's mission is to help rural communities overcome the significant challenges involved in designing rural training programs, securing sustainable funding, achieving Accreditation Council for Graduate Medical Education (ACGME) accreditation, and developing governance structures for GME training. The RRPD-TAC has regional hubs of content experts and external partner organizations with academic and program expertise in developing rural GME programs spread across the country. To support the 27 HRSA grantees, the RRPD-TAC developed a framework that describes the steps needed in each of 5 key stages of program development—exploration, design, development, start-up, and maintenance. The "Roadmap for Rural Residency Program Development" model outlined in the FIGURE details the progressive stages of the process, from early interest and recognized need for a GME program to meet local health care needs, to the implementation of a functional, accredited, and financially sustainable program. Additional resources and tools for developing rural residencies are available at www.ruralgme.org.[13]

Creating the Stages of Rural Residency Development

The framework identifies multiple goals within each of the 5 stages to give grantees the specific and measurable milestones they need to achieve on the path toward developing an accredited, financially sustainable GME program (TABLE). Each goal then has a number of objectives that are required to successfully move to the next stage (objectives are not shown but can be accessed in the online supplemental material or on the RRPD-TAC

DOI: http://dx.doi.org/10.4300/JGME-D-19-00932.1

Editor's Note: The online version of this article contains the rural residency development stages, goals, and objectives.

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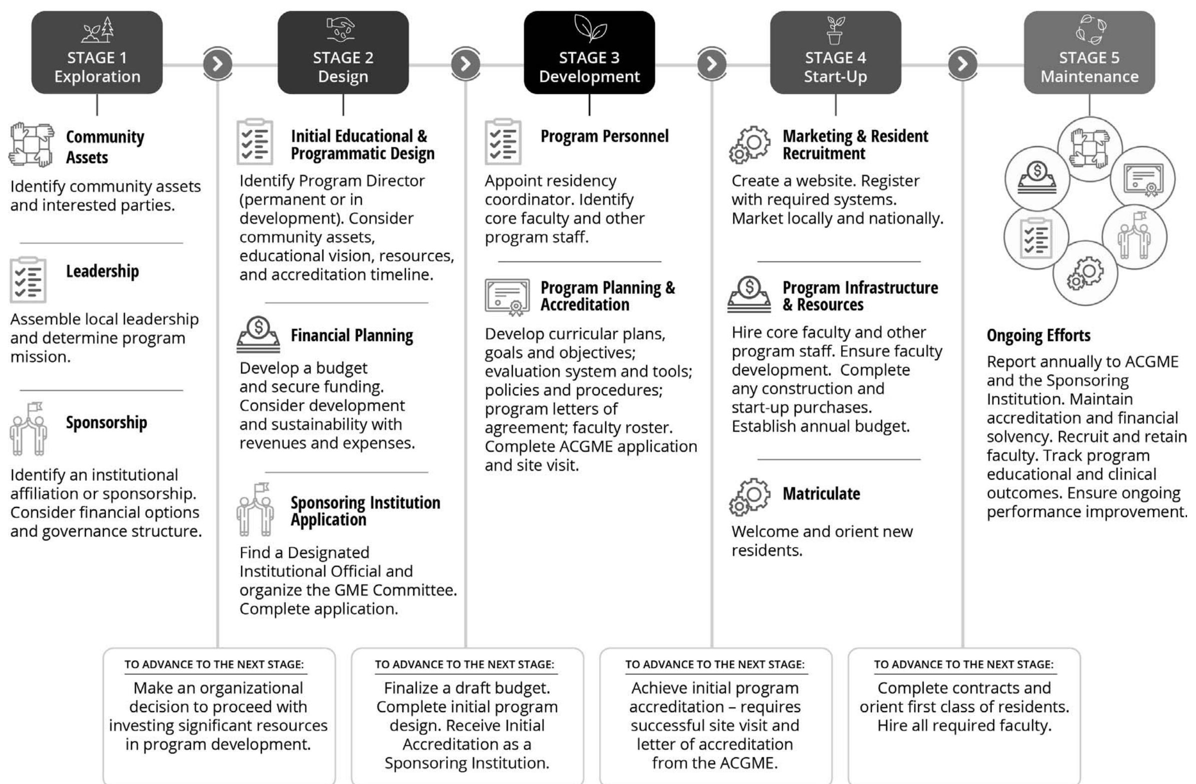

FIGURE

The Roadmap for Rural Residency Program Development

Abbreviation: ACGME, Accreditation Council for Graduate Medical Education.

website).[13] A number of "hard stops" mark the transition from one stage to the next and must be met to advance to the next stage (FIGURE). Despite the somewhat prescriptive nature of the goals and the presence of hard stops, a concerted effort was made to reflect the unique organizational structure and timeline for each individual GME program in development. The model gives flexibility in meeting goals and recognizes the iterative nature of program development; programs will likely be working on elements of future stages even before they have met the hard stop to move into the next stage of development. This is critical, because the key stakeholders for developing the program (eg, community, hospital, or medical school) may encounter different starting points and challenges along the way.

Although many of the components in the Roadmap for Rural Residency Program Development model are not new, they have not previously been organized into a coherent pathway that identifies the stages and milestones needed to develop a residency program, from engaging with the community, achieving accreditation, crafting a sustainable financial plan, and developing equitable governance structures that ultimately achieve desired community outcomes.

The framework was developed based on existing literature and an iterative consensus process with 21 content experts who have helped launch more than 100 rural residency programs.[14–16] These experts have academic and program expertise in rural GME and hold roles as program directors, department chairs, designated institutional officials, medical directors, consultants, and other responsibilities across the country. To capture the complexity of completing each goal, experts were asked to weigh the relative difficulty of each objective, assigning it a value of 1 to 5, with 1 being least difficult and 5 being most difficult to complete. We used expert responses to calculate the arithmetic mean weight for each goal; values were rounded to the nearest integer. This approach of using a survey of experts to develop parameters for a project has been used in previous rural contexts.[17,18]

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TABLE
Rural Residency Development Stages and Goals

Stage 1: Exploration	
Goal 1.1	Complete community asset and capacity inventory.
Goal 1.2	Assemble a local leadership team.
Goal 1.3	Engage potential financial stakeholders and identify a preliminary governance structure.
Goal 1.4	Make an organizational decision to proceed with investing significant resources in program development.
Stage 2: Design	
Goal 2.1	Appoint a PD or a PD in development.
Goal 2.2	Complete initial program design.
Goal 2.3	Develop SI application (if the SI is not already accredited).
Goal 2.4	Using initial program design, complete a detailed pro forma for all phases of program development and sustainability with revenues and expenses.
Goal 2.5	In light of the detailed pro forma, refine program design to include final curriculum outline and site mapping.
Goal 2.6	Submit SI application (if the SI is not already accredited).
Stage 3: Development	
Goal 3.1	Identify key staff support and core faculty members.
Goal 3.2	Complete specific program planning.
Goal 3.3	Submit ACGME application.
Goal 3.4	Complete ACGME site visit.
Goal 3.5	Finalize financial plan for the program.
Goal 3.6	Obtain ACGME accreditation.
Stage 4: Start-up	
Goal 4.1	Develop plan for resident marketing and recruitment.
Goal 4.2	Complete program infrastructure.
Goal 4.3	Establish annual budget (based on earlier pro forma).
Goal 4.4	Fill program positions through the NRMP Match.
Goal 4.5	Matriculate and orient initial class of residents.
Stage 5: Maintenance	
Goal 5.1	Annually recruit residents.
Goal 5.2	Maintain accreditation.
Goal 5.3	Maintain financial solvency; budget and reconcile budget annually.
Goal 5.4	Recruit and retain faculty.
Goal 5.5	Track program educational and clinical outcomes and ensure ongoing performance improvement, adaptability, and resilience.
Goal 5.6	Contribute to the community of practice in rural GME through dissemination of innovations and peer consultation.

Abbreviations: PD, program director; SI, sponsoring institution; ACGME, Accreditation Council for Graduate Medical Education; NRMP, National Resident Matching Program; GME, graduate medical education.
Note: The FIGURE and TABLE are used by permission of the Rural Residency Planning and Development Technical Assistance Center (www.ruralgme.org). To access resources and tools for developing rural residencies, please visit www.ruralgme.org.

Applying the Stages of Rural Residency Development

The Roadmap for Rural Residency Program Development model can be used to help communities and institutions creating new residency programs assess wherever they are in the process and to preemptively identify where they may anticipate barriers and challenges within each stage. Failure to anticipate and meet all the stages can result in unnecessary costs and delays. For example, a program that did not adequately prepare for an ACGME site visit may then have to spend at least 6 to 9 months addressing areas of concern and reapplying. Or an institution may succeed in developing a training program that achieves accreditation but ultimately fails to meet the needs of the community because of a lack of early and sustained community engagement.

Although created as part of the RRPD-TAC support to the 27 HRSA-funded programs, the Roadmap for Rural Residency Program Development model can serve as a guide for organizations and institutions outside the grantee pool. Although conducted in the United States, this work has relevance to other countries, including Canada, Australia, and New Zealand, which also struggle to develop the workforce needed in rural and remote settings. Whether GME will be sponsored by a school of medicine, health center, or health system, the framework can provide a general awareness of the steps required to start a program in a rural community. Although some of the challenges and barriers may differ from rural communities, the model is also relevant for urban settings, especially those that serve underserved populations in low-resourced areas.

As the RRPD-TAC implements the Roadmap for Rural Residency Program Development in the next 2 years, we will be refining the specific goals and objectives under each of the stages. Our goal is to provide a tool that is based on solid evidence and produces replicable outcomes for organizations wishing to start rural residency programs to address workforce needs in their communities.

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Emily M. Hawes, PharmD, BCPS, CPP, is Associate Professor, Department of Family Medicine, University of North Carolina (UNC) School of Medicine, and Associate Professor of Clinical Education, UNC Eshelman School of Pharmacy; **Amanda Weidner, MPH,** is Research Consultant, University of Washington (UW) Family Medicine Residency Network; **Cristen Page, MD, MPH,** is Executive Dean, and William B. Aycock Distinguished Professor, Department of Family Medicine, UNC School of Medicine; **Randall Longenecker, MD,** is Professor of Family Medicine, Department of Primary Care, and Assistant Dean of Rural and Underserved Programs, Ohio University Heritage College of Osteopathic Medicine, and Executive Director, The RTT Collaborative; **Judith Pauwels, MD,** is Professor, Department of Family Medicine, UW, and Associate Director for Program Development, WWAMI Region Family Medicine Residency Network; **Steven Crane, MD,** is Professor, Department of Family Medicine, UNC School of Medicine; **Frederick Chen, MD,** is Professor, Department of Family Medicine, UW, and Director, WWAMI Region Family Medicine Residency Network; and **Erin Fraher, PhD, MPP,** is Director, Carolina Health Workforce Research Center, Cecil G. Sheps Center for Health Services Research, and Associate Professor, Department of Family Medicine, UNC.

Funding: The RRPD-TAC is supported by the Health Resources and Services Administration (HRSA) of the US Department of Health and Human Services (HHS) under cooperative agreement No. UK6RH32513.

The contents are those of the authors and do not necessarily represent the official views of, nor an endorsement by HRSA, HHS, or the US Government.

Corresponding author: Emily M. Hawes, PharmD, BCPS, CPP, University of North Carolina, School of Medicine, 590 Manning Drive, CB No. 7595, Chapel Hill, NC 27599, 574.948.1447, fax 919.966.6125, emily_hawes@med.unc.edu

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